ADDENDUM #5
to the
Programmatic Environmental Impact Report for the
Prestressed Concrete Cylinder Pipe Rehabilitation Program
Second Lower Feeder Reach 3

January 2022

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

Metropolitan Report No. 1527-5

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ADDENDUM #5

to the

PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT

for the

PRESTRESSED CONCRETE CYLINDER PIPE
REHABILITATION PROGRAM

SECOND LOWER FEEDER REACH 3

SCH: 2014121055

Background

Lead Agency: The Metropolitan Water District of Southern California

Addendum to Certified Programmatic Environmental Impact Report Pursuant to: California Code of Regulations, Title 14, Division 6, Chapter 3, Article 11, Section 15164.

Background and Description of the Prestressed Concrete Cylinder Pipe Rehabilitation Program

Between 1962 and 1985, 163 miles of Prestressed Concrete Cylinder Pipeline (PCCP) were installed throughout The Metropolitan Water District of Southern California's (Metropolitan) service area. Under certain subsurface conditions, PCCP lines have an elevated risk of failure compared with other types of pipe. In response to this risk of failure, in the late 1990s, Metropolitan inspected and assessed all 163 miles of PCCP within its distribution system. In 2011, Metropolitan initiated a comprehensive program of inspections to evaluate and rank PCCP lines with the highest risk of failure. The data indicate that the following five pipelines represent the highest risk: Allen-McColloch Pipeline, Calabasas Feeder, Rialto Pipeline, Second Lower Feeder, and Sepulveda Feeder. The PCCP Rehabilitation Program (PCCP Program) was developed to rehabilitate the PCCP portions of the five subsurface water distribution pipelines (also known as feeders) that were identified as having the highest risk as described above.

The PCCP Program is designed to maintain the reliability of Metropolitan's distribution system to minimize risks associated with failures by proactively rehabilitating each portion of PCCP, starting with the pipes that show the greatest risk of failure. The PCCP Program will help Metropolitan avoid possible unplanned system outages, thereby increasing service reliability for customers within Metropolitan's service area.

The following are the objectives of the PCCP Program:

- Reduce the risk of unplanned outages.
- Extend the service life of the pipelines.
- Perform the rehabilitation work in a cost-effective manner.
- Minimize the effects of rehabilitation efforts on Member Agency deliveries.
- Minimize the loss of hydraulic capacity due to rehabilitation.
- Improve system operational and emergency flexibility.

A Programmatic Environmental Impact Report (PEIR) was prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code [PRC] Section 21000 et seq.) and the Guidelines for Implementation of CEQA (State CEQA Guidelines) published by the Public Resources Agency of the State of California (California Code of Regulations, Title 14, Section 15000 et seq.). The PCCP PEIR was certified by the Metropolitan Board of Directors on January 10, 2017.

Proposed Project Summary

The proposed project, Reach 3 of the Second Lower Feeder, covers rehabilitation of portions of a 4.9-mile section of the 78-inch diameter Second Lower Feeder in the cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates and a 300-linear-foot section of the 84-inch diameter Sepulveda Feeder in the cities of Los Angeles and Torrance. Proposed locations for project elements have been identified, including the contractor's work and storage area, pipe access sites from which the feeder would be relined, installation of large isolation valves, belowground structures that would be improved, air-release/vacuum valves that would be relocated above grade, air-release/vacuum valves that would be improved, and the construction of a service connection (WB-41). Rehabilitation and site restoration activities would take approximately 21 months and would be broken into three phases identified as Phase 3a, Phase 3b, and Phase 3c. For Phase 3a, mobilization of equipment and traffic control setup would be scheduled to begin in December 2022, and traffic control and equipment would be removed, and the sites restored by the end of June 2023. Water service would be interrupted on the Second Lower and Sepulveda Feeders beginning in January 2023, and the pipelines would be returned to service in April 2023. For Phase 3b, mobilization of equipment and traffic control setup would begin in December 2023 and would extend to June 2024. Water service would be interrupted from January 2024 through April 2024. For Phase 3c, mobilization of equipment and traffic control setup would begin in December 2024 and would extend to June 2025. Water service would be interrupted from January 2025 through April 2025. The PCCP Rehabilitation Program schedule is dependent on periodic pipeline inspections and risk assessments of all the PCCP lines within Metropolitan's service area. Thus, if inspections reveal another pipeline or pipeline reach is at greater risk, the repair schedule would be altered. Shutdowns are primarily scheduled during low water use times (i.e., the optimum time for pipeline shutdowns is winter months when water demand is less than during the summer months).

Environmental Consequences

Consistent with the procedures identified in Section 15168(c) of the State CEQA Guidelines, the proposed project is a subsequent activity that is part of the PCCP Program, which "must be examined in the light of the program EIR to determine whether an additional environmental document must be

prepared." Metropolitan has prepared an Initial Study to determine if the proposed project would have new effects that were not examined in the PEIR.

The environmental consequences of the proposed project are described in the attached Initial Study. The impacts of the proposed project are compared to the impacts described in the PEIR to determine whether the proposed project would result in new impacts not previously described and whether those new impacts would be significant, or whether the proposed project would result in significant impacts that are substantially more severe than the impacts identified in the PEIR. Several environmental resource areas are not discussed in this Initial Study, as these items were determined not to require further analysis beyond what was included for the Second Lower Feeder portion of the PCCP Program in the December 2014 Initial Study. The State CEQA Guidelines Appendix G items that are not included in this Initial Study are detailed in the introductory section.

The categories of impacts evaluated in the attached Initial Study include:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Recreation
- Transportation/Traffic

As described in the Initial Study that follows, the impacts of the proposed project are either consistent with the impacts described in the PEIR or less severe than those identified in the PEIR; therefore, the proposed project would not result in new significant impacts or substantially more severe significant impacts than those described in the PEIR. Applicable mitigation measures identified in the PEIR will be implemented for the proposed project.

Finding

This Addendum to the PCCP PEIR reflects the independent judgement of Metropolitan. Pursuant to Section 15168 of the State CEQA Guidelines, the proposed project is within the scope of the program covered by the PCCP PEIR. The proposed project would result in no new significant environmental impacts or substantially more severe significant impacts than those described in the PEIR. The Initial Study identifies mitigation measures from the PEIR that will be implemented for the proposed project. No new project-specific mitigation measures were identified. Consequently, the proposed project would not affect the original January 2017 program approval determination, and no supplemental environmental impact report (EIR), subsequent EIR, or Mitigated Negative Declaration to the PEIR is required.

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INITIAL STUDY

FOR THE

SECOND LOWER FEEDER REACH 3 OF THE PRESTRESSED CONCRETE CYLINDER PIPE REHABILITATION PROGRAM

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LIST OF ACRONYMS

AB	Assembly Bill
ANSI	American National Standards Institute
AQMP	Air Quality Management Plan
AWWA	American Water Works Association
BMPs	best management practices
BRA	Biological Resource Assessment
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CRS	Cultural Resources Study
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
GHG	greenhouse gas
HCP	Habitat Conservation Plan
L_{EQ}	average sound energy over a specified period
LOS	level of service
LST	Localized Significance Threshold
LUST	leaking underground storage tank
Metropolitan	The Metropolitan Water District of Southern California
MM	mitigation measure
N/A	not applicable
NCCP	Natural Community Conservation Plan
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
PCCP	Prestressed Concrete Cylinder Pipe
PCCP Program	Prestressed Concrete Cylinder Pipe Rehabilitation Program
PEIR	Programmatic Environmental Impact Report
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PM_{10}	particulate matter 10 microns or less in diameter
PRC	Public Resources Code
PRIMP	Paleontological Resources Impact Mitigation Program
proposed project	Second Lower Feeder Reach 3

ROW	right-of-way
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SLF	Second Lower Feeder
SO_X	sulfur oxides
Sta.	Station Number
s/v	second per vehicle (delay)
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
V/C	volume to capacity
VOC	volatile organic compounds

INTRODUCTION

Purpose of the Initial Study

The purpose of this Initial Study is to assess the potential for new or more severe significant environmental impacts for the Second Lower Feeder Reach 3 (proposed project) rehabilitation beyond those identified in the Programmatic Environmental Impact Report (PEIR) prepared for the Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program (PCCP Program). The PEIR was certified by The Metropolitan Water District of Southern California's (Metropolitan) Board of Directors on January 10, 2017 (SCH #2014121055) and addressed the potential for environmental impacts at a planning level for each of the five pipelines that would be rehabilitated under the PCCP Program. The proposed project covers rehabilitation of a 4.9-mile section of the Second Lower Feeder in the cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates and a 300-linear-foot section of the 84-inch-diameter Sepulveda Feeder in the cities of Los Angeles and Torrance (see **Figure 1**).

The PEIR was prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code [PRC] Section 21000 et seq.) and the Guidelines for Implementation of CEQA (State CEQA Guidelines) published by the Public Resources Agency of the State of California (California Code of Regulations, Title 14, Section 15000 et seq.). Consistent with the procedures identified in Section 15168(c) of the State CEQA Guidelines, the proposed project is a subsequent activity that is part of the PCCP Program, which "must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." Metropolitan is conducting an Initial Study to determine if the proposed project would have new effects that were not examined in the PEIR. In accordance with the State CEQA Guidelines Section 15168(c)(1) and (2), in the event that no new or substantially more severe significant effects from the subsequent activity are identified and no new mitigation measures are required, Metropolitan can approve the activity as being within the scope of the program covered by the PEIR, and no new environmental document is required. However, if new or substantially more severe significant impacts or additional mitigation measures are identified, a Negative Declaration or Environmental Impact Report (EIR) is required.

Scope of the Initial Study

As discussed above, this Initial Study evaluates the proposed project to determine whether new or more severe significant environmental effects beyond those identified in the PEIR would occur. Previous analysis completed as part of the December 2014 Initial Study/Notice of Preparation prepared for the PCCP Program and Second Lower Feeder Project determined that further analysis would not be required for some resource areas. It should be noted that the December 2014 Initial Study/Notice of Preparation described the PEIR as both a project-level EIR for the Second Lower Feeder Project and a PEIR for four other pipelines. Only a programmatic analysis was conducted for the certified PEIR, however; therefore, this Initial Study serves as the project-level analysis for one portion of the PCCP Program—Reach 3 of the Second Lower Feeder. The following items were determined not to require further analysis beyond what was included for the Second Lower Feeder portion of the PCCP Program in the December 2014 Initial Study because no significant environmental impacts were identified:

I. Aesthetics (b. substantially damage scenic resources)

II. Agriculture and Forestry Resources (a. conversion of farmland; b. conflict with agricultural use or Williamson Act; c. conflict with forestland or timberland zoning; d. conversion of forestland; e. changes that could convert farmland or forestland)

III. Air Quality (e. odors)

IV. Biological Resources (d. interfere with species movement; f. conflict with a habitat conservation plan)

VI. Geology and Soils (e. soils incapable of supporting septic tanks)

VIII. Hazards and hazardous materials (f. private airstrip; h. wildland fires)

IX. Hydrology and Water Quality (b. groundwater supplies; f. otherwise degrade water quality; g. housing in a 100-year flood hazard area; h. structures in a 100-year flood hazard zone; i. risk due to flooding or levee/dam failure)

X. Land Use and Planning (a. physically divide an established community; c. conflict with a habitat conservation plan)

XI. Mineral Resources (a. loss of availability of a mineral resource of value to the region and state; b. loss of availability of a locally important mineral resource)

XII. Noise (c. permanent increase in ambient noise levels; f. noise in the vicinity of a private airstrip)

XIII. Population and Housing (a. induce substantial population growth; b. displace substantial number of housing units; c. displace substantial numbers of people)

XIV. Public Services (a. provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities)

XV. Recreation (b. inclusion, construction, or expansion of recreational facilities)

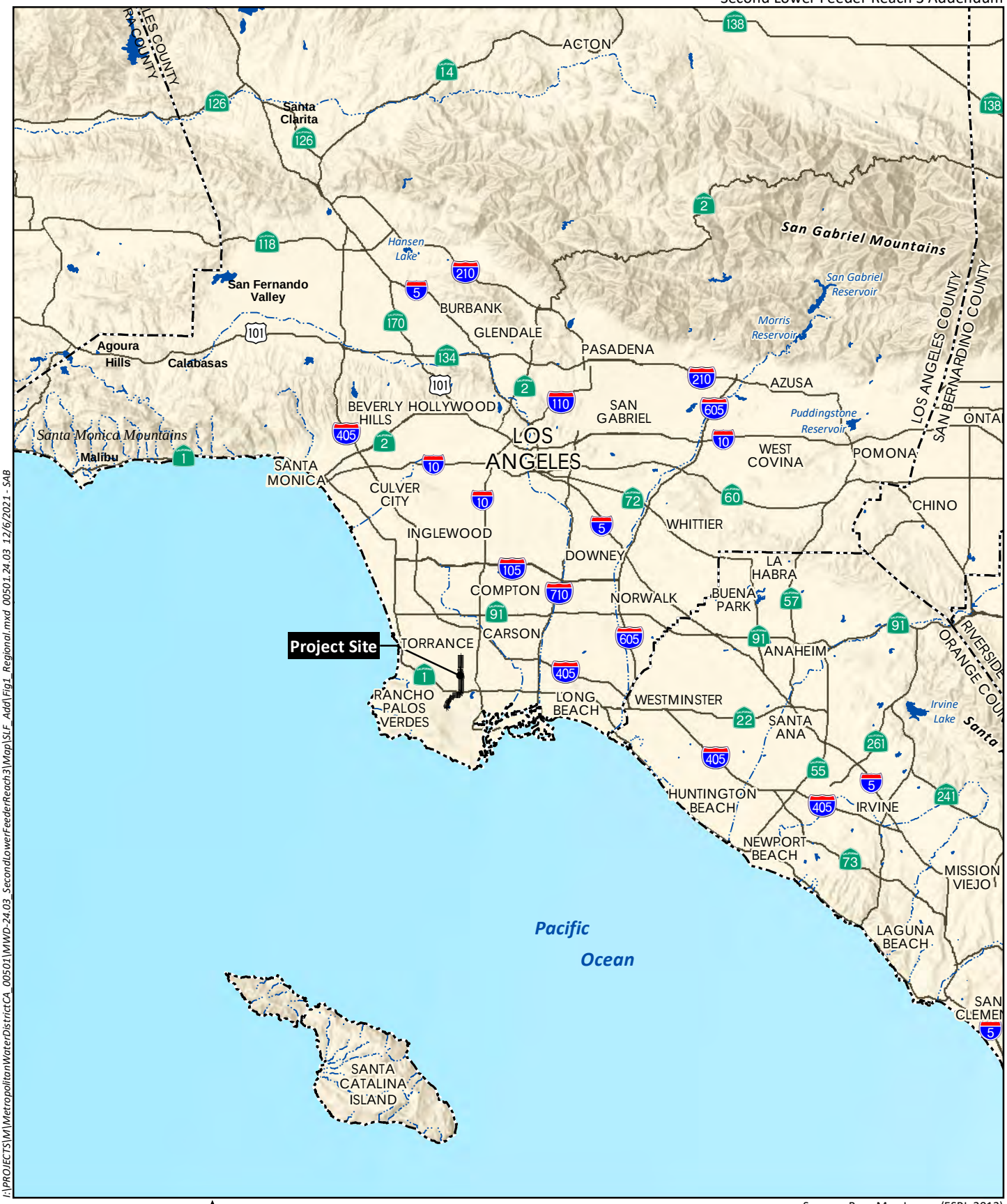
XVI. Utilities and Service Systems (a. conflict with wastewater treatment requirements; b. construction or expansion of new water or wastewater treatment facilities; c. construction or expansion of stormwater drainage facilities; d. sufficient water supplies; e. adequate wastewater capacity; f. sufficient landfill capacity; g. federal, state and local statutes and regulations related to solid waste)

The PCCP PEIR included an analysis of energy conservation consistent with Appendix F to the State CEQA Guidelines, which concluded that energy consumption related to program implementation would not be wasteful, inefficient, or unnecessary. Because Appendix F specifies that energy conservation is to be considered as part of an EIR, and the PEIR considered energy conservation in the analysis of program energy consumption, no additional analysis related to energy conservation is included in this Initial Study.

Additional analyses for issues and resources not included in the list above are provided in the Initial Study checklist that follows.

Format of the Initial Study

The Initial Study uses a modified version of the checklist set forth in Appendix G of the State CEQA Guidelines. It indicates whether an environmental impact category would have new or more severe significant impacts than those identified in the PCCP PEIR, or whether impacts would be less than or equal to those identified in the PCCP PEIR. In addition, the Initial Study identifies applicable mitigation measures included in the PCCP PEIR for implementation, as part of the proposed project. In certain circumstances, the mitigation measures included in the PCCP PEIR are not applicable to the proposed project because the project location or specific characteristics of the proposed project do not trigger the need for mitigation. For example, no historic structures are located within the project limits; therefore, mitigation for such resources is not required.



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Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1

APPENDIX G, ENVIRONMENTAL CHECKLIST FORM

1. Title

Initial Study for the Second Lower Feeder, Reach 3 of the Prestressed Concrete Cylinder Pipe Rehabilitation Program

2. Lead Agency Name and Address

The Metropolitan Water District of Southern California
700 N. Alameda Street
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Mailing Address

P.O. Box 54153
Los Angeles, California 90054-0153

3. Contact Person and E-mail

Lilia I. Martínez, Principal Environmental Specialist
EP@mwdh2o.com

4. Location

Cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates, California

5. Sponsor's Name and Address

The Metropolitan Water District of Southern California
700 N. Alameda Street
Los Angeles, California 90012

6. Land Use

Public Right-of-way

7. Zoning

Public Right-of-way (Not Zoned)

8. Project Description

The proposed project is located within the cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates, California and would reline approximately 26,000 linear feet (4.9 miles) of PCCP along the Second Lower Feeder and approximately 300 linear feet along the Sepulveda Feeder with prefabricated coiled steel liner pipe, extending from Second Lower Feeder Station 1860+10 (located at the intersection of Western Avenue and 220th Street in the city of Los Angeles) to Second Lower Feeder Station 2116+84 (located adjacent to the Palos Verdes Reservoir in the city of Rolling Hills Estates) and from Sepulveda Feeder (SF) Station 2270+46 to SF Station 2273+29 (located along Western Avenue between 219th and

220th streets in the cities of Torrance and Los Angeles); see **Figure 2**. Rehabilitation activities would occur throughout the project footprint including air release/vacuum valve relocations, valve replacements, pumpwell air vent installations, maintenance hole enlargements, incorporation of new maintenance holes, and other minor work.

Construction within the pipelines would occur over three phases referred to as Phase 3a, Phase 3b, and Phase 3c. Each of the three phases would include a four-month shutdown period (January to April 2023 for Phase 3a, January to April 2024 for Phase 3b, and January to April 2025 for Phase 3c). During these shutdowns, the Second Lower Feeder would be shutoff and dewatered from Station 1475+25 (located on Bixby Road west of Long Beach Boulevard in the city of Long Beach) to Station 2116+84 (located adjacent to the Palos Verdes Reservoir in the city of Rolling Hills Estates) and the Sepulveda Feeder would be shut down and dewatered from Station 1927+65 (located on Van Ness Avenue at El Segundo Boulevard in the city of Gardena) to Station 2273+36 (located on Western at 220th Street in the city of Torrance). Construction activities would include:

- Approximately 21 months of mobilization and traffic control work, including 12 months of pipeline rehabilitation activities as follows: Beginning in December 2022, equipment would be mobilized, and traffic control would be set up. Water service shutdowns would begin in January 2023 and the pipelines returned to service by the end of April 2023. Traffic controls and equipment would be removed by the end of June 2023. In December 2023, equipment would again be mobilized, and traffic control set up. Water service shutdowns would begin in January 2024, and the pipelines returned to service in April 2024. Traffic controls and equipment would be removed by the end of June 2024. In December 2024, equipment would again be mobilized for a third time, and traffic control would be set up. Water service shutdowns would begin in January 2025 and the pipelines returned to service in April 2025. Traffic controls and equipment would be removed by the end of June 2025.

Dewatering activities, as well as pipeline relining activities and ventilation, would generally occur 24 hours per day, Monday through Sunday. Other construction activities, such as excavation, would generally be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday, and on Saturdays when necessary and with prior approval of the Engineer, in accordance with local cities and municipalities. Noise attenuation measures would be implemented where needed, consistent with the PEIR, and appropriate jurisdictional permits will be obtained.

After all rehabilitation activities have been completed, for a period of five to ten days, the Second Lower Feeder and Sepulveda Feeder would be disinfected in accordance with American Water Works Association (AWWA) and American National Standards Institute (ANSI) standards. After disinfection, both feeders would be returned to service.

The following sections describe the components of the PCCP Program generally and how those components would be implemented as part of the proposed project.

Project Components

As discussed in the PEIR, rehabilitation of PCCP can be categorized as primary, secondary, and associated temporary construction components. These components and the various methods needed to construct, install, and operate the components are summarized below and would be used as appropriate for rehabilitation efforts under the proposed project.

Second Lower Feeder Project Alignment
Sepulveda Feeder Project Alignment
Pipe Access Site Station
City Boundary

1863
1860
1916
1964
2022
2015
2034
2098
2109
2114

Maple Ave
Sepulveda Blvd
Arlington Ave
Plaza Del Amo
223rd St
W 223rd St
Western Ave
W 228th St
Cabrillo Ave
W Sepulveda Blvd
235th St
Los Angeles Unincorporated
Lomita Blvd
Skypark Dr
Torrance
Lomita
Narbonne Ave
Torrance
Los Angeles
Normandie Ave
Eshelman Ave
Lomita Blvd
W Lomita Blvd
Western Ave
Crenshaw Blvd
Pacific Coast Hwy
Vermont Ave
Lomita
Torrance
Rolling Hills Estates
W Anaheim St
Lomita
Los Angeles
Palos Verdes Dr E
Rolling Hills Estates
Rolling Hills Estates
Western Ave
Palos Verdes Dr N
N Gaffey St
Lomita
Rancho Palos Verdes
Rolling Hills Estates
Rancho Palos Verdes
Rancho Palos Verdes
Los Angeles

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0 1,500 Feet

Source: Aerial (Maxar, 2020)

HELIX Environmental Planning

Project Components

Figure 2

- Primary components include the different methods of rehabilitation considered for segments of the pipelines under the PCCP Program. The rehabilitation method that would be used for this proposed project would be relining with coiled steel liner pipe.

- Secondary components include permanent appurtenant structures. These appurtenant structures include buried (underground) structures and aboveground enclosures. Buried structures include vaults that house piping such as those at interconnections and equipment such as valves, meters, service connections, and blow-offs. Aboveground enclosures, typically located on sidewalks or median strips, house air release/vacuum valves and air vents.

- Temporary construction components include pipe access sites, structure excavation sites, contractor work areas, and equipment staging areas.

Primary Project Components

Relining with Coiled Steel Liner Pipe

As discussed in the PEIR, steel cylinder relining rehabilitation of PCCP would involve the following:

- Inserting coiled steel liner pipe into the existing PCCP line.

- Expanding the coiled steel liner pipe to fit properly within the PCCP interior.

- Welding the expanded steel liner pipe within the PCCP.

- Filling the annular space between the expanded steel liner pipe and existing PCCP with cement grout.

- Applying a cement mortar lining to the interior surface of the steel liner pipe.

Most of the rehabilitation activities would occur within the existing pipeline, and site impacts would occur primarily at the pipe access sites. **Figure 3** shows an example of the type of coiled steel liner pipe that would be inserted into the existing PCCP. All work described above would be done inside the existing pipeline from pipe access sites along the existing pipeline alignment.

Figure 3. Coiled Steel Pipe Section

Secondary Project Components

As discussed in the PEIR, pipeline systems typically include equipment vaults that house water meters, isolation valves, check valves, bypass valves, back-flow preventer valves, pressure-reducing valves, pump wells, service connection, and blow-offs. The top of the structure is typically several feet belowground surface and the structures are accessed via ladders from street-level hatches or maintenance holes.

Maintenance Holes and Aboveground Enclosures

Maintenance holes typically provide access for maintenance and repairs and are spaced at regular intervals along pipelines. Existing maintenance holes would be used for ventilation, as well as for access to the interior of the pipeline for personnel, small equipment, and materials during rehabilitation of other project components (e.g., pipeline relining).

The proposed project would include the following three activities related to maintenance holes: maintenance hole enlargement, relocation of air release and vacuum valves at nine maintenance hole vaults to aboveground location, and maintenance hole refurbishment. Each activity is further described below.

Maintenance hole enlargement would occur at the five existing maintenance holes shown in **Table 1**. If determined to be necessary, the five maintenance hole enlargement sites may also be used as pipe access

sites. Therefore, in order to provide flexibility during construction, these sites are conservatively assumed to also be used as pipe access sites with an average excavation area of 86 feet by 34 feet.

Table 1. Maintenance Hole Enlargement Sites

Site	Location	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)
SLF Sta. 1875+56	Within the center of Western Avenue, immediately south of W 223rd Street	150 x 35
SLF Sta. 1899+76	Within the east side of Western Avenue, north of Sepulveda Boulevard	200 x 40
SLF Sta. 1957+80	Within the Western Ave median adjacent to W 246th Street	20 x 40
SLF Sta. 2034+32	On the north side of 262nd Street, west of Monte Vista Avenue	40 x 15
SLF Sta. 2045+04	Within the grassy parkway on the south side of 262nd Street west of Murad Ave	20 x 40

Note: For irregularly-shaped work areas, the maximum width and length are presented in the table.
SLF Sta.: Second Lower Feeder Station Number

California State Water Resources Control Board regulations require that all treated water supply systems be protected from potential contamination. Air release/vacuum valves currently located in vaults along the project pipeline have a potential to introduce contaminants into the Second Lower Feeder. The purpose of these valves is to control air pressure in the mainline by automatically opening to the atmosphere to allow air into or out of the pipeline during dewatering or filling operations. Being located in underground vaults that are susceptible to flooding with rain runoff or seepage water, there is a possibility that as these valves open, they will allow water that has flooded the vault into the pipeline, thereby contaminating it with rain-runoff or seepage water pollutants. Therefore, per the aforementioned regulations, existing air release/vacuum valves in underground vaults along the project would be relocated aboveground.

The relocation of air release/vacuum valves from belowground to aboveground would involve installation of new piping from the existing valve connection point in the vault to a nearby aboveground location and installation of a new valve aboveground. This would require shallow trenching from the existing belowground vault to the new aboveground location.

For the proposed project, the trench would be approximately two feet wide and about five feet deep. The length of the trench would vary with the size of the street to be crossed, as valves would be moved from their current underground locations within the roadway to nearby area outside of the roadway. In addition, the access structures would be retrofitted with locking maintenance hole covers, and the access structure ring would be removed.

The new aboveground air release/vacuum valves would be housed in small enclosures within the public right-of-way in a median or sidewalk or within Metropolitan-owned property. **Figure 4** shows a typical aboveground valve enclosure. **Table 2** identifies the locations where air release/vacuum valves would be relocated aboveground.

Following the equipment relocation, the remaining equipment in the maintenance vaults would be repainted. Additionally, existing mortar coating would be removed, existing steel pipe would be coated and new steel pipe sleeves would be installed in 24 maintenance holes and in two side outlets.

Figure 4. Typical Aboveground Valve Enclosure

Table 2. Air Release/Vacuum Valve Relocation Sites

Site	Location	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)
SLF Sta. 1863+24	Within the sidewalk on the east side of Western Ave south of 220th Street	20 x 40
SLF Sta. 1910+14	Within the Western Ave median north of 234th Street	20 x 40
SLF Sta. 1918+31	Within the sidewalk on the east side of Western Ave south of 235th Street	20 x 40
SLF Sta. 1934+77	Within the Western Ave median south of 238th Street	20 x 40
SLF Sta. 1957+80	Within the Western Ave median adjacent to W 246th Street	20 x 40
SLF Sta. 1963+48	Within the east side of Western Ave adjacent to W 247th Place	20 x 40
SLF Sta. 2034+32	On the north side of 262nd Street, west of Monte Vista Avenue	40 x 14.5
SLF Sta. 2045+04	Within the grassy parkway on the south side of 262nd Street west of Murad Ave	20 x 40
SLF Sta. 2101+17	Within the dirt parkway on Palos Verdes Drive E south of Palos Verdes Drive N	20 x 40

Note: For irregularly-shaped work areas, the maximum width and length are presented in the table.
SLF Sta.: Second Lower Feeder Station Number

Pumpwells and Blow-off Structures

As discussed in the PEIR, pumpwells and blow-off structures along pipelines are used to dewater the pipeline into natural creeks, channels, waterways, and storm drains when a shutdown of the pipeline is necessary. Pumpwells allow temporary pumps to be used to dewater a pipeline. Blow-offs allow gravity to dewater the pipelines. Pumpwells and blow-offs also provide access points for routine maintenance or pipeline inspection. These structures are typically located within the buried equipment vaults.

Table 3 identifies the location and improvements that would occur at the one pumpwell and three blowoff isolation structures within the project limits.

Table 3. Pumpwell Isolation Valve and Blow-off Structure Improvement Locations

Site	Location	Improvement	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)
SLF Sta. 1875+56	Within the sidewalk on the east side of Western Avenue south of 223rd Street	Install new vent stack for pump well structure	50 x 20
SLF Sta. 1920+30	Within the median on Western Avenue south of W 235th Street	Modify blow-off structure	140 x 40
SLF Sta. 1961+70	Within the median on Western Avenue south of W 247th Street	Modify blow-off structure	140 x 40
SLF Sta. 1973+18	Within the southbound lanes of Western Avenue on the southwest corner of Lomita Boulevard and Western Avenue	Modify blow-off structure	140 x 40

Note: For irregularly-shaped work areas, the maximum width and length are presented in the table.
SLF Sta.: Second Lower Feeder Station Number

Isolation Valves and Flow Meters

The proposed project would involve the removal of three existing and installation of three new mainline isolation valves, including rehabilitation of the existing valve vault structures and replacement of appurtenances. The work includes removal of two existing flow meters within the valve vault structures, and replacement of both meters within the new pipe sections. The proposed project also includes removal of one existing and installation of one new stand-alone meter within Oak Street. The three new isolation valves would require structural modifications to the existing large reinforced concrete vault structures within existing developed streets, including mechanical, electrical, instrumentation, and controls equipment. **Table 4** identifies the location and improvements that would occur at the three isolation valve vaults and one flow meter vault structure within the project limits.

Table 4. Isolation Valve Vault and Flow Meter Vault Structures Improvement Locations

Site	Location	Improvement	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)
SLF Sta. 1859+80	Within westbound lane of 220th Street east of Western Avenue	Isolation valve replacement and flow meter replacement, and modify existing vault structure	230 x 45
SLF Sta. 1865+41	Within the median on Western Avenue south of 220th Street and north of 221st Street	Isolation valve and flow meter replacement, and modify existing vault structure	200 x 40
SLF Sta. 2050+00	In Oak Street south of 262nd Street	Remove existing flow meter and install new flow meter	100 x 40
SF Sta. 2270+35	Within the median on Western Avenue north of 220th Street and south of 219th Street	Isolation valve and flow meter replacement, and modify existing vault structure	200 x 40

Note: For irregularly-shaped work areas, the maximum width and length are presented in the table.
SLF Sta.: Second Lower Feeder Station Number; SF Sta.: Sepulveda Feeder Station Number

Other Improvements

In addition to the isolation valve replacements at the improvement locations previously described, multiple other isolation valves and three service connection valves would be replaced.

Temporary Construction Components

As discussed in the PEIR, the temporary construction components include pipe access sites, installation of bulkhead, vault excavation sites, contractor work areas, and equipment staging areas. The temporary construction components would be present during rehabilitation activities only. After construction, these components would be removed, and the sites would be returned to pre-construction conditions.

Bulkhead Installation

As discussed in the PEIR, bulkheads may be required along various sections of the pipelines to isolate one section of the pipeline from another and to ensure continued and reliable water supply delivery to member agencies while rehabilitation is being performed on another section of pipe. For the proposed project, one bulkhead would be installed at Second Lower Feeder Station 1594+20.

Contractor's Work Areas

As discussed in the PEIR, contractor's work areas allow for construction activities to occur safely and efficiently within a construction site. Construction activities would include excavation, shoring, pipe removal, pipeline rehabilitation, electrical panel installation, and construction support activities such as ventilation, dewatering, pipe disinfection, and refilling.

One of the contractor's work areas is proposed to extend into Metro Park, located at 26205 Oak Street in the city of Lomita. Tree removal and grass disturbance would be required within Metro Park to allow for the storage of equipment. Trees that are removed at Metro Park would not be replaced in order to provide operational flexibility.

Pipe Access Sites

As discussed in the PEIR, a pipe access site is defined as the entry or exit portal that exposes the underground PCCP section of the pipe or equipment vault to be rehabilitated (i.e., it is the trench from which new coiled steel liner pipe, valves, and/or temporary bulkheads would be installed). Each pipe access site would be located within a contractor's work area with space to stage liner pipe prior to installation. Multiple pipe access sites would be needed to rehabilitate the pipeline and buried equipment vaults included in the PCCP Program.

Spacing of pipe access sites would vary based on several factors, including the horizontal and vertical bends of the pipe; the locations of valves, vaults, and other equipment; and other factors. Pipe access sites for the proposed project are shown in **Figure 2**. The pipe access sites would vary in size but would be up to 20 feet deep for the proposed project. **Table 5** identifies the locations and approximate sizes of the pipe access sites. However, as previously discussed, the five maintenance hole enlargement sites shown in **Table 1** may also be used as pipe access sites. Therefore, in order to provide flexibility during construction, these sites are conservatively assumed to also be used as pipe access sites with an average excavation area of 40 feet long, 17 feet wide, and 19 feet deep.

Existing surface improvements, such as road pavements, sidewalks, and landscaping, would be removed at each pipe access site, and soils would be excavated and temporarily removed from the site to expose the existing pipeline. Tree removal and/or trimming would be required at multiple pipe access sites, and overhead utility line relocation would be required at Second Lower Feeder Station 1859+80. Once rehabilitation is complete, many of the pipe access sites would have maintenance holes installed for future maintenance/repairs and the surrounding area would either be backfilled with soils originally excavated or backfilled with cement slurry, and the surface of each access site and surrounding work zone would be restored to existing conditions with the addition of maintenance hole covers in some locations. This would involve re-paving existing roads, repairing or replacing existing sidewalks, and replanting landscaping.

Pipe Access Site Ingress/Egress

Pipe access sites within roadways would generally be accessed via the roadway; however, access to Pipe Access Sites 2109 and 2114 would require additional ingress/egress routes. Ingress to the Pipe Access Sites 2109 and 2114 would be achieved by traveling west along Palos Verdes Drive North and then south along Palos Verdes Drive East. Egress would involve a U-turn across Palos Verdes Drive East to exit the area traveling north and then east on Palos Verdes Drive North.

Additionally, ingress to the flow meter vault at Second Lower Feeder Station 2050, located near the southern terminus of Oak Street, would be achieved via Oak Street. Egress would either be achieved via Oak Street or from Oak Street through a Metropolitan-owned property and out to Palos Verdes Drive North.

Contractor Staging and Storage Areas

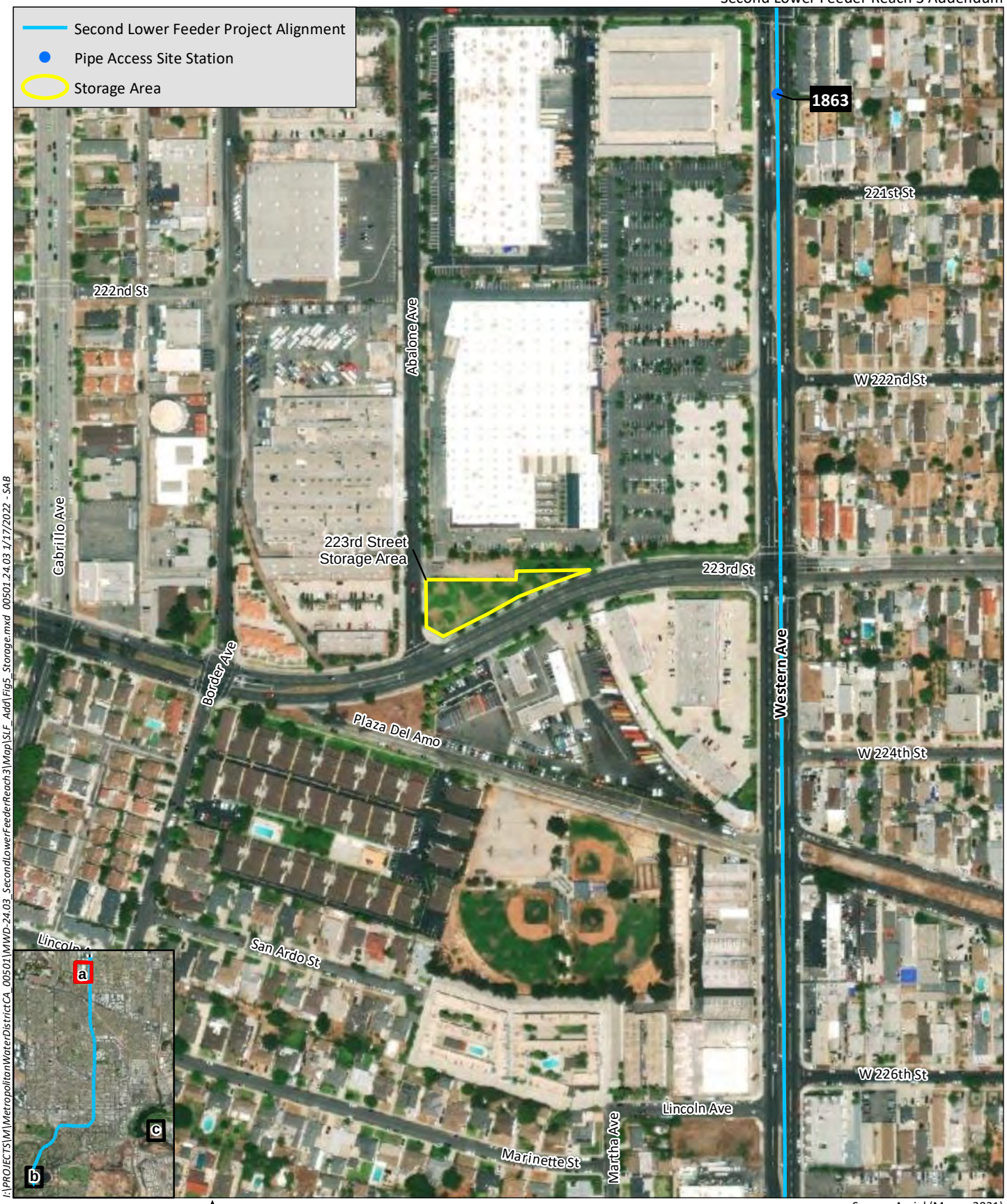
Contractor staging and storage areas provide space to temporarily store liner pipes, construction materials such as shoring boxes and pipe bedding materials, and equipment such as excavators and dump trucks. Space within the contractor's work areas may be used as a temporary staging area; however, space limitations require that most materials and equipment be stored at a larger contractor storage area.

Three staging areas are proposed along the project alignment. The first staging area would be located in the city of Torrance on the northeast corner of West 223rd Street and Abalone Avenue (**Figure 5a**). This

site would be primarily used for staging during the proposed valve replacement at the intersection of 220th Street and Western Avenue. At this location, existing trees and utilities would be avoided. The second would be located in the city of Rolling Hills Estates at the northeast corner of Palos Verdes North and Palos Verdes East (**Figure 5b**). At this location, the project would either use the existing dirt lot as a staging area or would create a laydown area within the street adjacent to the dirt lot. The third staging area would be located in the vacant area immediately southeast of the pipe access site at Second Lower Feeder Station 2109+65, southwest of Palos Verdes Drive East (**Figure 5b**).

In addition to these three smaller staging areas, a larger contractor storage area would be required and would be located at an approximately 12-acre vacant lot at Los Angeles Harbor College, one mile east of the project alignment (**Figure 5c**). Metropolitan has leased the site from Los Angeles Harbor College from February 2020 through January 31, 2023, with the potential for one or two 1-year extensions. In addition to storing equipment, materials, and vehicles at the site, Metropolitan would install temporary office trailers as well as security gates. Metropolitan determined through previous environmental documentation (dated November 2019) that there would be no potential significant impacts associated with using the Los Angeles Harbor College site as a contractor storage area for the PCCP Program and it is therefore not included in the analysis of this document.

Upon completion of construction work on the Second Lower Feeder, the contractor storage and staging areas would be returned to their pre-construction condition, as appropriate and pursuant to any agreements. For example, if pavement were to be damaged during staging, Metropolitan would re-pave the area.

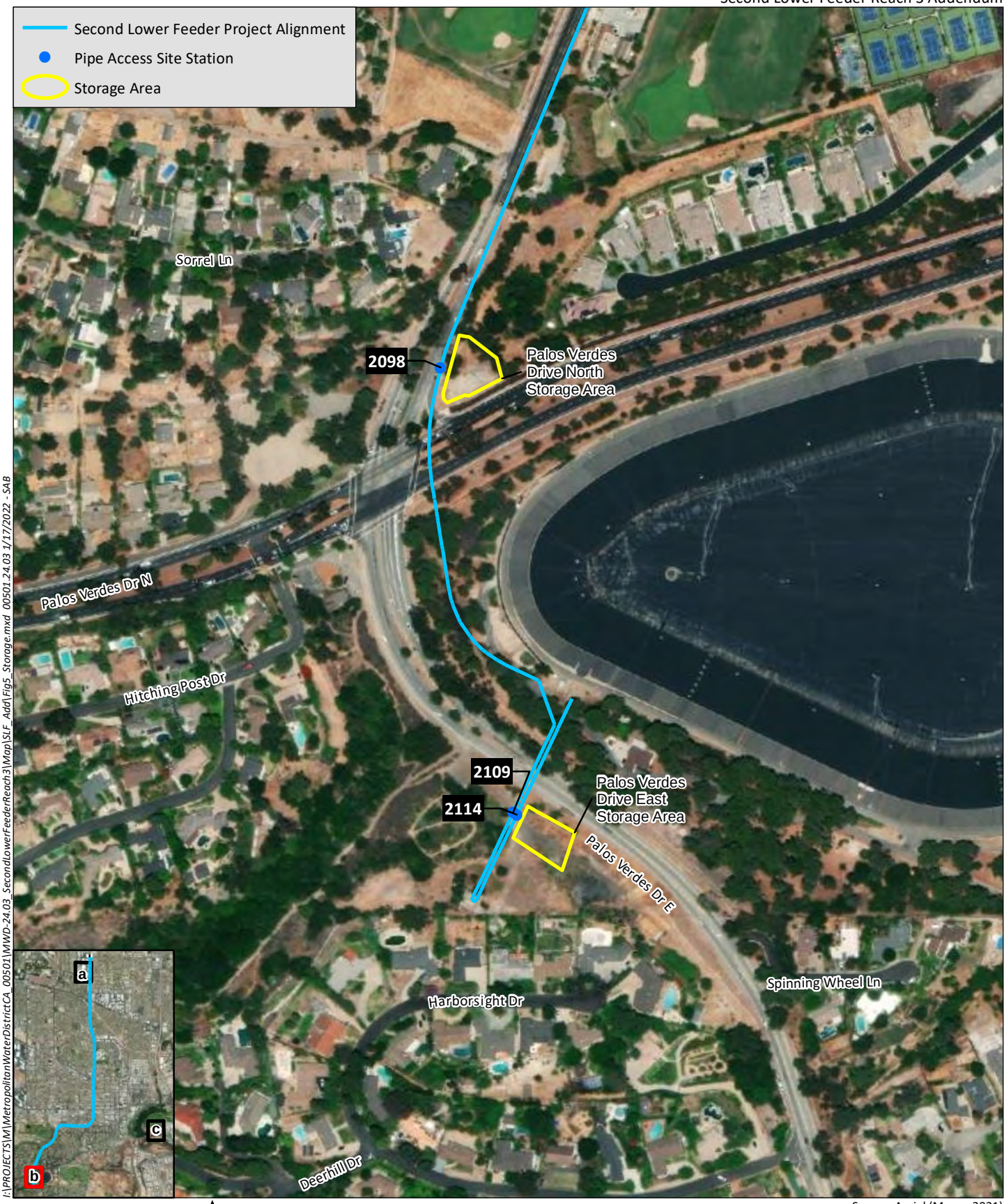


Source: Aerial (Maxar, 2021)

HELIX Environmental Planning

Contractor Staging Area

Figure 5a



Source: Aerial (Maxar, 2021)

HELIX Environmental Planning

Contractor Staging Areas

Figure 5b

Source: Aerial (Maxar, 2021)

HELIX Environmental Planning

Contractor Storage Area

Figure 5c

Table 5. Proposed Project Pipe Access Sites for PCCP Relining

Pipe Access Site	Location	Alignment	Approximate Excavation Dimensions (Length x Width x Depth, in feet)	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)	Location Type
SLF Sta. 1860	On the north side of W 220th Street, east of Western Avenue	East/West	40 x 18 x 20	230 x 45	Public ROW Roadway Utility
SLF Sta. 1863	Within the median on Western Avenue, south of 220th Street	North/South	40 x 18 x 20	200 x 40	Public ROW Roadway Utility
SLF Sta. 1916	Within the median on Western Avenue, north of W 235th Street	North/South	40 x 18 x 17	200 x 40	Public ROW Roadway Utility
SLF Sta. 1964	Within the median on Western Avenue, south of W 247th Place	North/South	40 x 18 x 18	200 x 40	Public ROW Roadway Utility
SLF Sta. 2015	Within the median on Western Avenue, north of W 261st Street	North/South	40 x 18 x 25	220 x 35	Public ROW Roadway Utility
SLF Sta. 2022	On the north side of 262nd Street, east of Cayuga Avenue	East/West	40 x 18 x 19	140 x 30	Public ROW Roadway Utility
SLF Sta. 2034	On the north side of 262nd Street, west of Monte Vista Avenue	East/West	40 x 15 x 18	140 x 30	Public ROW Roadway Utility
SLF Sta. 2098	On Palos Verdes Drive E north off Palos Verdes Drive N.	North/South	40 x 13 x 21.5	215 x 30	Public ROW Roadway Utility
SLF Sta. 2109 and 2114	Southwest of Palos Verdes Drive E	North/South	40 x 18 x 15.5	250 x 65	MWD Permanent Easement 1413-22-1 Utility

Note: For irregularly-shaped work areas, the maximum width and length are presented in the table.
ROW: right-of-way; SLF Sta.: Second Lower Feeder Station Number

CHECKLIST

Organization of the Initial Study

This Initial Study uses a modified version of the checklist set forth in Appendix G of the State CEQA Guidelines. Based on the analysis that follows, it was determined that no new or more severe significant impacts than those identified in the PEIR would occur as a result of implementation of the proposed project.

Determination

On the basis of this initial evaluation and application of the State CEQA Guidelines (Section 15162, 15163, and 15164):

	YES	NO
1. Substantial changes are proposed in the project that will require major revisions of the PEIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or		X
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous PEIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or		X
3. New information of substantial importance to the project becomes available, and		
a. The information was not known and could not have been known at the time the PEIR was certified as complete or was adopted, and		X
b. The new information shows any of the following:		
i. The project will have one or more significant effects not discussed previously in the PEIR;		X
ii. Significant effects previously examined will be substantially more severe than shown in the PEIR;		X
iii. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project; or		X
iv. Mitigation measures or alternatives that were not previously considered in the PEIR would substantially lessen one or more significant effects on the environment.		X

Findings:

1. The project has effects that were not examined in the EIR; therefore, an Initial Study needs to be prepared leading to either an EIR or a Negative Declaration.		X
2. The agency finds that pursuant to Section 15162, no new effects will occur and no new mitigation measures will be required. The agency can approve the project as being within the scope of the project covered by the PEIR, and no new environmental document is required.	X	

Jennifer Harriger
Signature

01-19-2022
Date

Jennifer Harriger
Printed Name

Section Manager, Environmental Planning Section
Title

I. AESTHETICS

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Have a substantial adverse effect on a scenic vista?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR noted that while there are some scenic resources present in the program area, impacts to these resources would be less than significant for the following reasons: (1) aesthetic impacts during construction would be temporary; (2) work areas would be restored to pre-construction conditions once construction is completed; and (3) visible, aboveground components of proposed PCCP Program facilities would be minimal (e.g., air release/vacuum valves). No mitigation was proposed.

As noted in Table 4.1-4 of the PCCP PEIR, Palos Verdes Drive East and Palos Verdes Drive North are the only scenic resources within the vicinity of the Second Lower Feeder. Reach 3 of the Second Lower Feeder travels along or immediately adjacent to Palos Verdes Drive East for approximately one mile, and excavation sites 2098 and 2109/2114 occur on or adjacent to Palos Verdes Drive East. Additionally, the pipeline transects Palos Verdes Drive North, and two contractor storage sites would occur along these roadways (one at the intersection of Palos Verdes Drive East and Palos Verdes Drive North, and one in the vacant lot southeast of site 2109, southwest of Palos Verdes Drive East). An air release/vacuum valve would also be relocated aboveground at the intersection of Palos Verdes Drive East and Palos Verdes Drive North. However, as stated in the PEIR, potential aesthetic impacts resulting from the rehabilitation and contractor storage areas associated with the proposed project would be temporary, and the working areas would be restored to pre-construction conditions. The visible aboveground component would be minimal and would not result in a significant adverse effect on Palos Verdes Drive North or Palos Verdes Drive East (see **Figure 4**). Therefore, impacts regarding substantial adverse effects on a scenic vista would be less than significant.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As described in the PCCP PEIR, multiple excavation areas would be used for program rehabilitation activities, which would have the potential to contribute to the degradation of the existing visual character and quality of the project site and the immediate surroundings through the introduction of vehicles, equipment, stockpiled material, and other elements. Due to the short-term nature of construction activities and use of contractor storage areas, however, the impact of the program was determined to be less than significant. Also, as described in the PEIR, permanent visible changes after construction are expected to result in minimal impacts because only aboveground components, such as the relocation of air release/vacuum valves, would be visible (see **Figure 4**). The PCCP PEIR concluded that impacts to visual character or quality related to aboveground structures would be less than significant due to the small footprints of the aboveground structures and because the aboveground structures would likely be placed intermittently and not grouped together. In addition, the aboveground structures would be located in developed areas, where such structures already

commonly exist; these areas would generally not be sensitive to the introduction of such structures. No mitigation was proposed.

Consistent with the PCCP Program, construction of the proposed project would involve the introduction of vehicles, equipment, stockpiled material, and other elements to residential neighborhoods during the course of rehabilitation activities. Thus, the same potential for short-term impacts related to visual character and quality, as discussed in the PEIR, would occur under the proposed project.

Table 2 identifies the nine aboveground relocation sites of the air release/vacuum valves of the proposed project. **Table 3** identifies the location of the pumpwell relocation and blow-off structure improvement locations for the proposed project. Permanent visible changes would be the same as those discussed in the PCCP PEIR, and related impacts would be less than significant. No mitigation would be required.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR discussed the possible use of lighting in contractor's work areas and storage areas for safety and security purposes and the potential for that lighting to spill over into adjacent light-sensitive areas, especially residential land uses, which could result in significant construction-related impacts. Permanent lighting was not included as part of the program; therefore, the PCCP PEIR identified no operational impacts related to light and glare. For construction impacts, the following mitigation measure was identified:

- **MM AES-1** requires that all safety and security lighting at contractor's work areas and staging areas be directed downward and shielded to avoid light spilling over into residential areas, thereby reducing impacts to a less than significant level.

For the proposed project, nighttime work and lighting may be required for the 24-hour periods when the Second Lower Feeder is either dewatered or returned to service, as well as during some pipeline relining and related ventilation work. Implementation of **MM AES-1** would reduce impacts related to light and glare to below a level of significance.

The severity of the impact would be the same as that identified in the PCCP PEIR.

II. AIR QUALITY

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, the criteria used to identify consistency with the South Coast Air Quality Management District (SCAQMD) 2012 Air Quality Management Plan (AQMP) included whether there would be air quality violations or delays in attainment or whether there would be exceedances of the

assumptions included in the AQMP. Regarding the consistency of the PCCP Program with the assumptions included in the AQMP, programmatic impacts were determined to be less than significant because no permanent land use changes would occur as a result of program implementation. With respect to the potential for air quality violation or delays in attainment, the PCCP Program was determined to result in significant impacts as a result of construction-period emissions exceeding SCAQMD regional mass emissions thresholds, and the following mitigation measure was identified:

- **MM AIR-1** requires controls on emissions from construction equipment through the use of best available control technology devices.

While construction-period emissions would be reduced with implementation of **MM AIR-1**, impacts were determined to remain significant and unavoidable.

The total amount of concurrent construction activities assumed for the proposed project based on the project phasing (up to 5 excavation sites, 5 new valve/meter vault structures, and 3 above grade relocations of air release/vacuum valves) would be less than what was analyzed within the PEIR, which assumed concurrent construction activities for 10 excavation sites, 3 aboveground relocations of air-release/vacuum valves, 2 new valve/vault/blow-off structures, and a 1,000-foot-long segment of pipe in a new alignment. Construction assumptions, including equipment, for the proposed construction activities would be similar to that analyzed in the PEIR; however, Reach 3 does not include installation of parallel pipeline. Additional details regarding assumptions and adjustments made to the PEIR analysis are provided in Appendix A.

Table 6 shows daily regional mass emissions at individual sites with implementation of **MM AIR-1**. As shown therein, no regional SCAQMD threshold would be exceeded at any individual site. Additionally, as shown in **Table 7**, maximum daily regional mass emissions for the concurrent construction schedule would not exceed the SCAQMD regional mass emissions thresholds for concurrent construction activities under the proposed project with implementation of **MM AIR-1**.

Table 6. Mitigated Daily Regional Mass Emissions for Single Sites (pounds per day)

Project Component	**Location**	**VOC**	**CO**	**NO_X**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Typical Excavation Site	On-Site	0.5	30.1	2.3	<0.1	0.2	<0.1
	Off-Site	<0.1	0.4	0.2	<0.1	0.1	<0.1
	Total	*0.6*	*30.5*	*2.5*	*<0.1*	*0.3*	*0.1*
Typical New Valve/Meter Vault Structure	On-Site	0.4	25.5	1.8	<0.1	<0.1	<0.1
	Off-Site	<0.1	0.8	0.1	<0.1	0.1	<0.1
	Total	*0.5*	*26.3*	*2.0*	*<0.1*	*0.2*	*<0.1*
Typical Belowground Air-release/ Vacuum Valve Relocation	On-Site	0.1	6.5	0.5	<0.1	<0.1	<0.1
	Off-Site	<0.1	0.4	0.2	<0.1	0.2	<0.1
	Total	*0.2*	*6.9*	*0.7*	*<0.1*	*0.2*	*<0.1*
Single-Site Maximum	**-**	**1.2**	**63.7**	**5.2**	**0.1**	**0.7**	**0.3**
Regional Mass Emissions Threshold	-	75	550	100	150	150	55
Single Site Exceeds Threshold?	**-**	***No***	***No***	***No***	***No***	***No***	***No***

Source: Calculations by HELIX 2021 (see Appendix A).
VOC = volatile organic compounds; CO = carbon monoxide; NO_X = nitrogen oxides; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

Table 7. Mitigated Daily Regional Mass Emissions for Concurrent Construction Scenario (pounds per day)

Emission Site Location	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
On-Site	5.1	297.3	22.1	0.5	1.2	0.7
Off-Site	0.6	7.4	2.4	0.1	1.8	0.5
Total for Concurrent Construction Schedule	**5.7**	**304.7**	**24.5**	**0.5**	**3.0**	**1.2**
Regional Mass Emissions Threshold	75	550	100	150	150	55
Total Exceeds Threshold?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Calculations by HELIX 2021 (see Appendix A).
Note: Emissions are the result of the unrounded single-site emissions, multiplied by the number of applicable construction sites; numbers may not add correctly due to rounding.
The concurrent construction scenario assumes five excavation sites, five new valve/meter vault structures, and three above grade relocations of air release/vacuum valves occurring simultaneously.
VOC = volatile organic compounds; CO = carbon monoxide; NO_X = nitrogen oxides; SO_X = sulfur oxides;
PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

Subsequent to the certification of the PEIR, the Board of the SCAQMD approved the 2016 AQMP, which identifies stationary and mobile source strategies to ensure that federal Clean Air Act deadlines for attainment of the National Ambient Air Quality Standards are met. The proposed project, as was discussed for the program, would not involve changes to land uses such that the assumptions used in the development of the 2016 AQMP would be exceeded. Thus, no conflict with the AQMP would occur.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, concurrent regional mass emissions for the full construction scenario (as described above) would result in emissions that exceed the SCAQMD thresholds for volatile organic compounds (VOCs), nitrogen oxides (NO_X), and carbon monoxide (CO). After the implementation of **MM AIR-1**, thresholds would still be exceeded for NO_X and CO. Thus, regional emissions from the PCCP Program were determined to be significant and unavoidable. The PEIR determined that localized emissions during program rehabilitation efforts would exceed the SCAQMD localized significance thresholds for NO_X, but implementation of **MM AIR-1** would reduce the impact to a less-than-significant level.

As discussed in Item II.a, the proposed project would not result in regional mass emissions that would exceed SCAQMD thresholds following the implementation of **MM AIR-1**. Thus, impacts would be less than significant after implementation of **MM AIR-1**. Localized emissions would be no greater than identified in the PEIR, as discussed in Item (d), and would be less than significant after implementation of **MM AIR-1**. Furthermore, because the proposed project rehabilitation activities within roadways would mostly occur on relatively low-volume streets with alternative routes available for roadways users, no CO or particulate matter hotspots would result from increased congestion near excavation sites.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
c. Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. Refer to the discussion in Items II.a and II.b. As shown in Table 4.3-7 of the PEIR, the South Coast Air Basin is in non-attainment for federal and state ozone standards. However, because emissions from the proposed project would not exceed the SCAQMD regional mass emissions thresholds, impacts would be less than significant after implementation of **MM AIR-1**.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As identified in the PEIR, program rehabilitation activities were determined to have a significant impact on sensitive receptors located in proximity to excavation sites. Such impacts were determined to be reduced with the implementation of **MM AIR-1**, but were found to be significant and unavoidable.

The proposed project would involve rehabilitation activities in proximity to sensitive receptors, such as residences and schools. All excavation areas would occur in residential neighborhoods, as would the aboveground relocation of air-release/vacuum valves and many of the blowers used for pipeline ventilation. Because the locations of these activities are consistent with the distances from sensitive receptors analyzed in the PEIR and the emissions at these locations would be no greater than identified in the PEIR, impacts related to sensitive receptors would be the same as described in the PEIR.

Diesel particulate matter (DPM) is the primary toxic air contaminant (TAC) that would be emitted during construction and would be generated from the use of off-road diesel equipment required for demolition, site grading, excavation, and other construction activities. Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The amount to which the receptors could be exposed, which is a function of concentration and duration of exposure, is the primary factor used to determine health risk. The generation of TAC emissions during construction would be variable and sporadic due to the nature of construction activity. Additionally, construction activities would occur in multiple places over 4.9 miles and would not be concentrated in a single location. Therefore, due to the short duration and intermittent nature of construction activities, and due to the highly dispersive properties of DPM, project-related TAC emission impacts during construction would not expose sensitive receptors to substantial pollutant concentrations and the impact would be less than significant.

A CO hotspot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. If a project increases average delay at signalized intersections operating at Level of Service (LOS) E or F or causes an intersection that would

operate at LOS D or better without the project to operate at LOS E or F with the project, a quantitative screening is required. The increase in daily trips associated with construction of the project would be nominal compared to local traffic volumes, and operation of the project would not result in an increase in traffic. The project would neither cause new severe congestion nor significantly worsen existing congestion. There would be no potential for a CO hotspot or exposure of sensitive receptors to substantial, project-generated, local CO emissions. The impact would be less than significant.

The severity of the impact would be the same as that identified in the PEIR.

III. BIOLOGICAL RESOURCES

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR identified impacts to special-status species as potentially significant at the programmatic level. Areas that are most likely to contain special-status species near the Second Lower Feeder were identified as the Diemer Water Treatment Plant and Black Hills Golf Course in Yorba Linda, and open space areas near the southwest terminus of the Second Lower Feeder in Rolling Hills Estates. Mitigation measures were identified in the PEIR to reduce potential impacts to special-status species resulting from PCCP Program activities:

- **MM BIO-1** requires a pre-construction survey by a qualified biologist for project sites where vegetation removal or ground disturbance would occur in areas that contain special-status species; and
- **MM BIO-2** requires a qualified biologist to determine the presence of nesting bird species in areas where vegetation removal would occur during the nesting season. If a nest is found, the biologist shall determine site-specific measures necessary to avoid disturbing the nest until nesting activity has ceased.

While these measures would reduce the potential for significant impacts to candidate, sensitive, or special-status species resulting from PCCP Program activities, the PEIR determined that impacts may remain significant. The PCCP PEIR concluded that further project-specific analysis and documentation would be necessary to determine if impacts could be reduced to a less-than-significant level.

A Biological Resources Assessment (BRA) was completed for the proposed project by Rincon Consultants, Inc. (Rincon; 2020a) and is provided as Appendix B. The proposed project site is located primarily within paved rights-of-way of existing roadways in highly developed/disturbed urbanized areas. The areas identified by the PEIR as most likely to include special-status species are not located within the proposed project limits.

The California Natural Diversity Database lists 21 special-status plant species and 21 special-status wildlife species that have the potential to occur within a five-mile radius of the proposed project

limits. One sensitive plant community (southern coastal bluff scrub) was also identified within five miles of the project site. Since sensitive plant and wildlife species typically have very specific habitat requirements, and the project area is highly disturbed and lacks suitable habitat, the noted species are not considered to have potential to occur in the project area.

Low-quality foraging and/or roosting habitat for three special-status species (southern California legless-lizard, western mastiff bat, and San Diego desert woodrat) occurs adjacent to and within the proposed project limits, with Palos Verdes Reservoir and Second Lower Feeder Stations 2109/2114 having the greatest potential to support special-status species. The BRA notes, however, that the project site and surrounding areas have a history of frequent disturbance and are surrounded by existing development and heavily travelled transportation corridors; therefore, there is low potential for the identified special-status species to occur on site. Additionally, the BRA states that the adjacent areas with low-quality potentially suitable habitat are also heavily disturbed and have low potential for occurrence of special-status species.

Overall, the project site does not contain habitat that would support species identified as candidate, sensitive, or special-status species; therefore, **MM BIO-1** would not be applicable to the proposed project.

Migratory birds, including most birds that could nest in the study area, are protected by the federal Migratory Bird Treaty Act, which forbids most forms of harm to birds, including to their active nests. In addition, California Fish and Game Code Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Where vegetation, and especially trees, are removed as part of construction during the nesting season (generally February 1 to August 31), there is the potential for violations under the Migratory Bird Treaty Act and Section 3503 et seq. of the California Fish and Game Code. The project site contains ornamental trees and shrubs that could provide suitable nesting habitat for several common bird species. Implementation of **MM BIO-2** would reduce potential impacts on nesting birds to a less-than-significant level.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR identified impacts to riparian habitat and other sensitive natural communities as potentially significant at the programmatic level. Areas that are most likely to contain riparian habitat or other sensitive natural communities near the Second Lower Feeder were identified as the Diemer Water Treatment Plant and Black Hills Golf Course in Yorba Linda and open space areas near the southwest terminus of the Second Lower Feeder in Rolling Hills Estates. Mitigation measures were identified in the PCCP PEIR to reduce potential impacts to riparian habitat and other sensitive natural communities resulting from PCCP Program activities:

- **MM BIO-3** requires a pre-construction survey by a qualified biologist for project sites where vegetation removal or ground disturbance would occur in areas that contain riparian habitat; and
- **MM BIO-4** requires adherence to adopted Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs), or a pre-construction survey by a qualified biologist for areas or activities not covered by an adopted HCP/NCCP, where vegetation removal and/or ground disturbance would occur in areas that contain sensitive natural communities.

The PCCP PEIR concluded that further project-specific analysis and documentation would be necessary to determine if impacts could be reduced to a less-than-significant level.

The BRA states that no riparian habitat, sensitive plant communities, or other sensitive natural communities are present within the proposed project limits or designated work areas. The proposed project would therefore have no impact on riparian habitat or other sensitive natural communities in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, and **MM BIO-3** and **MM BIO-4** would not be applicable to the proposed project.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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, marshes, vernal pools, coastal areas, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR identified impacts to wetlands as potentially significant at the programmatic level. Areas that are most likely to contain wetlands near the Second Lower Feeder were identified as the Diemer Water Treatment Plant and Black Hills Golf Course in Yorba Linda and open space areas near the southwest terminus of the Second Lower Feeder in Rolling Hills Estates. Mitigation was identified in the PEIR to reduce potential impacts to wetlands resulting from PCCP Program activities:

- **MM BIO-5** requires a pre-construction survey by a qualified biologist for project sites where vegetation removal or ground disturbance would occur in areas that contain wetland.

The PCCP PEIR concluded that further project-specific analysis and documentation would be necessary to determine if impacts could be reduced to a less-than-significant level.

The BRA states that although a riparian corridor is mapped within the work area for Second Lower Feeder Station 2098 in the USFWS NWI Wetland Mapper, this feature was not found to be present during the pedestrian survey. The area was found to be dominated by non-native Peruvian pepper trees and no water source was observed. A band of riverine habitat was also mapped along the Palos Verdes Drive East between Oak Street and Club View Lane. This feature was not observed in the field and no work areas are proposed at this location. Therefore, per the BRA, no potentially jurisdictional drainages or wetlands occur within the proposed project limits or designated work areas. The proposed project would have no impact on federally protected wetlands; therefore, **MM BIO-5** would not be applicable to the proposed project.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PEIR notes that PCCP Program pipelines cross many counties and cities that have tree preservation policies or ordinances in place. The PCCP Program would involve the removal of some trees and vegetation during construction activities, and restoration of project sites to pre-construction conditions may not be consistent with existing tree preservation policies or ordinances; therefore, the PCCP PEIR determined that related impacts would be potentially significant. Mitigation was identified to reduce potential impacts related to conflicts with tree preservation policies:

- **MM BIO-7** requires Metropolitan to coordinate with affected jurisdictions to determine appropriate requirements for PCCP Program projects that would require vegetation removal.

The proposed project may involve trimming or removal of vegetation and trees. The proposed project limits cross the jurisdiction of the cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates, and each of these jurisdictions has its own tree preservation ordinance. Trimming or removal of vegetation and trees related to the proposed project may occur within the jurisdiction of each of these cities. Additionally, the portion of the project site located along Western Avenue occurs within the California Department of Transportation (Caltrans) right-of-way; therefore, tree removal in this location would require coordination with Caltrans. Impacts would be potentially significant, but implementation of **MM BIO-7** would reduce impacts to a less-than-significant level.

The severity of the impact would be the same as that identified in the PEIR.

IV. CULTURAL RESOURCES

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR noted that ground-borne vibration from excavation and concrete cutting could potentially affect the nearby built environment and impacts to historical resources in the vicinity of program-related work could be potentially significant. Table 4.5-8 of the PCCP PEIR identified one known historical resource in the vicinity of the Second Lower Feeder where it crosses Almeda Drive: the Mojave Road former Indian trade route and U.S. Army Road (California Historical Landmark #963). Mitigation was identified to reduce potential impacts to historical resources:

- **MM CUL-1** requires a qualified cultural resource specialist to determine the presence of identified or eligible historical resources and to provide measures to prevent impacts to those resources as appropriate.

In accordance with **MM CUL-1**, a Cultural Resources Study (CRS) was completed for the proposed project by Rincon (2020b) and is provided as Appendix C. The records search completed

in support of the CRS identified seven historic resources within 0.5-mile of the project, although none occurs within the project boundaries and no historic resources were discovered within the project boundaries during the field survey. The closest of-age resource is the Palos Verdes Reservoir constructed in 1939, located approximately 60 feet from the project. However, the project is not expected to impact the reservoir. Additionally, the reservoir was previously recommended ineligible for listing on the National Register of Historic Places and the California Register of Historical Resources. The CRS states that since the project site is located in a residential area and has been previously developed with modern infrastructure, and since no historic cultural resources have been recorded or were observed during surveys of the excavation sites, staging location, or pipeline alignment, additional steps related to **MM CUL-1** would not be necessary for the proposed project. The historical resource identified in the PEIR is outside of the proposed project limits, and proposed activities would not result in a substantial adverse change in the significance of this resource. No mitigation would be required.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR discussed how sediments in proximity to pipelines have been previously disturbed and determined that the possibility of encountering intact archaeological resources during PCCP Program activities would be low. The possibility that archaeological resources may be encountered still exists, however, and the PEIR stated that impacts would be potentially significant. The following mitigation measures from the PEIR would reduce programmatic impacts to a less-than-significant level:

- **MM CUL-2** requires a pre-construction, site-specific records search to identify if additional sites or resources have been recorded on or adjacent to the proposed project site. If the proposed project site is found to be within the recorded area of a significant or potentially significant site, then archaeological and/or Native American monitoring during ground-disturbing activities is required.
- **MM CUL-3** requires a pre-construction meeting to inform construction personnel how to identify cultural resources during ground-disturbing activities and what to do if such potential resources are found.
- **MM CUL-4** establishes a protocol in the event that potentially significant cultural resources are unexpectedly encountered during construction.
- **MM CUL-5** requires a professional archaeologist to perform a pedestrian survey of areas where ground-disturbing activities are proposed. If archaeological resources are recorded or are discovered during the survey and avoidance is not feasible, then site testing and evaluation by a professional archaeologist is required.

Table 4.5-8 of the PCCP PEIR identified one known archaeological resource adjacent to the Second Lower Feeder (Site CA-LAN-281): a deep dark midden deposit and probable village site that was removed in conjunction with the construction of Metropolitan's Palos Verdes Reservoir. The identified archaeological resource is not within the proposed project limits, and the proposed project would not result in a substantial adverse change in the significance of this archaeological resource.

Pursuant to **MM CUL-2** and **MM CUL-5**, the CRS for the proposed project included a cultural resources records search, a sacred lands file search, and a field survey. The records search identified six archaeological cultural resources within 0.5-mile of the project, none of which occurs within the project boundaries. The nearest cultural resource identified in the records search (19-000191) consisted of a prehistoric shell midden located at the Palos Verdes Reservoir. However, the CRS notes that this resource was likely completely destroyed by the construction of the Palos Verdes Reservoir in 1939. No cultural resources were discovered within the project boundaries during the pedestrian survey. Additionally, in accordance with **MM CUL-2**, Metropolitan requested a Sacred Lands File search from the Native American Heritage Commission in early 2015. The Sacred Lands File search was completed with negative results for the project site. Because no archaeological resources have been identified within the proposed project limits, archaeological monitoring and Native American monitoring under **MM CUL-2** would not be required for the proposed project. The proposed project will, however, implement requirements from **MM CUL-3** and **MM CUL-4**, which would ensure impacts to archaeological resources would be less than significant. The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. Table 4.5-9 of the PCCP PEIR lists geologic formations located within the vicinity of the Second Lower Feeder where fossils have been recovered. The PEIR analysis concluded that it would be unlikely that paleontological resources would be discovered in areas with sediments previously disturbed by original pipeline construction; however, the possibility of encountering such resources still remains and the following mitigation measure was identified:

- **MM CUL-6** requires the development and implementation of a site-specific mitigation program to address potential impacts to paleontological resources.

Implementation of **MM CUL-6** would reduce potential impacts resulting from the PCCP Program to a less-than-significant level.

In compliance with **MM CUL-6**, a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project was prepared by Rincon (2020c), and is provided as Appendix D. According to the paleontological records search performed as part of the PRIMP, 11 vertebrate localities were identified in the general vicinity of the project although no fossil localities have been previously recorded within the proposed project limits. The nearest vertebrate localities (LACM 1053 and LACM 3065) were identified approximately 0.2 mile southwest of Second Lower Feeder Station 2049. Additionally, LACM 1099 was identified less than 0.25 mile west of Second Lower Feeder Station 2098. LACM 1098 was also identified further to the southwest, south of Palos Verdes Drive North and east of Portuguese Bend Road.

According to the PRIMP, the geologic units underlying the project area have a paleontological sensitivity ranging from low to high. The older Quaternary alluvium, older Quaternary eolian deposits, San Pedro Formation, and Monterey Formation immediately underlying most of the project area are all assigned a high paleontological sensitivity because they have proven to yield vertebrate fossils near the project area and throughout the Los Angeles Basin. Holocene surficial alluvial deposits (Qya2, Qyf2), underlying a small segment of the southwestern project area, have a low paleontological sensitivity at the surface because they are too young to preserve fossilized

remains. At shallow depth, the Holocene alluvial deposits overlie sensitive Pleistocene age deposits across the project area. Therefore, the paleontological sensitivity of the Holocene deposits is determined to be low to high, increasing at a depth of about five feet below ground surface (see Figure 3 in Appendix D).

Requirements in the PRIMP include retention of a qualified paleontologist to implement the PRIMP, a Worker Environmental Awareness Program to train all site personnel prior to the start of work, obtainment of a curation agreement with an accredited museum prior to construction, monitoring during earth moving in previously undisturbed areas, the availability of appropriate equipment and supplies, adherence to guidelines involving bulk matrix sampling, appropriate laboratory preparation and curation protocol, and a final report of findings. Details regarding each of these requirements can be found in Section 3 of Appendix D. With the implementation of the PRIMP, as required by **MM CUL-6**, impacts to paleontological resources would be less than significant.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PEIR identified the potential for PCCP Program activities to disturb human remains within the pipeline alignments or in staging areas during excavations or grading and determined that this could result in a significant impact if damage to or destruction of human remains occurred. Compliance with California state law in Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the PRC would, however, reduce potential programmatic impacts related to disturbance of human remains to a less-than-significant level. No mitigation was proposed.

Activities associated with the proposed project could also disturb human remains, which would result in a significant impact. Consistent with analysis in the PEIR, however, compliance with California state law in Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the PRC would make this potential impact of the proposed project less than significant. No mitigation would be required.

The severity of the impact would be the same as that identified in the PEIR.

V. GEOLOGY AND SOILS

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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)?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR discussed how the PCCP Program is located within a seismically active area. All of the feeders, with the exception of the Calabasas Feeder, cross at least one Alquist-Priolo Earthquake Fault Zone. The PEIR determined that the PCCP Program would nonetheless have less-than-significant impacts related to fault rupture for the following reasons: (1) the PCCP Program would not include the construction of structures intended for human occupancy; (2) the PCCP Program would not draw a significant amount of people to the area; (3) the probability of a seismic event coinciding with construction is very low; and (4) Metropolitan would require contractors to comply with the requirements of the California Building Code and the California Division of Occupational Safety and Health. The PEIR also stated that hazards related to fault rupture are considered to pose an acceptable level of risk for construction and operation of a water conveyance system. No mitigation was proposed.

The proposed project components would not be located within an Alquist-Priolo Earthquake Fault Zone (CGS 1999). The Newport-Inglewood-Rose Canyon Fault Zone is the closest Alquist-Priolo Earthquake Fault Zone, located approximately 3.5 miles northeast of the project. As discussed in the PEIR, impacts related to fault rupture would be less than significant because the proposed project would not include the construction of structures intended for human occupancy and would comply with all applicable requirements. No mitigation would be required.

The severity of the impact would be the same as that identified in the PEIR.

	New or More Severe Significant Impact than Identified in the PEIR	*Impact Less than or Equal to Impact Identified in the PEIR*
ii. Strong seismic ground shaking?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR discussed that all five feeders would be potentially subject to strong seismic shaking as a result of earthquakes on nearby or more distant faults, but determined that impacts related to seismic shaking would be less than significant for the same reasons as summarized above for Item V.a.i. No mitigation was proposed.

The proposed project would be potentially subject to strong seismic shaking as a result of earthquakes on nearby or more distant faults. Impacts of the proposed project would be of the same severity as those analyzed in the PCCP PEIR, as the proposed project would not include the construction of structures intended for human occupancy and would comply with all applicable requirements. No mitigation would be required.

The severity of the impact would be the same as that identified in the PEIR.

	New or More Severe Significant Impact than Identified in the PEIR	*Impact Less than or Equal to Impact Identified in the PEIR*
iii. Seismically related ground failure, including liquefaction?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. Figure 4.6-8 of the PCCP PEIR identified areas surrounding the Second Lower Feeder that are susceptible to liquefaction during seismic events, which would result in settlement and lateral spreading that could damage the pipelines and result in impacts. Analysis included in the PEIR determined, however, that impacts related to liquefaction would be less than significant for the same reasons as summarized above for Item V.a.i. No mitigation was proposed.

As shown in Figure 4.6-8 of the PCCP PEIR, Reach 3 of the Second Lower Feeder is not located within an area that is susceptible to liquefaction. Additionally, the proposed project would not include the construction of structures intended for human occupancy and would comply with applicable requirements. Therefore, the proposed project is at a lower risk for liquefaction than what was analyzed in the PEIR. No mitigation would be required.

The severity of the impact would be less than that identified in the PEIR.

	New or More Severe Significant Impact than Identified in the PEIR	*Impact Less than or Equal to Impact Identified in the PEIR*
iv. Landslides?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. Figure 4.6-8 of the PCCP PEIR identified areas surrounding the Second Lower Feeder that are susceptible to earthquake-induced landslides that could damage the pipelines and result in impacts. Programmatic impacts were determined to be less than significant for the reasons summarized above for Item V.a.i. No mitigation was proposed.

The proposed project is located in an area with little topography and is surrounded by urban development. As shown in Figure 4.6-8 of the PCCP PEIR, there is the potential for earthquake-induced landslides along the southern region of Reach 3 of the Second Lower Feeder; however, the potential for earthquake-induced landslides is low, and the severity of the impact would be the same as that identified in the PEIR. No mitigation would be required.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
b. Result in substantial soil erosion or the loss of topsoil?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR identified the potential for soil erosion or the loss of topsoil to occur as a result of trenching during pipeline rehabilitation. In addition, the movement and temporary stockpiling of excavated soil could result in short-term erosion and sedimentation if improperly handled and stored. The PEIR identified environmental commitments Metropolitan would fulfill as part of the PCCP Program which would reduce potential impacts to a less-than-significant level. These commitments include:

- Compliance with SCAQMD Rule 403 to minimize fugitive dust, construction traffic, and particulate matter releases; and

- Implementation of water quality best management practices (BMPs), including a Storm Water Pollution Prevention Plan (SWPPP), as applicable, for sediment and erosion control, pollutant treatment, outlet protection, and general site management.

As described in the PEIR, no specific areas in which soil erosion is likely were identified within the vicinity of the Second Lower Feeder. Because the proposed project is not located in an area identified as susceptible to soil erosion, the proposed project would have the same potential impacts as those identified in the PCCP Program and would employ the same environmental commitments identified within the PEIR.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. Aside from the earthquake-related landslide and liquefaction hazards discussed above, the PCCP PEIR did not identify other unstable geology or soils hazards area within the vicinity of the Second Lower Feeder. Consequently, no additional geology or soils hazards are anticipated. There would therefore be no impacts beyond the less-than-significant impacts identified for Items V.a.iii and V.a.iv, which discuss impacts related to earthquake-related landslide and liquefaction hazards.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR stated that while some areas of the PCCP Program may be underlain by expansive soils that could deform, resulting in damage to feeders and risking injury to workers, impacts would be less than significant for similar reasons summarized above for Item V.a.i. No mitigation was proposed.

Expansive soils identified in the PCCP PEIR in the vicinity of the Second Lower Feeder occur in unincorporated Orange County and the cities of Buena Park, Lomita, and Rancho Palos Verdes. According to the Safety Element of the City of Lomita General Plan, soils within the central and southern portions of Lomita have a high shrink-swell potential and are therefore at an increased risk of hazards related to expansive soil (City of Lomita 1998). A portion of the proposed project would cross through the southern portion of Lomita, and therefore has the potential to be located on expansive soil. However, the hazard of expansive soils is an existing risk for the current operation of the feeders, and the proposed project would not increase this risk. Additionally, for the same reasons as summarized above for Item V.a.i, impacts related to expansive soil would be less than significant.

The severity of the impact would be the same as that identified in the PEIR.

VI. GREENHOUSE GAS EMISSIONS

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, greenhouse gas (GHG) emissions would occur as a result of program rehabilitation activities, including the use of construction equipment, material delivery and off-haul, and commute trips by workers. Because program emissions would exceed the SCAQMD interim threshold of 3,000 metric tons per year, impacts were determined to be significant. Although there would be small reductions in GHG emissions associated with implementation of **MM AIR-1**, programmatic impacts were determined to be significant and unavoidable.

Proposed project GHG emissions were estimated using the PEIR's quantification of individual sites and multiplying that by the total number of sites (i.e., all three phases combined) that would be used as part of the proposed project. Consistent with SCAQMD's prescribed methodology and the PEIR analysis, GHG emissions were amortized over a 30-year period. As shown in **Table 8**, the proposed project would result in 323.0 metric tons of carbon dioxide equivalent (CO_2e), which would be 10.8 metric tons of CO_2e per year when amortized over 30 years. Because the proposed project would not exceed the SCAQMD interim GHG emissions threshold, impacts would be less than significant, which is less than impacts identified in the PEIR. Nevertheless, **MM AIR-1** will be implemented due to the overall program GHG emissions.

The severity of the impact would be less than that which was identified in the PEIR.

Table 8. Estimate of Proposed Project GHG Emissions (metric tons)

Phase	**Individual Site CO_2e**	**Proposed Project CO_2e**
Typical Excavation Site (Quantity: 15)	9.2	137.6
Typical New Valve/Meter Vault Structure (Quantity: 9)	17.5	157.9
Typical Belowground Air-release/Vacuum Valve Relocation (Quantity: 8)	3.4	27.4
Total Construction Emissions[1]		323.0
30-year Amortized Total		10.8

Source: HELIX 2021, Appendix A.
[1] Note that numbers may not total due to rounding.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
b. Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, because Metropolitan has not adopted a qualified plan, policy, or regulation to reduce GHG emissions, the most applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions is Assembly Bill (AB) 32, which codified the state's GHG emissions-reduction targets for 2020. Although rehabilitation activities would result in GHG emissions, it was determined that

program emissions would not conflict with GHG reduction goals outlined in the AB 32 Scoping Plan.

Additionally, the PEIR discussed two Executive Orders (EOs) related to the reduction of statewide GHG emissions. EO B-30-15 established an interim GHG reduction target of 40 percent below 1990 levels by 2030, and EO S-03-05 established a long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050. Senate Bill (SB) 32, which codified the state's GHG emissions-reduction targets for 2030, was signed into law in September 2016. The PEIR pointed out that significant policy, technical, and economic solutions will be required in order to meet the goals of EO S-03-05 and B-30-15; however, these changes would require state and/or federal action and would be outside of the control of Metropolitan. While long-term climate change policy and regulatory changes are currently unknown, the PEIR concluded that PCCP Program features would not conflict with the goals in EO S-03-05 and EO B-30-15, and related impacts would be less than significant.

The proposed project would result in GHG emissions associated with rehabilitation activities, as shown in the discussion of Item VI.a. These activities would result in a net increase in GHG emissions, but the emissions would be minimal and temporary and would not otherwise conflict with the statewide GHG reduction targets identified in AB 32 and SB 32.

The severity of the impact would be the same as that identified in the PEIR.

VII. HAZARDS AND HAZARDOUS MATERIALS

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As described in the PCCP PEIR, although solvents, paints, oils, grease, and fuels would be transported, used, and disposed of during the construction phase, these materials would not represent the transport, use, and disposal of acutely hazardous materials. In addition, as described in the PEIR, Metropolitan's contractors would implement the following environmental commitments as part of the PCCP Program:

- Rehabilitation activities would incorporate BMPs, including a SWPPP, as applicable, for sediment and erosion control, pollutant treatment, outlet protection, and general site management; and
- A Spill Emergency Response Plan would be prepared prior to the start of construction to ensure that hazardous materials and waste are handled, stored, and disposed of in accordance with applicable federal and state laws and regulations. All materials and fuels within staging areas and excavation sites and work zones would be stored in a manner that reduces potential for spills.

Due to implementation of the above environmental commitments and required compliance with existing regulations, the PEIR concluded that impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant, and no mitigation was proposed.

The proposed project would require transport, use, and disposal of hazardous materials such as solvents, paints, oils, grease, and fuels. Compliance with applicable regulations and implementation of the described environmental commitments of the PCCP Program would result in

less-than-significant impacts related to the routine transport, use, or disposal of hazardous materials, and no mitigation would be required.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed above, the PCCP PEIR determined that the program would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The risk of upset and accidents involving the release of hazardous materials into the environment was therefore also determined to be less than significant for the PCCP Program.

For the proposed project, as described in Item VII.a., rehabilitation activities would require transport, use, and disposal of hazardous materials, which could result in upset or accidents that could release hazardous materials into the environment. Such transport, use, and disposal must be compliant with applicable regulations, and impacts would be similar to those identified in the PEIR.

After rehabilitation activities are complete, the operation of the proposed project would be the same as existing conditions. Therefore, there would be no impacts related to risk of upset and accidents involving the release of hazardous materials into the environment associated with operation of the program pipelines.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, construction-related hazardous releases that could occur within 0.25 mile of a school would be from commonly used materials such as fossil fuels, solvents, and paints and would not include substances listed in 40 Code of Federal Regulations 355, Appendix A, *Extremely Hazardous Substances and Their Threshold Planning Quantities*. Accidental releases of commonly used hazardous materials would be localized and immediately contained and cleaned up. The PEIR determined that program impacts would be less than significant with the implementation of the following mitigation measures:

- **MM HAZ-1** requires the preparation of a project-level analysis of previously identified hazardous materials sites in the vicinity;
- **MM HAZ-2** establishes a protocol for the identification and management of previously unknown hazardous materials sites that may be encountered during construction activities;
- **MM HAZ-3** requires the construction contractor to implement BMPs to minimize human exposure to potential contaminants; and
- **MM HAZ-4** establishes a protocol for the handling of contaminated groundwater that could be encountered during construction.

As shown in **Table 9**, there are five schools within 0.25 mile of the proposed project alignment. Additionally, the main contractor storage area would be located at a vacant lot at Los Angeles Harbor College. Although rehabilitation would involve hazardous materials typical of a construction project (as discussed above under Item VII.a.), the proposed project would operate in compliance with federal, state, and local regulations. In accordance with **MM HAZ-1**, a project-level analysis of previously identified hazardous materials sites in the vicinity has been conducted (see Item VII.d, below). Additionally, **MM HAZ-2** through **MM HAZ-4** would be implemented for the proposed project, thereby reducing potential impacts to a less-than-significant level.

Table 9. Schools within 0.25 mile of the Proposed Project Alignment

School	Address	Approximate Distance from the Proposed Project
Harbor City Elementary School	1508 254th Street, Harbor City	0.20 mile east
Eshelman Avenue Elementary School	25902 Eshelman Avenue, Lomita	0.17 mile north
President Avenue Elementary School	1465 West 243rd Street, Harbor City	0.24 mile east
Alexander Fleming Middle School	25425 Walnut Street, Lomita	0.24 mile west
Narbonne High School	24300 S Western Avenue, Harbor City	50 feet east

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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, create a significant hazard to the public or the environment?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR identified the potential for rehabilitation activities to encounter hazardous materials sites found in various environmental databases. Excavations into contaminated media at known or unknown sites could result in a significant hazard to the construction workers, the public, or the environment. Program impacts were determined to be potentially significant, but impacts would be mitigated to a less-than-significant level through the implementation of **MM HAZ-1** through **MM HAZ-4** of the PEIR.

In accordance with **MM-HAZ-1**, a records search was conducted in June 2021 of state databases that identify sites for which a hazardous materials release or incident has occurred or sites that

generate, store, treat, or dispose of hazardous materials. Specifically, this included the California Department of Toxic Substances Control (DTSC) EnviroStor website and the State Water Resources Control Board (SWRCB) GeoTracker website. Four hazardous materials sites were identified within 1,000 feet of the proposed project on the EnviroStor site's map (DTSC 2021). These include an active voluntary cleanup site at a former automotive shop located 100 feet east of the project (case number 60001269); a site under evaluation located at 1638 West 227th Street, approximately 270 feet east of the project (case number 19990046); a site under evaluation located at 2026 Abalone Avenue, approximately 430 feet west of the project (case number 19240022); and a closed school investigation at Los Angeles Harbor College (case number 60001351). The GeoTracker website lists 13 sites within 1,000 feet of the proposed project, all of which consist of a leaking underground storage tank (LUST) cleanup site. The locations of these sites are listed below:

- Rubber Craft (1800 220th Street), 800 feet west of the project (case number 905010134)
- Pasminco Property (22219 Western Avenue), 50 feet west of the project (case number 905010034)
- Thrifty Oil Company (22620 Western Avenue), 50 feet east of the project (case number 10595/25919)
- Former Shell Gas Station (22930 Western Avenue), 50 feet east of the project (case number 905010189)
- Aable Muffler (23908 Western Avenue), 50 feet east of the project (case number 907100134)
- Shell Oil Company (25001 Western Avenue), 50 feet west of the project (case number 907100098)
- Lomita Gas Station (1800 Lomita Boulevard), 250 feet west of the project (case number I-04807)
- Mobil Gas Station (1701 Pacific Coast Highway), 100 feet west of the project (case number R-09417)
- Former Shell Services Station (1695 Pacific Coast Highway), 100 feet east of the project (case number 907100089A)
- Former Texaco (1752 Pacific Coast Highway), 320 feet west of the project (case number I-06181)
- Chevron (25800 Western Avenue), 50 feet east of the project (case number 907100070)
- Los Angeles Harbor College (1111 Figueroa Place), adjacent to the project (case number 907440425)
- Lomita Sheriff's Station (26123 Narbonne Avenue), 380 feet northwest of the project (case number R-05421)

There are multiple known hazardous materials sites near the proposed project limits, and there is potential for construction crews to encounter previously unknown contaminated media during excavations, which could result in a significant impact. However, MM HAZ-2 through MM HAZ-4 shall be implemented to reduce potential impacts to a less-than-significant level.

After rehabilitation is complete, the operation of the proposed project would be the same as existing conditions.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
e. For a project located within an airport land use plan or, where such plan has not been adopted, within 2 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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, the Second Lower Feeder is within the notification area for Joint Forces Training Base in Los Alamitos. Notification areas are established to ensure that structures are not built near the airport that would adversely affect day-to-day operations. Since the PCCP Program only includes small aboveground structures, such as small valve enclosures (see **Figure 4**), it was determined that the program would have no impact on airport operations at the Joint Forces Training Base in Los Alamitos.

The PEIR also notes that the Second Lower Feeder is within the runway protection zone of the Long Beach Municipal Airport. Runway protection zones are intended to provide for the unobstructed passage of landing aircraft, and no structures or congregation of people are allowed in this zone. Aboveground rehabilitation activities or permanent aboveground elements of the PCCP Program within this zone would result in potentially significant impacts, and the following mitigation was identified:

- **MM HAZ-5** requires coordination with airport management, as appropriate, for rehabilitation activities occurring within runway protection zones and implementation of identified operation and safety requirements; and
- **MM HAZ-6** requires prior approval of airport officials for any aboveground elements within runway protection zones.

The PEIR determined that implementation of these mitigation measures would reduce impacts to airport operations and safety to less-than-significant levels.

The Long Beach Municipal Airport is located approximately 8.3 miles to the east of the proposed project limits; therefore, the proposed project limits are not located within the Airport Influence Area (County 2003). The runway protection zone is more than eight miles away from the closest proposed excavation site. No related impacts would occur, and no mitigation would be required.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, if an excavation were to take place in roadways that serve as emergency/evacuation routes, and capacity of the affected streets were reduced during construction (such as reducing four lanes to two lanes), the ability of these streets to serve as emergency/evacuation routes may be impaired

and impacts would be potentially significant. The following mitigation was identified to address these potentially significant impacts:

- **MM HAZ-7** requires emergency/evacuation routes to be maintained during PCCP Program construction activities by: (1) avoiding the placement of excavation sites in roadways designated as emergency/evacuation routes; (2) working with local jurisdictions to maintain capacity on emergency/evacuation routes when those roadways cannot be avoided; and/or (3) notifying emergency personnel and posting temporary signage to direct emergency/evacuation traffic if detours are necessary.

Implementation of **MM HAZ-7** would reduce programmatic impacts to a less-than-significant level.

The PEIR does not identify an emergency response plan or an emergency evacuation plan for the city of Torrance; however, there are known designated emergency/evacuation routes within the cities of Los Angeles, Lomita, and Rolling Hills Estates. These include Normandie Avenue and Vermont Avenue in Los Angeles; Pacific Coast Highway, Western Avenue, Narbonne Avenue, and Lomita Boulevard in Lomita; and Palos Verdes Drive East and Palos Verdes Drive North in Rolling Hills Estates. However, as stated above, implementation of **MM HAZ-7** would reduce impacts to a less-than-significant level. Additionally, as discussed below in Item XII.a, construction traffic control measures and procedures would be implemented as part of the proposed project in order to reduce temporary construction traffic and transportation impacts on city streets. Impacts to emergency response and/or evacuation during project construction would therefore be less than significant. Once rehabilitation is complete, all proposed project sites would be returned to pre-construction conditions, and no related long-term impacts would occur.

The severity of the impact would be less than that identified in the PEIR.

VIII. HYDROLOGY AND WATER QUALITY

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Violate any water quality standards or waste discharge requirements?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, construction-related chemicals, such as fuels, oils, grease, solvents, and paints, would be stored in limited quantities at work sites, which could wash into and pollute surface waters or groundwater in the absence of proper controls. The PEIR points out, however, that Metropolitan would incorporate Sediment and Erosion Control standard practices and requirements to minimize construction-related runoff impacts, and contractors would be required to comply with applicable National Pollutant Discharge Elimination System (NPDES) regulations. Programmatic impacts were determined to be less than significant.

The proposed project would involve excavation sites and work areas in which construction-related chemicals would be used and stored and sediment would be stockpiled. As described in Item V.b., however, water quality BMPs would be implemented for sediment and erosion control, pollutant treatment, outlet protection, and general site management. Additionally, compliance with applicable NPDES regulations would be required. Project-specific impacts would be less than significant.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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 that would result in substantial erosion or siltation on or off site?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PEIR, no alteration of the course of a stream or river would occur under the PCCP Program. While construction would include excavation and the overall disturbance of existing hardscape and landscape, which could temporarily alter drainage patterns and potentially cause erosion and sedimentation, implementation of water quality BMPs was determined to reduce programmatic impacts to a less-than-significant level.

The proposed project would involve excavation sites, which could temporarily alter drainage patterns with the potential to cause erosion and sedimentation, but water quality BMPs, as described in Item V.b., would be implemented to ensure such project impacts would be less than significant.

Following the completion of rehabilitation activities, work areas would be returned to existing conditions, and no impact would occur.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PEIR, no alteration of the course of a stream or river would occur under the PCCP Program. The PEIR did discuss the potential for new aboveground facilities to change the extent of permeable or impermeable surfaces, which could alter the direction and volume of overland flows during both wet and dry periods. The following mitigation was identified:

- **MM HYD-1** requires the development and implementation of a project-specific grading and drainage plan for proposed aboveground facilities within pervious areas to ensure no increase in flooding would occur on or off site.

As shown in **Table 2**, there are nine air-release/vacuum valves that are proposed to be relocated to aboveground locations. The aboveground relocation sites would be located within existing paved areas for seven of the stations: 1863+24, 1910+14, 1918+31, 1934+77, 1957+80, 1963+48, and 2034+32. The aboveground relocation sites at Stations 2045+04 and 2101+17 would be within existing parkways; however, the footprint of the new enclosures would be minimal. The proposed project would not involve the substantial conversion of permeable surfaces to impermeable surfaces. As such, impacts would be less than significant, and no mitigation would be required.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PEIR, runoff could be generated during construction of the PCCP Program facilities during a storm event or from non-stormwater discharges, such as water used for dust control or hydrostatic testing of the pipelines. The PEIR stated that Sediment and Erosion Control and Groundwater Dewatering standard practices and requirements would be implemented to minimize construction-related runoff and dewatering impacts. Impacts were determined to be less than significant with implementation of these standard practices and requirements, as well as compliance with applicable NPDES regulations.

The proposed project could involve polluted runoff during storm events or during non-storm discharges, as discussed in the PEIR; however, with proper implementation of BMPs and compliance with applicable regulations, impacts would be less than significant. Following the completion of rehabilitation activities, work areas would be returned to their existing condition and no permanent changes related to runoff would occur.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
j. Expose people or structures to inundation by seiche, tsunami, or mudflow?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR states that the program study area does not include coastal areas that could be subject to tsunami. While some areas in the PCCP Program are adjacent to bodies of water that could be subject to inundation by seiche under extreme conditions, the PEIR points out that placement of proposed facilities in these areas would not exacerbate this condition. The majority of the PCCP Program area, including areas surrounding the Second Lower Feeder, is relatively flat and not susceptible to mudflows. Based on these considerations, the PEIR determined that programmatic impacts related to inundation by seiche, tsunami, or mudflow would be less than significant.

The proposed project is not located in an area that has been identified as a tsunami inundation zone or an area close to enclosed water bodies or hillsides that suggest risks related to seiches or mudflows. Furthermore, no habitable structures are included in the proposed project. Therefore, impacts would be less than significant.

The severity of the impact would be the same as that identified in the PEIR.

IX. LAND USE AND PLANNING

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
b. Conflict with 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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PEIR discussed that since the PCCP Program would not change land uses, the program's consistency with land use plans would be the same as the existing condition and no programmatic impacts related to conflicts with land use plans, policies, and regulations would result from program implementation. No mitigation was proposed.

Work activities related to the proposed project would temporarily occupy public rights-of-way, but would not change existing land uses. All required permits would be obtained prior to the start of construction. No conflict with land use plans, policies, or regulations would occur, and no mitigation would be required.

The severity of the impact would be the same as that identified in the PEIR.

X. NOISE

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PCCP PEIR discussed the potential for noise impacts related to rehabilitation activities such as excavation, concrete sawing, and providing ventilation and power. Since determining noise impacts requires an analysis of ambient noise conditions, the location of receptors, and attenuation of the noise, the PEIR concluded that severity and location of the impacts could not be determined until excavation sites were identified. The following mitigation measures related to construction noise were identified:

- **MM NOI-2** requires a noise consultant to be retained during excavation site planning to assist in locating excavation sites away from sensitive receptors or where sensitive receptors can be shielded from construction noise;
- **MM NOI-3** requires a project-level noise study at all excavation sites where sensitive receptors are present; and
- **MM NOI-4** requires staging areas to be located in areas that would not affect sensitive receptors or where receptors can be shielded from staging noise.

As required by **MM NOI-2** and **MM NOI-3**, a construction noise impact analysis for the proposed project was prepared by HELIX in December 2021, and is included as Appendix E. The contractor

storage and staging areas were sited per **MM NOI-4**, with one occurring at a vacant lot at Los Angeles Harbor College, one at the intersection of Palos Verdes Drive North and Palos Verdes Drive East, one southwest of Palos Verdes Drive East, and one at the northeast corner of West 223rd Street and Abalone Avenue.

The severity of the impacts would vary depending upon the proximity of construction activity to sensitive receptors, but the PEIR found that it is likely that noise levels would exceed local standards. Thus, program impacts were determined to be significant and unavoidable following the implementation of **MM NOI-2** through **MM NOI-4**.

On Friday, December 7, 2018, six site-specific field noise measurements were conducted along the pipeline alignment. These measurement locations are summarized in **Table 10**. Measurements ranged from 57.3 to 76.1 A-weighted decibels (dBA).

Table 10. Site Survey Noise Measurement Results

Approximate Location	Time	Measurement (dBA L_{EQ})
SLF Sta. 1863	11:24 a.m.	73.7
SLF Sta. 1897	11:05 a.m.	76.1
SLF Sta. 1964	10:42 a.m.	72.3
SLF Sta. 2022	10:18 a.m.	62.3
SLF Sta. 2098	9:51 a.m.	68.0
SLF Sta. 2114	7:36 a.m.	57.3

L_{EQ}: an average of the sound energy occurring over a specified period, SLF Sta.: Second Lower Feeder Station Number.

The PEIR references the noise elements of each jurisdiction's general plan and noise ordinance and identifies whether local CEQA thresholds have been adopted. For the proposed project, the applicable thresholds from the cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates are included in Table 11.

Table 11. Applicable Noise Thresholds

City of Los Angeles CEQA Thresholds Guide
Los Angeles developed a CEQA Thresholds Guide (Los Angeles 2006) to establish significance thresholds for construction activities. These thresholds would be applicable to construction activities within 500 feet of a noise-sensitive use. A project would normally have a significant impact on noise levels from construction if: • Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise-sensitive use; • Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use; or • Construction activities would exceed the ambient noise level by 5 dBA at a noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.
City of Torrance Municipal Code
Article 3 – construction. 46.3.1: • Construction can occur between 7:30 a.m. to 6 p.m. Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays. Prohibited on Sundays and Holidays observed by City Hall. • Can request extended hours from the Community Development Director.

City of Lomita Municipal Code
Chapter 4.4.04 • During day hours, noise limits are 65 dBA for residential, 75 dBA for commercial, and 80 dBA for manufacturing. • During night hours, noise limits are 55 dBA for residential, 70 dBA for commercial, and 75 dBA for manufacturing. Chapter 4.4.11 • Construction equipment can operate between 7 a.m. and 6 p.m. Monday through Friday, except holidays and between 9 a.m. and 5 p.m. Saturday and Sunday. • Noise levels cannot reach more than 35 dB for a cumulative period of 15 minutes of an hour at any receiving property line.
City of Rolling Hills Estates Municipal Code
Chapter 8.32-Noise: 8.32.210 A. Permitted construction hours and days. • Monday through Friday 7 a.m. to 5 p.m., and Saturday 9 a.m. to 5 p.m. • Construction is not allowed any time on Sunday and holidays. Chapter 8.32-Noise: 8.32.050 • From 7:00 a.m. to 10:00 p.m. exterior noise limits are 55 dBA for residential, 65 dBA for commercial, and 75 dBA for industrial. • from 10:00 p.m. to 7:00 a.m. exterior noise limits are 45 dBA for residential, 55 dBA for commercial, and 45 dBA for industrial.

Excavation to access the pipeline is proposed at the locations shown in **Table 5**. The Second Lower Feeder pipe access sites occur in the cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates. Specifically, Stations 1860, 1863, and 1964 occur in Los Angeles; Station 1916 occurs in both Los Angeles and Torrance; Station 2022 occurs in Lomita; Station 2015 occurs in both Los Angeles and Lomita; and Stations 2098 and 2109/2112 occur in Rolling Hills Estates. The maintenance hole enlargement sites at SLF Stations 1875+56 and 1957+80 occur in Los Angeles, SLF Station 1899+76 occurs in Torrance, and SLF Stations 2034+32 and 2045+04 occur in Lomita. The five maintenance hole enlargement sites may also be used as pipe access sites. All potential pipe access sites are located within single-family residential areas. In addition to single-family residences, four of the sites are also surrounded by multi-family residences (Stations 1860, 1864, 1916, and 2022), one site is located near a park (Station 2098), and one site is located near a school (Station 1957+80).

The city of Torrance does not set noise level standards for construction, and impacts from the various construction activities described below that are located in Torrance would therefore be less than significant when conducted between the hours of 7:30 a.m. to 6 p.m. on weekdays and 9 a.m. to 5 p.m. on Saturdays. If necessary, extended hours can be requested from the Community Development Director. Construction activities, such as dewatering, pipeline relining, and ventilation to support relining work, that occur outside of these specified days and timeframes, however, would represent a significant and unmitigable impact.

Excavation would require the simultaneous use of an excavator and dump truck for short periods of time to access the pipeline segments. Construction noise due to pipeline excavation would generate noise levels exceeding the applicable thresholds at each of the potential pipe access locations. Therefore, potential significant impacts would occur at all excavation sites as a result of construction noise from pipeline excavation. Pipe access site construction noise levels are provided below in Table 12.

Table 12. Pipe Access Site Construction Noise

SLF Site	NSLU Jurisdiction	Threshold at NSLU (dBA L_{EQ} [1 hour])	Modeled Noise Levels (dBA L_{EQ} [1 hour])	Exceed Standard at NSLU?
Pipe Access Sites				
1860	Los Angeles	55	89.1	Yes
1863	Los Angeles	55	77.1	Yes
1916	Los Angeles/ Torrance	55 / NA	77.1	Yes / NA
1964	Los Angeles	55	69.1	Yes
2015	Los Angeles/ Lomita	55 / 65	70.0	Yes
2022	Lomita	65	83.1	Yes
2034	Lomita	65	83.1	
2098	Rolling Hills Estates	55	66.8	Yes
2109 and 2114	Rolling Hills Estates	55	63.1	Yes
Maintenance Hole Enlargement Sites (Potential Pipe Access Sites)				
1875+56	Los Angeles	55	75.1	Yes
1899+76	Torrance	NA	73.5	NA
1957+80	Los Angeles	55	75.1	Yes
2034+32	Lomita	65	83.1	Yes
2045+04	Lomita	65	89.1	Yes

Source: HELIX 2021; Appendix E
NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level
NA = not applicable (Torrance does not have daytime noise level limits for construction activities).

A grouting mixer, generator, welder, and crane would be required for relining activity at each excavation area. The loudest equipment types would be a grouting mixer and generator in use simultaneously. Construction noise due to pipeline relining would exceed applicable noise levels at each of the pipe access locations. Construction noise from relining activities is provided in **Table 13**.

Table 13. Relining Activity Site Construction Noise

SLF Site	NSLU Jurisdiction	NSLU Distance	Day Threshold at NSLU (dBA L_{EQ} [1 hour])[1]	Night Threshold at NSLU (dBA L_{EQ} [1 hour]) [1]	Noise Levels (dBA L_{EQ} [one hour])	Exceed Day Standard at NSLU?	Exceed Night Standard at NSLU?
Pipe Access Sites							
1860	Los Angeles	10 feet	55	45	92.4	Yes	Yes
1863	Los Angeles	40 feet	55	45	80.4	Yes	Yes
1916	Los Angeles/ Torrance	40 feet	55 / NA	45 / 50	80.4	Yes	Yes
1964	Los Angeles	100 feet	55	45	72.2	Yes	Yes
2015	Los Angeles/ Lomita	90 feet	55 / 65	45 / No construction allowed	73.2	Yes	Yes / NA
2022	Lomita	20 feet	65	No construction allowed	86.4	Yes	NA
2034	Lomita	20 feet	65	No construction allowed	86.4	Yes	Yes
2098	Rolling Hills Estates	130 feet	55	No construction allowed	69.9	Yes	NA
2109 and 2114	Rolling Hills Estates	200 feet	55	No construction allowed	66.0	Yes	NA
Maintenance Hole Enlargement Sites (Potential Pipe Access Sites)							
1875+56	Los Angeles	50 feet	55	45	78.4	Yes	Yes
1899+76	Torrance	60 feet	NA	50	76.8	Yes	Yes
1957+80	Los Angeles	50 feet	55	45	78.4	Yes	Yes
2034+32	Lomita	20 feet	65	No construction allowed	86.4	Yes	NA
2045+04	Lomita	10 feet	65	No construction allowed	92.4	Yes	NA

Source: HELIX 2021; Appendix E

[1] Relining activity would fall under the Los Angeles standard for construction activity lasting more than 10 days in a three-month period, which is 5 dBA above the 50 dBA ambient noise levels presumed for a residential neighborhood.

NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level

NA = not applicable.

Ventilation and access to support relining work would be conducted along the project alignment at manhole locations, to provide adequate air supply and access for workers and equipment. A generator, welder, and fan/blower would be in use simultaneously, and could generate elevated noise levels at nearby noise sensitive land uses (NSLUs). For daytime ventilation activities, potentially significant impacts would occur if the ventilation activities were conducted within 265 feet of an NSLU in a residential area in the city of Los Angeles, 90 feet of an NSLU in a residential area in Lomita, 30 feet of an NSLU in a commercial area in Lomita, 265 feet of an NSLU in a residential area in Rolling Hills Estates, or 90 feet of an NSLU in a commercial area in Rolling Hills Estates. The city of Torrance does not set daytime construction noise level standards in its municipal code, and impacts would therefore be less than significant when conducted between the hours of 7:30 a.m. and 6:00 p.m. on weekdays and between 9:00 a.m. and 5:00 p.m. on

Saturdays. For nighttime ventilation activities, potentially significant impacts would occur if the ventilation activities were conducted within 850 feet of residential uses in the nighttime in Los Angeles, or within 500 feet of residential uses in Torrance. Nighttime construction is not allowed in Lomita and Rolling Hills Estates, so nighttime ventilation activities in these two cities would result in significant impacts.

A jackhammer would be required for maintenance hole refurbishment and blow-off structure improvements. For work requiring the use of a jackhammer, noise levels would exceed local standards if located within 1,000 feet of an NSLU in a residential area in the city of Los Angeles; 550 feet of an NSLU in a residential area in Lomita; 180 feet of an NSLU in a commercial area in Lomita; 1,750 feet of an NSLU in a residential area of Rolling Hills Estates; or 550 feet of an NSLU in a commercial area of Rolling Hills Estates. As stated above, the city of Torrance does not set daytime construction noise level standards in its municipal code, so impacts would be less than significant when conducted during the outlined daytime hours.

Relocation of the air release/vacuum valves from belowground to aboveground would involve running new piping from the existing valve connection point in the vault to a nearby aboveground location and installing a new vault aboveground. This would require shallow trenching from the existing belowground vault to the new aboveground location. Shallow trenching would require the short-term use of a concrete saw and backhoe. Similarly, the replacement of and improvements to isolation valves, flow meters, and service connections would also require shallow trenching, which would require a backhoe and concrete saw. For the use of a backhoe, noise levels would exceed standards if located within 270 feet of an NSLU in the city of Los Angeles, 150 feet of an NSLU in a residential area of Lomita, 48 feet of an NSLU in a commercial area of Lomita, 480 feet of an NSLU is a residential area of Rolling Hills Estates, or 150 feet of an NSLU in a commercial area of Rolling Hills Estates. For the use of a concrete saw, noise levels would exceed standards if located within 2,000 feet of an NSLU in the city of Los Angeles, 1,150 feet of an NSLU in a residential area of Lomita, 350 feet of an NSLU in a commercial area of Lomita, 3,500 feet of an NSLU is a residential area of Rolling Hills Estates, or 1,150 feet of an NSLU in a commercial area of Rolling Hills Estates. As stated above, the city of Torrance does not set daytime construction noise level standards in its municipal code, so impacts would be less than significant when conducted during the outlined daytime hours.

Dewatering would require the use of a submersible pump and generator to power the pump. The only audible equipment would be the generator. Dewatering would occur 24 hours per day up to seven days. For dewatering requiring the use of a generator, noise levels from a generator would exceed daytime standards if located within 75 feet of an NSLU in the city of Los Angeles, 40 feet of an NSLU in a residential area of Lomita, 12 feet of an NSLU in a commercial area of Lomita, 120 feet of an NSLU is a residential area of Rolling Hills Estates, or 40 feet of an NSLU in a commercial area of Rolling Hills Estates. The city of Torrance does not set daytime construction noise level standards, so impacts would be less than significant when done during the designated daytime hours. For dewatering during nighttime hours, noise levels from a generator would exceed standards if located within 380 feet of an NSLU in the city of Los Angeles or within 215 feet of an NSLU in the city of Torrance. Dewatering activities within the cities of Lomita and Rolling Hills Estates would represent a significant and unmitigable impact, due to required nighttime work.

The project would also require other instances of nighttime construction. The proposed valve replacement at Service Connection T-08, located at Second Lower Feeder Station 1902+95 near the intersection of Western Avenue and Sepulveda Boulevard, and modifications to a blow-off structure, located at Station 1973+18 near the intersection of Western Avenue and Lomita Boulevard, may require nighttime work to minimize traffic effects at these major intersections. Construction work associated with improvements to Service Connection T-08 would occur as close as 200 feet from a residential NSLU within Torrance, where nighttime construction work is limited

to 50 dBA L_{EQ} (1-hour). Improvements would involve construction activities similar to those described above (trenching using a concrete saw and backhoe). At 200 feet, a backhoe would generate a noise level of 62.5 dBA L_{EQ} and a concrete saw would generate a noise level of 77.6 dBA L_{EQ}. As previously discussed, due to the short-term and mobile nature of the use of a backhoe, a barrier would likely not be used, and noise levels would exceed the Torrance nighttime noise limit of 50 dBA L_{EQ} (1-hour). For use of concrete saw, a 6-foot noise barrier would attenuate noise levels to approximately 60 dBA L_{EQ}, and noise levels at the nearby residential NSLUs would exceed the 50-dBA L_{EQ} (1-hour) nighttime noise limit for Torrance.

Construction work associated with modifications to the blow-off structure at Second Lower Feeder Station 1973+18 would occur as close as 120 feet from a residential NSLU within Los Angeles, where nighttime construction work is limited to 45 dBA L_{EQ} (1-hour). Blow-off structure modifications would require the use of a jackhammer, as described above. At 120 feet, a jackhammer would generate a noise level of 78.3 dBA L_{EQ}. With a 6-foot noise barrier, noise levels would be reduced to approximately 63 dBA L_{EQ}, and noise levels at the nearby residential NSLUs would exceed the 45-dBA L_{EQ} (1-hour) nighttime noise limit for Los Angeles.

Construction traffic would travel on local streets. A general rule of thumb is that a doubling of traffic would cause a doubling in sound energy (a 3-dBA increase), which would be perceptible, and therefore a significant increase. The proposed project would result in a minimal increase in traffic during construction that would not constitute a doubling of traffic. Therefore traffic-related noise resulting from construction would not be expected to cause a doubling in noise. Furthermore, overall construction noise impacts would be temporary and operation of the project would not result in an increase in traffic. Impacts from the addition of construction traffic would be less than significant.

To comply with **MM NOI-3**, the following project-specific measures shall be implemented:

- **MM NOI-3.1 Construction Exterior Noise Level Standards.** Construction noise from project construction activities shall comply with the daytime and nighttime thresholds and hours specified by the cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates for sensitive receptors to the maximum extent feasible.

  Within the city of Los Angeles, daytime construction activities lasting more than one day and less than 10 days in a three-month period shall comply with the 60 dBA L_{EQ} standard for residential zones. Daytime construction activities lasting more than 10 days in a three-month period shall comply with the 55 dBA L_{EQ} standard for residential zones. Nighttime (9:00 p.m. to 7:00 a.m. on weekdays, before 8:00 a.m. and after 6:00 p.m. on Saturday, and any time on Sunday) activities shall comply with the 45 dBA L_{EQ} standard for residential zones.

  Within the city of Torrance, construction activities shall occur only between 7:30 a.m. and 6:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturdays, if feasible. If construction occurs outside these hours, noise levels shall not exceed 50 dBA as measured at property lines.

  Within the city of Lomita, construction activities shall occur only between 7:00 a.m. and 6:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturdays, Sundays, and Holidays. In addition, daytime construction noise shall comply with the 65 dBA standard for residential land uses and the 75 dBA standard for commercial land uses.

  Within the city of Rolling Hill Estates, construction activities shall occur only between 7:00 a.m. and 5:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on

Saturdays. In addition, daytime construction noise shall comply with the 55 dBA standard for residential land uses and the 65 dBA standard for commercial uses.

- **MM NOI-3.2 Noise Reduction Measures for Pipe Access Site Excavation and Relining Activities.** Measures to reduce noise levels to below a level of significance may include the use of noise barriers; noise attenuation devices/modifications to construction equipment; limitations on the hours of operation; or a combination of these measures.

  For excavation and pipeline relining activities at all proposed pipe access sites, a 12-foot noise barrier shall be required to reduce noise levels.

  All noise barriers shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close-butted seams and must be at least ¾-inch thick or have a surface density of at least 3.5 pounds per square foot. Sheet metal of 18 gauge (minimum) may be used if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation. The noise barrier enclosures should be of an elongated "U" shape, with the elongated sides parallel to the pipeline.

- **MM NOI-3.3 Setback Distances for Mobile Operations (Ventilators, Manholes, Valves).** For construction operations that would require equipment to move along multiple locations along the pipeline alignment, the following setback distances and/or noise barriers shall be necessary to maintain noise levels to within local standards for residential land uses in Los Angeles, Torrance, Lomita, and Rolling Hills Estates, and for commercial land uses in the Lomita and Rolling Hills Estates. Setback distances and/or noise barriers shall be used to the extent feasible.

  <u>Daytime</u>

  For ventilation activities, equipment shall be set back outside of the distances within which noise levels would exceed thresholds, which would be at least 70 feet away with an 8-foot barrier, 110 feet away with a 6-foot barrier, or 265 feet away with no barrier from an NSLU in a residential area in the city of Los Angeles; at least 20 feet away with an 8-foot barrier, 33 feet away with a 6-foot barrier, or 90 feet away with no barrier from an NSLU in a residential area in the city of Lomita; at least 6 feet away with an 8-foot barrier, 11 feet away with a 6-foot barrier, or 30 feet away with no barrier from an NSLU in a commercial area in the city of Lomita; at least 70 feet away with an 8-foot barrier, 110 feet away with a 6-foot barrier, or 265 feet away with no barrier from an NSLU in a residential area in the city of Rolling Hills Estates; and at least 20 feet away with an 8-foot barrier, 33 feet away with a 6-foot barrier, or 90 feet away with no barrier from an NSLU in a commercial area in the city of Rolling Hills Estates.

  For the continuous use of a jackhammer during a single hour, equipment shall be set back outside of the distances within which noise levels would exceed thresholds, which would be at least 180 feet away with a 6-foot noise barrier or 1,000 feet away with no noise barrier from an NSLU in the city of Los Angeles; at least 100 feet away with a 6-foot noise barrier or 550 feet away with no noise barrier from an NSLU in a residential area in the city of Lomita; at least 32 feet away with a 6-foot barrier or 180 feet away with no noise barrier from an NSLU in a commercial area in the city of Lomita; at least 325 feet away with a 6-foot noise barrier or 1,750 feet away with no barrier from an NSLU in a residential area in the city of Rolling Hills Estates; and at least 100 feet away with a 6-foot

noise barrier or 550 feet away with no noise barrier from an NSLU in a commercial area in the city of Rolling Hills Estates. Noise generated from a jackhammer is limited to the impact point with the ground, so increasing the height of the noise barrier would not significantly lower noise levels.

A backhoe would be used at numerous and variable locations along the pipeline alignment, noise levels at specific receptors are not provided. Instead, the setback distances needed to meet the cities of Los Angeles', Lomita's, Rolling Hills Estates', and Carson's exterior noise thresholds at land uses located in proximity to anticipated work sites are provided. Due to the short-term use of a backhoe and the mobile nature of its use, a temporary noise barrier would not likely be used. For use of a backhoe, equipment shall be set back outside of the distances within which noise levels would exceed thresholds, which would be at least 270 feet from an NSLU in a residential area in the city of Los Angeles; at least 150 feet away from an NSLU in a residential area in the city of Lomita; at least 48 feet away from an NSLU in a commercial area in the city of Lomita; at least 480 feet away from an NSLU in a residential area in the city of Rolling Hills Estates; and at least 150 feet away from an NSLU in a commercial area in the city of Rolling Hills Estates.

For the continuous use of a concrete saw during a single hour, equipment shall be set back outside of the distances within which noise levels would exceed thresholds, which would be at least 300 feet away with a 6-foot noise barrier or 2,000 feet away with no noise barrier from an NSLU in a residential area in the city of Los Angeles; at least 160 feet away with a 6-foot noise barrier or 1,150 feet away with no barrier from an NSLU in a residential area in the city of Lomita; at least 50 feet away with a 6-foot noise barrier or 350 feet away with no noise barrier from an NSLU in a commercial area in the city of Lomita; at least 500 feet away with a 6-foot noise barrier or 3,500 feet away with no noise barrier from an NSLU in a residential area in the city of Rolling Hills Estates; and at least 160 feet away with a 6-foot noise barrier or 1,150 feet away with no noise barrier from an NSLU in a commercial area in the city of Rolling Hills Estates. Noise generated from a concrete saw is limited to the impact point with the ground, so increasing the height of the noise barrier would not significantly lower noise levels.

For the continuous use of a generator during a single hour, equipment shall be set back outside of the distances within which noise levels would exceed thresholds, which would be at least 25 feet away with a 6-foot noise barrier or 75 feet away with no noise barrier from an NSLU in a residential area in the city of Los Angeles; at least 14 feet away with a 6-foot noise barrier or 40 feet away with no barrier from an NSLU in a residential area in the city of Lomita; at least 5 feet away with a 6-foot noise barrier or 12 feet away with no noise barrier from an NSLU in a commercial area in the city of Lomita; at least 45 feet away with a 6-foot noise barrier or 120 feet away with no barrier from an NSLU in a residential area in the city of Rolling Hills Estates; and at least 14 feet away with a 6-foot noise barrier or 40 feet away with no noise barrier from an NSLU in a commercial area in the city of Rolling Hills Estates.

Nighttime

For the continuous use of a generator during a single hour at night, equipment shall be set back outside of the distances within which noise levels would exceed thresholds, which would be at least 135 feet away with a 6-foot noise barrier or 380 feet away with no noise barrier in the city of Los Angeles, and at least 80 feet away with a 6-foot noise barrier or 215 feet away with no noise barrier in the city of Torrance.

For nighttime ventilation activities, equipment shall be set back outside of the distances within which noise levels would exceed thresholds, which would be at least 170 feet away

with an 8-foot noise barrier or 850 feet away with no noise barrier in the city of Los Angeles, and at least 95 feet away with an 8-foot noise barrier or 500 feet away with no noise barrier in the city of Torrance.

- **MM NOI-3.4 Nighttime Construction Management Plan.** The project specifications shall require preparation of a Nighttime Construction Management Plan prior to the onset of construction. The plan shall describe measures to reduce noise levels for any nighttime work that may occur. Specific measures to reduce construction noise may include:
    - Placement of noise-generating equipment as far as feasible from noise-sensitive land uses.
    - Utilization of enclosures or other barriers for equipment to reduce noise levels.
        - If work at Service Connection T-08 using a concrete saw occurs during nighttime hours, a six-foot noise barrier shall be required between the equipment and residential land uses to reduce noise levels.
        - If work at the blow-off structure located at Second Lower Feeder Station 1973+18 using a jackhammer occurs during nighttime hours, a six-foot noise barrier shall be required between the equipment and residential land uses to reduce noise levels.
    - Construction equipment properly outfitted and maintained with manufacturer-recommended noise-reduction devices.
    - Diesel equipment operated with closed engine doors and equipped with factory-recommended mufflers.
    - Written notification to residents within 100 feet of the project site boundaries, provided a minimum of one week prior to nighttime construction activity. Notification to include a description of activities anticipated, expected dates and hours for construction, and contact information with details of a complaint and response procedure.

For daytime construction, impacts from pipe access site excavation would remain significant at all pipe access sites with the use of a 12-foot noise barrier. Impacts from relining activities would also remain significant at all pipe access sites except at Second Lower Feeder Station 1964, 2098, and 2109/2114 with the use of a 12-foot noise barrier. Impacts associated with pipe access site excavation and relining are therefore considered significant and unavoidable. As noted above, however, impacts would be consistent with those identified in the PEIR. For activities that would occur at various locations along the pipeline alignment and require equipment to move along the alignment, provided the setback distances with or without inclusion of noise barriers as described in MM NOI-3.3 are maintained, impacts would be reduced to less-than-significant levels.

For nighttime construction, noise levels from nighttime relining activities at all pipe access sites within the cities of Los Angeles and Torrance would exceed respective nighttime standards at nearby NSLUs, and impacts would be significant and unavoidable; however, impacts would be consistent with those identified in the PEIR. Similarly, noise levels from nighttime work at Service Connection T-08 in Torrance and at the blow-off structure located at Second Lower Feeder Station 1973+18 in the city of Los Angeles would exceed respective nighttime standards at nearby NSLUs, even with the use of noise barriers, and impacts would be significant and unavoidable; however, these impacts would be consistent with those identified in the PEIR. Impacts associated with dewatering and ventilation activities within the cities of Los Angeles and Torrance would be less than significant after

mitigation, which involves maintaining the setback distances listed in MM NOI-3.3. If dewatering or ventilation activities occur within these setback distances, impacts would be significant but consistent with those identified in the PEIR.

The use of noise barriers during nighttime dewatering, relining, and ventilation activities would reduce noise levels at nearby NSLUs within the cities of Lomita and Rolling Hills Estates; however, because the cities of Lomita and Rolling Hills Estates do not allow nighttime construction, noise impacts associated with construction between the hours of 6:00 p.m. and 7:00 a.m. on weekdays, before 9:00 a.m. and after 5:00 p.m. on Saturdays, Sundays, and Holidays in Lomita, or between the hours of 5:00 p.m. and 7:00 a.m. on weekdays, before 9:00 a.m. and after 5:00 p.m. on Saturdays, or any time on Sundays in the city of Rolling Hills Estates, impacts would be significant and unavoidable. As noted above, however, impacts would be consistent with those identified in the PEIR.

The severity of noise impacts for both daytime and nighttime work would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, the severity and location of excessive groundborne vibration or groundborne noise level impacts could not be determined until excavation sites were identified. The following mitigation was identified to reduce such impacts to a less-than-significant level:

- **MM NOI-1** requires a noise and vibration consultant to be retained during excavation site planning to assist in locating excavation sites away from vibration-sensitive land uses wherever possible, or to identify appropriate mitigation to reduce vibration levels at vibration-sensitive land uses to less-than-significant levels.

As stated in the Construction Noise Technical Report prepared for the proposed project, numerous pipe access sites would be within 200 feet of single-family and multi-family residences, with the nearest sensitive use living area approximately 30 feet from Pipe Access Site 1860. The greatest source of vibration would be from compaction of the soil following relining activities and prior to final paving of each site. Due to the size of the excavation areas, a small vibratory plate compactor or tamping rammer would likely be used. These are handheld units and would have no measurable vibration beyond 10 to 15 feet. Impacts from excessive vibration would therefore be less than significant.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity, above levels existing without the project?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. Temporary or periodic increases in ambient noise levels would result from construction activities associated with the project. These impacts are described in X.a., above. Impacts would remain significant and unavoidable.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, some portions of the existing pipelines are within airport land use plans or near airports; however, since the PCCP Program would not change land uses, and construction workers would wear noise safety gear as required by the federal Occupational Safety and Health Administration, noise impacts related to nearby airports were determined to be less than significant and no mitigation was proposed.

The project proposes the relining of an underground pipeline, and no housing or permanent workers would result from the project. Additionally, as mentioned, construction workers would wear noise safety gear as required by the federal Occupational Safety and Health Administration that would also serve as protection from airport noise exposure. No impacts from airport noise exposure would occur.

The severity of the impact would be less than that identified in the PEIR.

XI. RECREATION

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. The PEIR discussed that construction storage areas for the PCCP Program may be located in parks or other recreational facilities for months or longer, depending on how many excavation sites the storage area is serving. The PEIR stated that Metropolitan would work with the local jurisdictions and schools to ensure that rehabilitation activities would not result in significant temporary impacts on recreational activities or permanent physical deterioration of recreational facilities, and programmatic impacts were determined to be less than significant. No mitigation was proposed.

As described above in the Project Description, a main contractor storage area has been established for the proposed project at Los Angeles Harbor College, one mile east of the project alignment. Three contractor staging areas are proposed along the project alignment: one at the northeastern corner of the intersection of Palos Verdes Drive North and Palos Verdes Drive East, one southeast of Second Lower Feeder Station 2109+65 southwest of Palos Verdes Drive East, and one at the northeast corner of the intersection of West 223rd Street and Abalone Avenue (see **Figures 5a** through **5c**).

The contractor storage area is located adjacent to Machado Lake and is less than 0.5 mile from Ken Malloy Harbor Regional Park. The two contractor staging areas located along Palos Verdes Drive East are within 0.25 mile of Dapplegray Park and the George F Canyon Nature Center and Preserve. The contractor staging area at the northeast corner of the intersection of West 223rd Street and Abalone Avenue is located approximately 450 feet north of recreational baseball fields and 1,850 feet northwest of Torrance Park. Additionally, the pipeline alignment is located within 0.25 mile of Metro Park, Lomita Park, and Sur La Brea Park. One of the contractor's work areas is proposed to extend into Metro Park and require tree removal and grass disturbance to allow for the storage of equipment. However, such impacts would be minimal and would not permanently diminish the quality of this recreational facility. Although there are recreational areas located near contractor storage and staging areas, and rehabilitation sites, the recreational areas would not experience significant adverse impacts as a result of the project. Impacts to parks or other recreational areas would be less than significant, and no mitigation would be required.

The severity of the impact would be less than that identified in the PEIR.

XII. TRANSPORTATION/TRAFFIC

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
a. Conflict with an applicable plan, ordinance, or policy that establishes 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, and pedestrian and bicycle paths?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, the disruption of local and regional traffic caused by capacity reduction from program rehabilitation activities would be significant at some locations, but the level of impacts would be determined at the project level when rehabilitation locations had been identified. The PEIR identified the following mitigation measures to reduce potentially significant impacts:

- **MM TRA-1** requires that excavation sites be located to avoid traffic impacts to the maximum extent feasible;
- **MM TRA-2** requires Metropolitan and/or its contractors to coordinate with the appropriate counties and local jurisdictions to develop construction traffic control measures and procedures prior to the start of construction; and
- **MM TRA-3** requires excavation work zones and construction staging areas to avoid interfering with parking for adjacent land uses, to the extent feasible.

The PEIR determined that implementation of **MM TRA-1** would reduce impacts related to temporary traffic disruptions and reduced capacity in some locations but stated that the severity or location of impacts could not be determined; therefore, programmatic impacts were found to be significant and unavoidable. Temporary programmatic impacts related to construction traffic and parking were determined to be less than significant with the implementation of **MM TRA-2** and **MM TRA-3**.

The proposed project would generate construction-related traffic during site preparation, ground excavation, pipe isolation and dewatering activities, and rehabilitation work at the proposed excavation sites (see **Figure 2**). Construction vehicle access to the proposed excavation sites would require temporary lane closures on select streets. However, these impacts would be temporary, and the roadways would be restored to existing conditions following the completion of construction. Additionally, in accordance with **MM TRA-1** and **MM TRA-3**, Metropolitan has planned excavation work zones and contractor's work areas in such a manner as to minimize traffic and parking impacts to the extent feasible. Further, pursuant to **MM TRA-2**, Metropolitan would coordinate with the cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates to develop construction traffic control measures and procedures, prior to the start of construction on each excavation/pipe access site. Site-specific measures to reduce temporary construction traffic and transportation impacts on city streets may include, but would not be limited to, the following:

- Provide advance written notification of construction activities to residences, schools, and businesses around each construction site. Notifications will include a brief overview of the proposed project and its purpose, as well as the proposed construction activities and schedule. Notification would also include the name and contact information for each Metropolitan project manager or representative responsible for resolving traffic issues for the given pipeline.
- Identify travel routes and establish optimal arrival and departure times to minimize conflicts with residents, schools, and businesses, as feasible.
- Employ provisions to detour pedestrians and bicyclists from project activities near or on sidewalks and bike lanes.
- Implement safety measures, such as signs, flaggers, cones, signage, and advance notice as appropriate.
- Cover all open trenches with steel plating per Caltrans standards when not in use or at the end of each workday, as applicable.

Due to the temporary nature of the anticipated traffic impacts, no permanent off-site roadway improvements would be required for the proposed project. Site-specific traffic control measures would be identified by Metropolitan in coordination with the appropriate jurisdictions, and implementation of these measures would reduce temporary impacts to a less-than-significant level. No long-term mitigation would be required. Following the completion of proposed project rehabilitation activities, all operational transportation circulation would be restored to existing conditions.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, because the program would include rehabilitation of existing pipelines, which are underground, there would be minimal impacts related to long-term congestion management plans. For program

rehabilitation activities that would be located on or around arterials or intersections identified in the Los Angeles County Metropolitan Transportation Authority 2010 Congestion Management Program (CMP), the PCCP Program was determined to generate only a small number of truck trips and employee commuter trips compared with the daily traffic volumes for these access roads, and individual projects would take place over a few months or years. Once rehabilitation is complete in the CMP roadway, the street would be restored to preconstruction conditions. As such, program impacts were determined to be less than significant.

More than half of the length of the pipeline occurs within or adjacent to State Route 213, which is identified as an arterial within the CMP transportation network. The pipeline also crosses Interstate 1, which is also identified as an arterial, although the project does not propose excavation on or adjacent to Interstate 1 (Los Angeles County Metropolitan Transportation Authority 2010). Although portions of the project would occur within an arterial that is part of the CMP, the project would result in minimal temporary impacts to roadways. As described above under Item XII.a, the project would implement traffic control measures and procedures for the duration of construction to further minimize impacts. Following the completion of construction, roadways would be returned to existing conditions. The project would operate similar to existing conditions and would not result in an increase in operational traffic. Therefore, due to the minimal and temporary impacts to CMP arterials and freeways, impacts would be less than significant.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, the Second Lower Feeder crosses under a portion of the Long Beach Municipal Airport and is within a runway protection zone. The PEIR noted that for aboveground rehabilitation activities in these runway protection zones, construction equipment and/or personnel could interfere with airport operations. Also, where pipelines cross under runway or taxiway areas, there is the potential for belowground construction activities to affect or be affected by airport operations and safety. Impacts would be less than significant with the incorporation of mitigation measures. Implementation of **MM HAZ-5** would reduce program construction-period impacts to less-than-significant levels. Aboveground elements for program operation in a runway protection zone were determined to result in a significant impact if they could interfere with airport operations and safety, but program impacts would be less than significant with the implementation of **MM HAZ-6**, as the measure would require approval from airport officials on program elements.

The proposed project limits are not located within the Airport Influence Area or runway protection zone for the Long Beach Municipal Airport (County 2003). The runway protection zone is more than eight miles east of the closest proposed excavation site. Accordingly, no related impacts would occur, and no mitigation would be required.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, no obstacles that would affect sight distance were determined to result from program construction. The PEIR also noted the potential for safety hazards to result from maneuvering of construction-related vehicles and equipment among general-purpose traffic on local streets and that temporary lane closures could affect non-motorized travel along affected road sections. Program impacts were determined to be less than significant with the implementation of **MM TRA-2**.

The proposed project would involve construction equipment and vehicles within fenced work areas. Traffic would be rerouted to avoid these areas such that no increase in hazards would occur. With the implementation of **MM TRA-2**, project-specific impacts would be less than significant.

The severity of the impact would be the same as that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
e. Result in inadequate emergency access?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, in some cases the program pipelines are within street rights-of-way that serve as emergency response routes and/or evacuation routes. The PEIR stated that if excavation were to take place in roadways that serve as emergency access and capacity of the affected streets were reduced during construction (such as reducing four lanes to two lanes), the ability of these streets to serve as emergency access routes may be impaired. Implementation of **MM HAZ-7** would reduce impacts to a less-than-significant level. Once rehabilitation is complete, contractors would be required to return the street to preconstruction conditions; therefore, there would be no long-term impacts related to emergency access.

As discussed in Item VII.g, the PEIR does not identify an emergency response plan or an emergency evacuation plan for the city of Torrance; however, there are known designated emergency/evacuation routes within the cities of Los Angeles, Lomita, and Rolling Hills Estates. These include Normandie Avenue and Vermont Avenue in Los Angeles; Pacific Coast Highway, Western Avenue, Narbonne Avenue, and Lomita Boulevard in Lomita; and Palos Verdes Drive East and Palos Verdes Drive North in Rolling Hills Estates. However, as stated above, implementation of **MM HAZ-7** would reduce impacts to a less-than-significant level. Additionally, as discussed in Item XII.a, traffic control measures and procedures would be implemented to reduce temporary construction traffic and transportation impacts on city streets. Temporary, construction-related impacts to emergency access would therefore be less than significant. Once rehabilitation is complete, proposed project sites would be returned to preconstruction conditions; therefore, no long-term impacts would occur.

The severity of the impact would be less than that identified in the PEIR.

Would the proposed project:	*New or More Severe Significant Impact than Identified in the PEIR*	*Impact Less than or Equal to Impact Identified in the PEIR*
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?	☐	☒

Impact Less than or Equal to Impact Identified in the PEIR. As discussed in the PCCP PEIR, program rehabilitation would require temporary lane closures on certain streets. Where the pipeline directly travels under Class II bicycle lanes or encroaches on existing bus stops, work zones could interfere with bus services and bicycle traffic on these streets. Lane closures would be restricted to a short distance and would be short in duration, but temporary impacts could be significant. With implementation of **MM TRA-1** and **MM TRA-2**, however, programmatic impacts were determined to be less than significant.

The PCCP PEIR lists roads with designated Class II bicycle lanes in the vicinity of the Second Lower Feeder; none occur within the project boundaries. There is one bus route within the proposed project limits: GTrans Line 2, which travels along Western Avenue. Metro Line 205 also travels along Western Avenue within a small portion of the project site (Metro Transit 2018). Sidewalks and private driveways are present along the majority of the Reach 3 alignment. Implementation of **MM TRA-2** and related site-specific traffic control measures that are identified through coordination between Metropolitan and the appropriate jurisdictions would ensure that temporary impacts to pedestrian and bicycle facilities during construction activities would be less than significant.

Proposed project operation would have no impact on transit, bicycle, or pedestrian travel.

The severity of the impact would be the same as that identified in the PEIR.

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PREPARERS OF INITIAL STUDY

The following individuals participated in the preparation of the Initial Study:

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Appendix A
Air Quality/Greenhouse Gas Emissions Calculations

MWD-24 PCCP Reach3 Maximum Daily Emissions

CalEEMod Summary

Site Type	Location	Maximum Unmitigated Emissions (pounds per day)										Maximum Mitigated Emissions (pounds per day)									
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Typical Excavation Site	On-Site	3.14	27.48	27.55	0.05	0.00	1.62	1.62	0.00	1.54	1.54	0.53	2.31	30.11	0.05	0.00	0.07	0.07	0.00	0.07	0.07
	Off-Site	0.04	0.23	0.43	0.00	0.14	0.00	0.14	0.04	0.00	0.04	0.04	0.23	0.43	0.00	0.14	0.00	0.14	0.04	0.00	0.04
Typical New Valve/Meter Vault Structure	On-Site	2.55	22.61	23.43	0.04	0.00	1.30	1.30	0.00	1.24	1.24	0.42	1.84	25.48	0.04	0.00	0.06	0.06	0.00	0.06	0.06
	Off-Site	0.04	0.13	0.80	0.01	0.30	0.00	0.13	0.03	0.00	0.03	0.04	0.13	0.80	0.01	0.30	0.00	0.13	0.03	0.00	0.03
Typical Below Grade AV/VV Relocation	On-Site	0.55	4.71	6.00	0.01	0.00	0.25	0.25	0.00	0.24	0.24	0.10	0.45	6.45	0.01	0.00	0.01	0.01	0.00	0.01	0.01
	Off-Site	0.04	0.20	0.40	0.00	0.15	0.00	0.13	0.03	0.00	0.04	0.04	0.20	0.40	0.00	0.15	0.00	0.15	0.03	0.00	0.04

On-Site Fugitive Dust

Site Type	Max CY/Day	pounds per day	
		PM10	PM2.5
Typical Excavation Site	638.7	8.73E-02	1.32E-02
Typical New Valve/Meter Vault Structure	177.8	2.43E-02	3.68E-03
Typical Below Grade AV/VV Relocation	25.9	3.54E-03	5.36E-04

On-Site Haul Truck Idling

Site Type	Max Trip/Day	ROG	CO	NOX	PM10	PM2.5
Typical Excavation Site	3	3.78E-05	1.91E-04	1.36E-03	2.59E-06	2.48E-06
Typical New Valve/Meter Vault Structure	2	2.52E-05	1.27E-04	9.08E-04	1.73E-06	1.65E-06
Typical Below Grade AV/VV Relocation	2	2.52E-05	1.27E-04	9.08E-04	1.73E-06	1.65E-06

Maximum Concurrent Site Construction

Typical Excavation Site	5
Typical New Valve/Meter Vault Structure	5
Typical Below Grade AV/VV Relocation	3

Project Total

	Unmitigated Emissions (pounds per day)										Mitigated Emissions (pounds per day)									
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
On-Site	30.1	264.6	272.9	0.5	0.6	15.3	15.9	0.0	14.6	14.6	5.1	22.1	297.3	0.5	0.6	0.7	1.2	0.0	0.7	0.7
Off-Site	0.6	2.4	7.4	0.1	2.6	0.0	1.7	0.5	0.0	0.5	0.6	2.4	7.4	0.1	2.6	0.0	1.8	0.5	0.0	0.5
Total	**30.6**	**267.0**	**280.2**	**0.5**	**3.2**	**15.3**	**17.6**	**0.5**	**14.6**	**15.1**	**5.7**	**24.5**	**304.7**	**0.5**	**3.2**	**0.7**	**3.0**	**0.5**	**0.7**	**1.2**
SCAQMD Threshold	75	100	550	150	-	-	150	-	-	55	75	100	550	150	-	-	150	-	-	55
Exceed Threshold?	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Source:
1. CalEEMod version 2020.4.0
2. USEPA AP-42 Fifth Edition: 13.2.4 Aggregate Handling And Storage Piles
3. USEPA AP-42 Fifth Edition: 13.2.2 Unpaved Roads Table 13.2.2-1, Construction Sites
4. EMFAC2021 (v1.0.1) Emissions Inventory

MWD-24 PCCP Reach3 Annual GHG Emissions

CalEEMod Summary						
	Emissions (MT per year)					
Site Type	Bio CO2	N-Bio CO2	Total CO2	CH4	N20	CO2e
Typical Excavation Site	0.0	8.7	8.7	0.0	0.0	8.8
Typical New Valve/Meter Vault Structure	0.0	17.4	17.4	0.0	0.0	17.5
Typical Below Grade AV/VV Relocation	0.0	3.4	3.4	0.0	0.0	3.4

On-Site Haul Truck Idling					
	Total	Emissions (MT per year)			
Site Type	Trips	CO2	CH4	N20	CO2e
Typical Excavation Site	81	4.0E-01	1.8E-06	6.3E-05	4.0E-01
Typical New Valve/Meter Vault Structure	2	9.8E-03	4.5E-08	1.6E-06	9.8E-03
Typical Below Grade AV/VV Relocation	2	9.8E-03	4.5E-08	1.6E-06	9.8E-03

Total Site Types	
Typical Excavation Site	15
Typical New Valve/Meter Vault Structure	9
Typical Below Grade AV/VV Relocation	8

Project Total						
	Emissions (MT per year)					
	Bio CO2	N-Bio CO2	Total CO2	CH4	N20	CO2e
Total	0.0	320.6	320.6	0.1	0.0	323.0

On-Site Fugitive Dust Emissions

Soil Handling Emission Factors[1]		
	PM10	PM2.5
k, particle size multiplier	0.35	0.053
U, mean wind speed, miles per hour[6]	5.7	5.7
M, material moisture content (%)	12	12
CY per ton[2]	1.2641662	1.2641662
Emission Factor (pounds per CY material)	1.3664E-04	2.0692E-05

Vehicle Dust Emissions Factors[3]			
Input			
		PM10	PM2.5
a, empirical constant		0.9	0.9
b, empirical constant		0.45	0.45
k, empirical constant		1.5	0.15
s, surface material silt content (%)[4]		8.5	8.5
Emissions Factor (lb/VMT)			
Vehicles	W (tons)	PM10	PM2.5
Highway Haul Trucks	15	2.2690	0.2269

Highway Haul Trucks on Unpaved Roads						
			PM10		PM2.5	
Source	Round Trips	Miles/Trip	Emissions Factor (lb/VMT)	Max Daily (lb)	Emissions Factor (lb/VMT)	Max Daily (lb)
Highway Haul Trucks	1	0.2	2.2690	0.454	0.2185	0.044
Total Uncontrolled				**0.5**		**0.0**
Water unpaved travel surfaces twice daily (55% Reduction)				**0.2**		**0.0**
Speed limit 15 MPH (66.7% Reduction))				**0.1**		**0.0**

Notes:
1. Emissions factors from USEPA AP-42 Fifth Edition: 13.2.4 Aggregate Handling And Storage Piles:
EF = k * (0.0032) * ((U/5)^1.3 / (M/2)^1.4)
2. 1 cubic yard soil = 1.2641662 tons (CalEEMod User's Guide Appendix A)
3. Emissions factor equation from USEPA AP-42 Fifth Edition: 13.2.2 Unpaved Roads:
EF = k * (s/12)^a * (W/3)^b
4. Silt content from USEPA AP-42 Fifth Edition: 13.2.2 Unpaved Roads Table 13.2.2-1, Construction Sites.
5. Dust control on unpaved roads from Western Regional Air Partnership Fugitive Dust Handbook.
6. Mean wind speed from Long Beach Aiport ASOS data:
https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=LGB&network=CA_ASOS

Idling Emissions for Heavy Duty Trucks

Input		Pounds per Day					MT per Year				
		ROG	CO	NOX	PM10	PM2.5		CO2	CH4	N20	Total
Trucks per Day in the Idling Queue	1.00						GWP	1	25	298	
Average Idling Time (minutes)	5.0	1.26E-05	6.36E-05	4.54E-04	8.65E-07	8.27E-07		0.00	2.25E-08	7.75E-07	0.00
Days Per Year	85.0										
Metric Tonnes (MT) per Pound	4.54E-04										

Notes:
1. Idling emissions are approximated by 5 mph emissions.
2. Average idling emissions in pounds per minute for Los Angeles County calculated using weighted average of annual VMT for heavy duty trucks.

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, tons/day for Emissions, 1000 gallons/day for Fuel Consumption, mph for Speed, kWh/day for Energy Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT		ROG_RUNEX	CO_RUNEX	NOx_RUNEX	CO2_RUNEX	CH4_RUNEX	PM10_RUNEX	PM2.5_RUNEX	N2O_RUNEX
Los Angeles (SC)	2022	HHDT	Aggregate	5	Diesel	618.6509		0.000233543	0.001179758	0.008426822	2.368646593	1.08475E-05	1.60519E-05	1.53575E-05	0.000373181
					Total	**618.65**	**lbs/min**	**2.5167E-06**	**1.2713E-05**	**9.0809E-05**	**2.5525E-02**	**1.1689E-07**	**1.7298E-07**	**1.6549E-07**	**4.0215E-06**

Appendix B
Biological Resources Assessment

July 20, 2020
Project No: 17-04026

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Subject: Biological Resources Assessment for the Prestressed Concrete Cylinder Pipe Rehabilitation Program – Second Lower Feeder Reach 3 Project, Cities of Los Angeles, Torrance, Lomita, and Rolling Hills Estates, Carson, and Long Beach, Los Angeles County, California

Dear Ms. Martinez:

This report documents the findings of a Biological Resources Assessment conducted by Rincon Consultants, Inc. (Rincon), for the proposed Prestressed Concrete Cylinder Pipeline (PCCP) Rehabilitation Program - Second Lower Feeder (SLF) Reach 3 Project (project). The project is located along the alignment of the Metropolitan Water District of Southern California's (Metropolitan) Second Lower Feeder water distribution pipeline within the cities of Los Angeles, Torrance, Lomita, Rolling Hills Estates, Carson, and Long Beach and a section of the Sepulveda Feeder in the cities of Los Angeles and Torrance. The assessment was completed to document existing site conditions via desktop analysis and field survey, to determine potential impacts to special-status biological resources based upon current project plans, and to compare project impacts to those previously analyzed within Metropolitan's Programmatic Environmental Impact Report (PEIR) (SCH No. 2014121055) (ICF International 2016).

Additional improvements at Station 1565+92, 1569+91, and 1594+15 are located along the existing SLF alignment and are within the PEIR area of analysis. The potential presence of sensitive biological resources in the vicinity of the additional improvements locations was previously evaluated in Addendum No. 3 (Reach 2) to the PEIR (Metropolitan 2019). Site conditions at these stations relevant for biological resources have not changes since the addendum was published.

The proposed project site contains habitat for nesting birds and the project proposes the trimming or removal of trees and vegetation. Therefore, appropriate mitigation (MM BIO-2 and MM BIO-7) as identified in the PEIR is recommended herein to reduce impacts to these sensitive biological resources.

Project Location and Description

The proposed project, Reach 3 of the SLF, covers rehabilitation of portions of a 4.9-mile section of the 78-inch-diameter Second Lower Feeder in the cities of Los Angeles, Torrance, Lomita, Rolling Hills Estates, Carson, and Long Beach and a 300-linear-foot section of the 84-inch-diameter Sepulveda Feeder in the cities of Los Angeles and Torrance (Figure 1). Proposed locations for project elements have been identified, including the contractor's work and storage area, pipe access sites from which the feeder

would be relined, installation of large isolation valves, below ground structures that would be improved, air-release/vacuum valves that would be relocated above grade, air-release/vacuum valves that would be improved, and the construction of a service connection (WB-41).

Ground disturbance in the project area is primarily proposed for Stations 1860, 1864, 1916, 1964, 2015, 2022, 2049, 2098, 2104, and 2109/2114, as well as WB-41. The maximum depth of excavation in these areas would be 20 feet below ground surface. Minor ground disturbance would also occur throughout the project footprint for other project elements (e.g., air-release/vacuum valve relocations). Additional improvements incorporated as part of the project include: the relocation of a vacuum valve to an above ground location within the sidewalk at Station 1565+92 (Reach 2); the relocation of an air release/vacuum valve at Station 1569+91 (Reach 2); and the replacement of an existing 16-inch valve at service connection WB-37 located at Station 1594+15 (Reach 2). All proposed excavation is along the existing pipeline alignment and ground disturbance is expected to remain primarily within disturbed soils.

Existing surface improvements, such as road pavements, sidewalks, and landscaping, would be removed at each excavation area, and soils would be excavated and temporarily removed from the site to expose the existing pipeline. Once rehabilitation is complete, the excavation area would either be backfilled with soils originally excavated or backfilled with slurry, and the surface of each excavation area and surrounding work zone would be restored to existing conditions. This would involve re-paving existing roads, repairing or replacing existing sidewalks, and replanting landscaping.

Rehabilitation activities would take approximately one year, with mobilization of equipment and traffic control setup scheduled to begin as early as October 2021. Water service shutdowns on the Second Lower and Sepulveda Feeders would begin in mid-October 2021, and the proposed project pipeline segment would be returned to service in April 2022. Traffic controls and equipment would be removed by the end of October 2022. The PCCP Program schedule is dependent on risk assessment of the pipeline, thus if inspections reveal another segment is more at risk, the repair schedule will be altered. Shutdowns are primarily scheduled during low water use times (i.e., the optimum time for pipeline shutdowns is winter months when water demand is less than during the summer months).

Previous Environmental Review

The PEIR assessed the potential environmental effects of the PCCP Rehabilitation Program (SCH No. 2014121055) in accordance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code [PRC] Section 21000 et seq.) and the Guidelines for Implementation of CEQA (State CEQA Guidelines) published by the Public Resources Agency of the state of California (California Code of Regulations [CCR], Title 14, Section 15000 et seq.). The PEIR analyzed rehabilitation of the PCCP portions of the five pipelines within Metropolitan's service area that were identified as having the highest risk, including the Reach 3 segment of the Second Lower Feeder. The SLF Reach 3 additional improvements are located along the existing SLF alignment (Reach 2) and are within the PEIR area of analysis.

The PEIR identified programmatic impacts associated with thresholds BIO(a), BIO(b), BIO(c), BIO(d) and BIO(f) as potentially significant and unavoidable despite proposed mitigation, noting that the level of impact would need to be determined at the project level. Impacts associated with threshold BIO(e) were identified as less than significant after mitigation.

Methodology

Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special-status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees.

Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes:

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- City of Los Angeles Municipal Code
- City of Torrance Municipal Code
- City of Lomita Municipal Code
- City of Rolling Hills Estates Municipal Code
- City of Carson
- City of Long Beach Municipal Code

Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

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

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

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal areas, etc.) through direct removal, filling, hydrological interruption, or other means.

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

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional or state habitat conservation plan.

Literature Review

A literature review was conducted to establish the environmental and regulatory setting of the proposed project. Specific literature reviewed for the subject analysis is provided in the references section of this document. The reviewed literature also included the United States Department of Agriculture (USDA) Soil Survey for the United States Geological Service (USGS) *Torrance, California* 7.5-minute topographic quadrangle (USDA 2019), and literature detailing the habitat requirements of subject species. Aerial photographs, topographic maps, and soil survey maps were also examined.

Queries of the United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS): Information, Planning and Conservation System (IPaC) (USFWS 2019a), USFWS Critical Habitat Portal (USFWS 2019b), USFWS National Wetland Inventory (NWI) (USFWS 2019c), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2019a), CDFW Biogeographic Information and Observation System (BIOS) (CDFW 2019b) and California Native Plant Society (CNPS) *Online Inventory of Rare, Threatened and Endangered Plants of California* (CNPS 2019) were conducted. The queries were conducted to obtain comprehensive information regarding state and federally listed species, sensitive communities and federally designated critical habitat known to or considered to have potential to occur within the vicinity of the project site.

Field Reconnaissance Survey

The field reconnaissance survey was limited to providing an overview of site biological constraints and the potential presence of sensitive biological resources, including special-status plant and wildlife species, sensitive plant communities, jurisdictional waters and wetlands, protected trees, wildlife movement, and habitat for nesting birds. The survey area consisted of the approximately 4.9-mile project footprint extending from Second Lower Feeder Station (SLF STA) 1859+80 (located on West 220th Street in the city of Los Angeles) to SLF STA 2116+84 (located adjacent to the Palos Verdes Reservoir in the city of Rolling Hills Estates) and from Sepulveda Feeder Station (SF STA) 2270+35 to SF STA 2273+23, located on Western Avenue in the cities of Torrance and Los Angeles. Site photographs are included in Attachment C.

Rincon biologist Amy Leigh Trost conducted the field reconnaissance survey on September 26, 2019. The survey was performed by walking and driving along the proposed work area to characterize the existing biological resources present (e.g., vegetative communities, potential presence of special-status species and/or habitats, and presence of potentially jurisdictional waters). Where portions of the survey area were inaccessible on foot (e.g., private property and fenced areas), the biologist visually inspected these areas with binoculars (10 x 40). Weather conditions during the survey included an average temperature of 71 degrees Fahrenheit, with winds between 0 and 3 miles per hour and overcast skies.

Existing Conditions

Physical Characteristics

The project site is located within developed/disturbed urbanized areas, primarily within the paved rights-of-way of existing roadways. Based on a review of historic aerial photographs, most of the project site and surrounding areas have been heavily developed and disturbed since at least 1952.

Soils onsite consist of the following soil types, of which Urban land-Thums-Windfetch complex, 0 to 2 percent slopes, and Urban land-Marina complex, 0 to 5 percent slopes, are considered hydric (Attachment B, Figure 2, USDA 2019):

- Urban land-Aquic Xerothents, fine substratum-Cropley complex, 0 to 5 percent slopes
- Urban land-Haploxeralfs complex, 0 to 2 percent slopes
- Urban land-Anthraltic Xerorthents, loamy substratum-Grommet complex, 0 to 5 percent slopes
- Urban land-Typic Xerothents, coarse substratum-Typic Haploxeralfs complex, 0 to 5 percent slopes
- Urban land-Thums-Windfetch complex, 0 to 5 percent slopes
- Urban land-Thums-Windfetch complex, 0 to 2 percent slopes
- Urban land-Marina complex, 0 to 5 percent slopes
- Urban land-Metz-Pico complex, 0 to 2 percent slopes
- Urban land-Windfetch-Sepulveda complex, 2 to 9 percent slopes
- Lunada-Zaca complex, 30 to 75 percent slopes
- Urban land-Dapplegray-Oceanaire complex, 10 to 35 percent slopes
- Pits and Quarries
- Dapplegray-Urban land complex, 10 to 35 percent slopes, terraced

Land use adjacent to the project site consists of developed and urban areas including a mixture of institutional, residential, and commercial uses.

Vegetation

Based on a review of available aerial imagery and the field reconnaissance survey, the project site is primarily characterized by urban and developed land including paved road rights-of-way, and adjacent sidewalks and utility poles. These portions of the project site are devoid of vegetation with the exception of landscaped medians, sidewalks and street trees, which are dominated by ornamental species such as eucalyptus (*Eucalyptus* sp.), large pines (*Pinus* sp.), Peruvian pepper tree (*Schinus molle*), crimson bottlebrush (*Callistemon lanceolatus*), and ornamental palms. Trees located within Palos Verdes Reservoir are primarily large pine trees. Two coast live oak (*Quercus agrifolia*) trees were documented in the work area for SLF STA 2109/2114 in the city of Rolling Hills Estates.

General Wildlife

The urban and developed habitat in the project site supports common urban wildlife. Wildlife species observed directly or detected from calls, tracks, scat, or other sign were documented. The detection of wildlife species was limited by seasonal and temporal factors. Avian species observed/detected on or adjacent to the site include mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*),

European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), and Anna's hummingbird (*Calypte anna*).

Sensitive Biological Resources

Based on review of aerial photographs and the field reconnaissance survey, Rincon evaluated the potential presence of sensitive biological resources on and adjacent to the project site.

Special-Status Species

Local, state, and federal agencies regulate special-status species and generally require an assessment of their presence or potential presence to be conducted prior to the approval of a proposed project. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, species occurrence records from other sites in the vicinity of the survey area, and previous reports for the project site. The potential for each special-status species to occur in the survey area was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

The CNDDB has records for 21 special-status plant species and 21 special-status wildlife species within five miles of the project site (Attachment D). One sensitive plant community, southern coastal bluff scrub, was identified within five miles of the project site. Special-status plant and wildlife species typically have very specific habitat requirements, which are not found on the project site.

Special-Status Plant Species

The project site is located within highly developed/disturbed urbanized areas, and primarily within the paved rights-of-way of existing roadways. Because of historic and existing disturbance from high levels of anthropogenic activities, the site is not suitable for special-status plant species.

Special-Status Wildlife Species

The project site is located within highly developed/disturbed urbanized areas, and primarily within the paved rights-of-way of existing roadways. Because of historic, existing disturbance from high levels of

anthropogenic activities, and the lack of specific coastal habitats or suitable substrates, the site is not suitable for most special-status wildlife species.

Low quality or marginal foraging and/or roosting habitat for three special-status wildlife species occurs within and adjacent to the project site:

- Southern California legless-lizard (*Anniella stebbinsi*); CDFW Species of Special Concern (SSC)
- Western mastiff bat (*Eumops perotis californicus*); CDFW SSC
- San Diego desert woodrat (*Neotoma lepida intermedia*); CDFW SSC

The project site is dominated by landscaped areas containing ornamental trees with low buildings that may potentially serve as habitat for southern California legless lizard (SCLL), San Diego desert woodrat (SDDW), and roosting western mastiff bat. The habitat surrounding Palos Verdes Reservoir and SLF STA 2109/2114 has the greatest potential to support special-status species; however, these areas are regularly disturbed. SLF STA 2109/2114 contains some woody shrubs and is located directly adjacent to the George F. Canyon Nature Preserve where there is some potentially suitable habitat for SCLL and SDDW. Palos Verdes Reservoir was developed in the 1960s and portions of the property have returned to a semi-natural habitat with suitable understory for both SCLL and SDDW. Therefore, potential for occurrence of these species is low. The project site has a history of frequent disturbance and is surrounded by existing development and heavily traveled transportation corridors. These factors reduce the potential for occurrence for most wildlife species mentioned.

Nesting Birds

Ornamental shrubs and trees that could provide suitable nesting habitat for several common avian species occur throughout the project site. Nesting birds are protected by CFGC 3503 and the MBTA.

Sensitive Plant Communities

No sensitive plant communities as defined by the CNDDB or local ordinances are present on the project site.

Jurisdictional Waters and Wetlands

Based on aerial review, including review of the USFWS NWI Wetland Mapper (USFWS 2019c), and the reconnaissance field survey, no potentially jurisdictional drainages or wetlands are present within any designated work areas. A riparian corridor is mapped within the work area for SLF STA 2098; however, this feature was not present in the field (Attachment C, Photograph 3). The area is dominated by non-native Peruvian pepper trees and no water source was observed. A length of riverine habitat is also mapped along Palos Verdes Drive East between Oak Street and Club View Lane. This feature was not observed in the field and furthermore, no project work is proposed in this area.

Addendum No. 3 (Reach 2) to the PEIR identified concrete-lined storm water channels, including Dominguez Channel and Los Cerritos Drain. Both channels are potential jurisdictional features, but are located more than 100 feet from the project's additional improvement locations.

Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning

areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The project site is located within a developed urban area and occurs close to heavily traveled transportation corridors including Interstate (I) 110 and I-405. The closest mapped *Natural Landscape Block* (Spencer et al. 2010) is approximately 22 miles northeast of the project site in the Puente Hills (including the Worsham Open Space Preserve) near the city of Whittier. The project site is separated from these habitat connectivity areas by existing development, major highways, and paved roadways. The project site is located adjacent to the George F. Canyon Nature Preserve, which is located just north of SLF STA 2109/2114 at the southern end of the project site. This area provides for local movement of common wildlife but does not serve as a significant migratory wildlife corridor. Furthermore, the site has been previously disturbed and no work is proposed in the nature preserve. Therefore, the project site does not contain significant migratory wildlife corridors.

Resources Protected by Local Policies and Ordinances

City of Lomita

The Lomita City Tree Ordinance (9-2.30) states that alteration or removal of any city tree shall require a tree trimming or removal permit, respectively. Furthermore, the ordinance states that all city pine trees in the Lomita Pines neighborhood with a diameter at breast height of twelve inches or greater, shall be given protected tree status. All reasonable efforts to save trees must be exhausted before removal will be allowed. The Lomita Pines neighborhood is generally bordered by Pacific Coast Highway to the north, Western Avenue to the east, Narbonne Avenue to the west, and ends just north of Via Madonna in the city of Lomita.

City of Los Angeles

The city of Los Angeles Protected Tree Relocation or Replacement Ordinance (177404) states that no protected tree may be relocated or removed unless the removal of the tree has been approved by the Advisory Agency. Los Angeles protects all of the following Southern California native tree species, which measure four inches or more in cumulative diameter, four and one-half feet above the ground level at the base of the tree: Oak trees including valley oak (*Quercus lobata*), California live oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the scrub oak (*Quercus dumosa*), southern California black walnut (*Juglans californica* var. *californica*), western sycamore (*Platanus racemosa*), and California bay (*Umbellularia californica*). Non-protected street trees within Los Angeles require a street tree removal permit.

City of Rolling Hills Estates

The Rolling Hills Estates Street Tree Ordinance (12.20) states that a property owner shall file a written request to the superintendent to initiate removal of street trees from a planting strip or easement.

City of Torrance

The Torrance Tree Ordinance (75.1.1) states that no person may cut, trim, remove, prune, plant, injure, or interfere with any tree upon any street, park, alley, or public place within the City without first obtaining a permit from the Public Works Director.

City of Carson

The City of Carson Municipal Code Chapter 9 states that the Public Works Division shall be responsible for administering and scheduling pruning of all City trees; otherwise all other trimming is prohibited, unless a permit is obtained. All City trees shall be trimmed using professionally accepted standards, as established by the International Society of Arboriculture (ISA) Best Management Practice and ANSI Pruning Standards, whichever is more protective of tree preservation. All City trees shall be pruned in a manner that will encourage good development while preserving their health, structure, and natural appearance. Shearing, topping, heading back, stubbing, lion tailing, or pollarding of public trees is prohibited, except in accordance with ISA standards (City of Carson 2020).

City of Long Beach

The City of Long Beach Municipal Code Section 14.28 states that tree trimming and removal of any City-owned street tree will be conducted by the Public Works Department following submittal of an application for a no-fee permit (City of Long Beach 2006, 2013).

California Department of Transportation

The portion of the project site that occurs within the California Department of Transportation (Caltrans) right-of-way includes the length of the project along Western Avenue (California State Route 213). This segment will require coordination with Caltrans prior to tree removal in this area.

Conservation Plans

The proposed project is not located within the jurisdiction of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact Analysis and Mitigation Measures

Special-Status Species

Twenty one special-status plant species and 21 special-status wildlife species are known to occur within a five-mile radius of the project site. Due to the historic and existing disturbed/developed condition of the project site, the site is not suitable for any special-status plant species; therefore, no impacts to special-status plant species would occur. The severity of the impact would be less than that identified in the PEIR.

Of the 21 special-status wildlife species identified, three species have low potential to occur onsite: southern California legless-lizard, western mastiff bat, and San Diego desert woodrat.

The project proposes the removal or trimming of trees which may provide low-quality foraging habitat as well as daytime or nighttime roosts for the western mastiff bat, as well as low-quality habitat for SCLL and SDDW. As such, the project may result in loss of low quality habitat for these species, as well as potential injury or death to individuals. It should be noted that these species are not geographically restricted to the vicinity of the project area and the loss of low quality habitat would not significantly affect the species. Given the low potential for occurrence onsite and the location of the proposed project adjacent to disturbed/developed areas, the proposed project would not have population-wide negative effects on these species. Impacts would be less than significant and no further actions are recommended. The severity of the impact would be less than that identified in the PEIR.

As described above, the project site contains ornamental shrubs and trees that could provide suitable nesting habitat for several common avian species. Implementation of MM BIO-2 as identified in the PEIR would reduce impacts to a less than significant level. The severity of the impact would be equal to that identified in the PEIR.

> **MM BIO-2: Impacts on Nesting Birds.** For any projects within the program that require vegetation removal during the nesting season for sensitive species protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503, including street trees and other landscaping, a qualified biologist will inspect the vegetation to be removed no more than 10 days prior to tree/ vegetation removal to determine whether nesting birds are present. If a nest is found, the biologist will determine the site-specific measures necessary to avoid disturbing the nest until nesting activity has ceased. Nothing in this mitigation measure precludes the use of deterrent measures to prevent bird nesting.

Sensitive Plant Communities

The project site does not contain riparian habitat or other sensitive natural communities. Therefore, no impacts are expected and the severity of the impact would be less than that identified in the PEIR.

Jurisdictional Waters and Wetlands

The project site does not contain any jurisdictional drainages or wetlands. A riparian corridor is mapped within the work area for SLF STA 2098; however, this feature was not present in the field (Attachment C, Photograph 3). The area is dominated by non-native Peruvian pepper trees and no water source was observed. A band of riverine habitat is also mapped along Palos Verdes Drive East between Oak Street and Club View Lane. This feature was not observed in the field and furthermore, no work areas are proposed at this location. Therefore, no impacts to jurisdictional waters and wetlands are expected.

Wildlife Movement

As discussed above, the project site is located within a developed urban area and occurs close to heavily traveled transportation corridors including I-110 and I-405. The closest mapped *Natural Landscape Block* (Spencer et al. 2010) is approximately 22 miles northeast of the project site in the Puente Hills (including the Worsham Open Space Preserve) near the city of Whittier. The project site is separated from these habitat connectivity areas by existing development, major highways, and paved roadways. The project site is located adjacent to the George F. Canyon Nature Preserve. The site has been previously disturbed and no work is proposed in the nature preserve. The project site does not contain significant migratory wildlife corridors; therefore, no impacts are expected and the severity of the impact would be less than that identified in the PEIR.

Local Policies and Ordinances

As described above, trees and vegetation are proposed to be trimmed or removed in order to complete the project. Implementation of MM BIO-7 as identified in the PEIR would reduce impacts to a less than significant level. The severity of the impact would be equal to that identified in the PEIR.

> **MM BIO-7: Conflicts with Local Policies Related to Biological Resources.** For any projects within the program that require vegetation removal, Metropolitan will determine if there are any applicable local policies related to biological resources and, if so, coordinate with the affected jurisdiction, as necessary, to determine appropriate requirements for vegetation removal and replacement. The contractor will be required to comply with any applicable requirements. Nothing in this mitigation

will require the contractor to make improvements beyond the existing condition prior to construction.

Conservation Plans

The proposed project is not located within the jurisdiction of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur and the severity of the impact would be less than that identified in the PEIR.

Thank you for the opportunity to provide this Biological Resources Assessment. Please contact the undersigned with any questions.

Sincerely,
Rincon Consultants, Inc.

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Attachments

Attachment A References
Attachment B Figures
Attachment C Site Photographs
Attachment D Special-Status Species Potential to Occur

Attachment A

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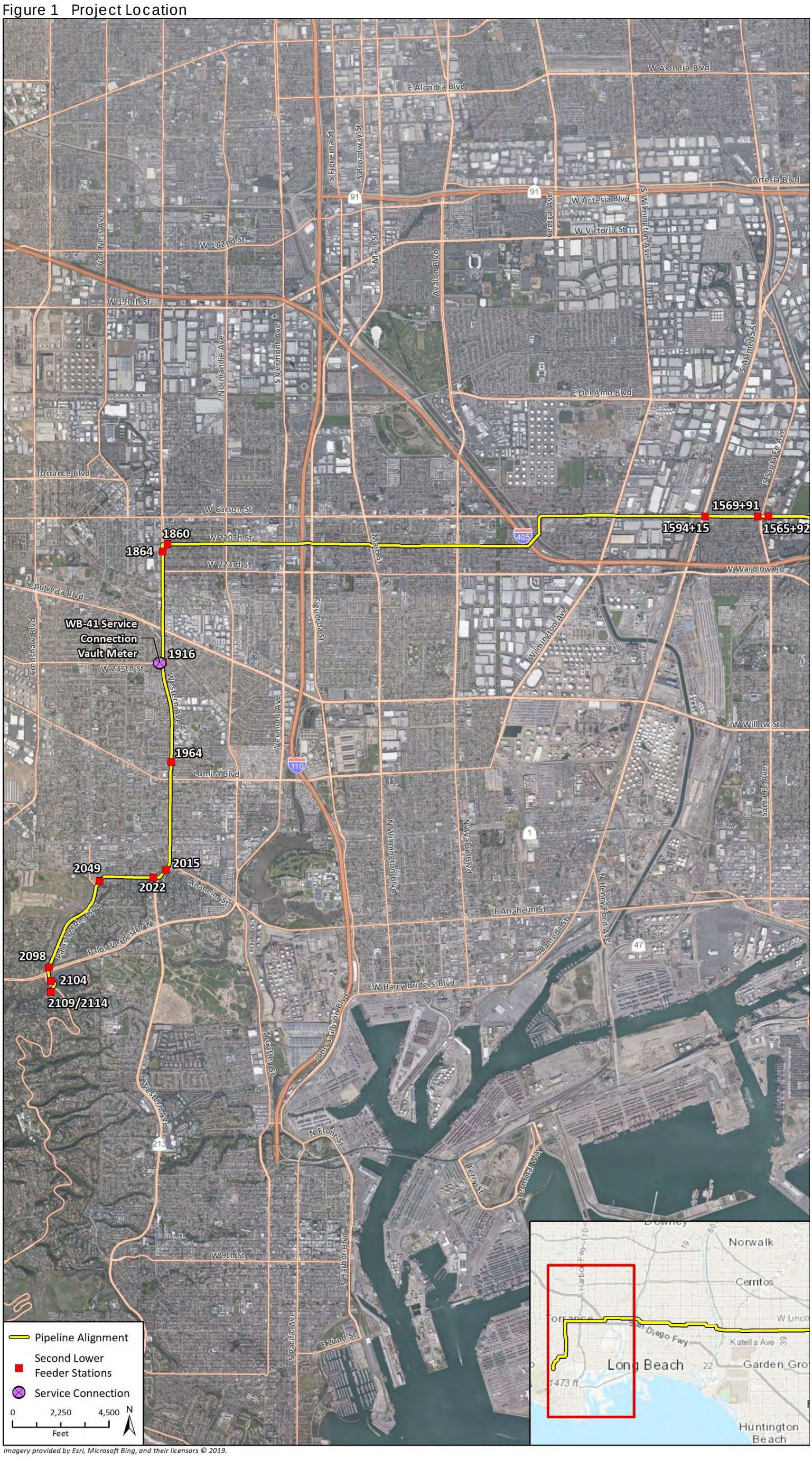
Attachment B

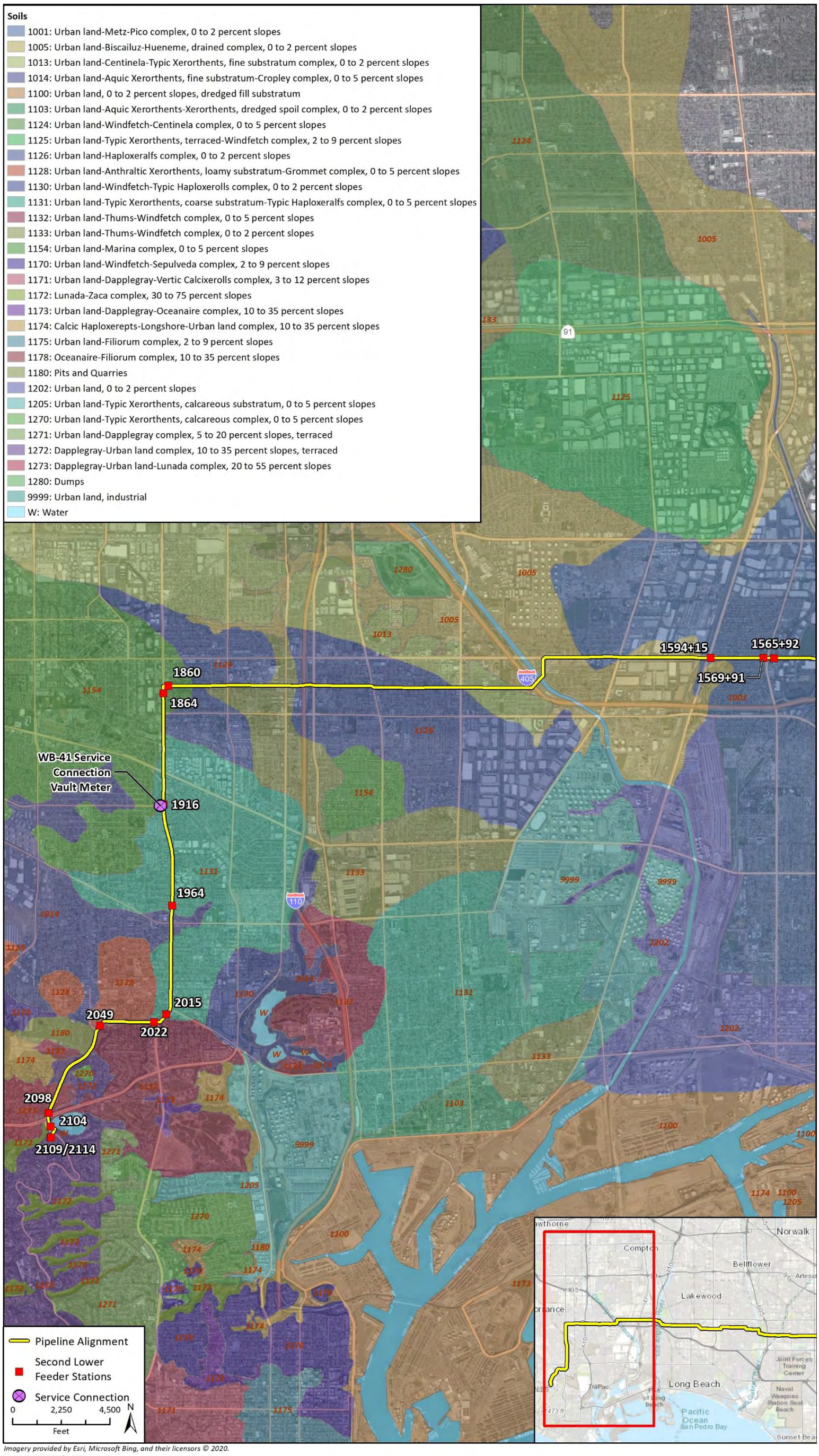
Figures

Figure 1 Project Location



Imagery provided by Esri, Microsoft Bing, and their licensors © 2019.

Figure 2 Mapped Soil Units in the Project Vicinity



Imagery provided by Esri, Microsoft Bing, and their licensors © 2020.
NRCS SSURGO Soils, 2020.

Attachment C

Site Photographs

Photograph 1. SLF STA 2109/2114, facing northeast.

Photograph 2. SLF STA 2104 within Palos Verdes Reservoir, facing north.

Photograph 3. SLF STA 2098, facing west.

Photograph 4. Metro Park adjacent to SLF STA 2049, facing west.

Photograph 5. Project site with street trees proposed for trimming/removal, facing south.

Photograph 6. Project site along Western Avenue, facing north.

Attachment D

Special-status Species Potential to Occur

Special-Status Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Plants and Lichens				
Aphanisma blitoides aphanisma	None/None 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. On bluffs and slopes near the ocean in sandy or clay soils. 3-305 m. annual herb. Blooms Feb-Jun	None	No coastal scrub habitats occur along the site.
Atriplex coulteri Coulter's saltbush	None/None 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2-460 m. perennial herb. Blooms Mar-Oct	None	No coastal scrub or grassland habitats occur along the site.
Atriplex pacifica south coast saltscale	None/None 1B.2	Coastal scrub, coastal bluff scrub, playas, coastal dunes. Alkali soils. 1-400 m. annual herb. Blooms Mar-Oct	None	No coastal scrub habitats or playas occur along the site.
Atriplex parishii Parish's brittlescale	None/None 1B.1	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 5-1420 m. annual herb. Blooms Jun-Oct	None	No vernal pools or scrub habitats occur along the site.
Atriplex serenana var. *davidsonii* Davidson's saltscale	None/None 1B.2	Coastal bluff scrub, coastal scrub. Alkaline soil. 0-460 m. annual herb. Blooms Apr-Oct	None	No coastal scrub habitats occur along the site.
Centromadia parryi ssp. *australis* southern tarplant	None/None 1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-975 m. annual herb. Blooms May-Nov	None	No marshes or swamps, grasslands, or vernal pools occur along the site.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Centromadia pungens ssp. *laevis* smooth tarplant	None/None 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m. annual herb. Blooms Apr-Sep	None	No grassland, scrub, meadows, playas, or riparian habitats occur along the site.
Chloropyron maritimum ssp. *maritimum* salt marsh bird's-beak	FE/FE 1B.2	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m. annual herb (hemiparasitic). Blooms May-Oct (Nov)	None	No marshes or swamps, or dunes occur along the site.
Crossosoma californicum Catalina crossosoma	None/None 1B.2	Chaparral, coastal scrub. On rocky sea bluffs, wooded canyons, and dry, open sunny spots on rocky clay. 5-535 m. perennial deciduous shrub. Blooms Feb-May	None	No chaparral, scrub, canyons, or clay soils occur along the site.
Dudleya virens ssp. *insularis* island green dudleya	None/None 1B.2	Coastal bluff scrub, coastal scrub. Rocky soils. 0-275 m. perennial herb. Blooms Apr-Jun	None	No coastal scrub habitats occur along the site.
Horkelia cuneata var. *puberula* mesa horkelia	None/None 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m. perennial herb. Blooms Feb-Jul(Sep)	None	No chaparral, scrub, or woodland habitats occur along the site.
Isocoma menziesii var. *decumbens* decumbent goldenbush	None/None 1B.2	Coastal scrub, chaparral. Sandy soils; often in disturbed sites. 1-915 m. perennial shrub. Blooms Apr-Nov	None	No chaparral or scrub habitats occur along the site.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None 1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m. annual herb. Blooms Feb-Jun	None	No salt marshes, playas, or vernal pools occur along the site.
Lycium brevipes var. *hassei* Santa Catalina Island desert-thorn	None/None 3.1	Coastal bluff scrub, coastal scrub. Coastal bluffs and slopes. 30-95 m. perennial deciduous shrub. Blooms Jun (Aug)	None	No coastal scrub habitats occur along the site.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Nama stenocarpa mud nama	None/None 2B.2	Marshes and swamps. Lake shores, river banks, intermittently wet areas. 5-500 m. annual / perennial herb. Blooms Jan-Jul	None	No marhes, swamps, or other natural aquatic habitats occur along the site.
Navarretia prostrata prostrate vernal pool navarretia	None/None 1B.2	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3-1235 m. annual herb. Blooms Apr-Jul	None	No scrub or grassland habitats, or vernal pools, meadows or seeps occur along the site.
Nemacaulis denudata var. *denudata* coast woolly-heads	None/None 1B.2	Coastal dunes. 0-100 m. annual herb. Blooms Apr-Sep	None	No coastal dunes occur along the site.
Pentachaeta lyonii Lyon's pentachaeta	FE/FE 1B.1	Chaparral, valley and foothill grassland, coastal scrub. Edges of clearings in chaparral, usually at the ecotone between grassland and chaparral or edges of firebreaks. 30-630 m. annual herb. Blooms (Feb)Mar-Aug	None	No chaparral, grassland, or scrub habitats occur along the site.
Phacelia stellaris Brand's star phacelia	None/None 1B.1	Coastal scrub, coastal dunes. Open areas. 3-370 m. annual herb. Blooms Mar-Jun	None	No coastal scrub or dune habitats occur along the site.
Suaeda esteroa estuary seablite	None/None 1B.2	Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. 0-80 m. perennial herb. Blooms (May)Jul-Oct (Jan)	None	No marshes or swamps occur along the site.
Symphyotrichum defoliatum San Bernardino aster	None/None 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 2-2040 m. perennial rhizomatous herb. Blooms Jul-Nov	None	No meadows or seeeps, woodlands or forests, grassland, or scrub habitats occur along the site.
Invertebrates				

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Bombus crotchii Crotch bumble bee	None/SC	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	None	No suitable food plant species occur along the site.
Cicindela gabbii western tidal-flat tiger beetle	None/None	Inhabits estuaries and mudflats along the coast of Southern California. Generally found on dark-colored mud in the lower zone; occasionally found on dry saline flats of estuaries.	None	No estuaries or mudflats occur along the site.
Cicindela hirticollis gravida sandy beach tiger beetle	None/None	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	None	No coastal areas occur along the site.
Cicindela latesignata latesignata western beach tiger beetle	None/None	Mudflats and beaches in coastal Southern California.	None	No mudflats or beaches occur along the site.
Danaus plexippus pop. 1 monarch - California overwintering population	None/None	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	None	Eucalyptus trees occur along the site; however, these areas are sparse and would not provide suitable roosting sites.
Euphilotes battoides allyni El Segundo blue butterfly	FE/None	Restricted to remnant coastal dune habitat in Southern California. Host plant is *Eriogonum parvifolium*; larvae feed only on the flowers and seeds; used by adults as major nectar source.	None	No suitable host plant species occur along the site.
Glaucopsyche lygdamus palosverdesensis Palos Verdes blue butterfly	FE/None	Restricted to the cool, fog-shrouded, seaward side of Palos Verdes Hills, Los Angeles County. Host plant is Astragalus trichopodus var. lonchus (locoweed).	None	No suitable host plant species occur along the site.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Streptocephalus woottoni Riverside fairy shrimp	FE/None	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	None	No vernal pools occur along the site.
Tryonia imitator mimic tryonia (=California brackishwater snail)	None/None	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	None	No lagoons, estuaries, or salt marshes occur along the site.
Fish				
Siphateles bicolor mohavensis Mohave tui chub	FE/FE FP	Endemic to the Mojave River basin, adapted to alkaline, mineralized waters. Needs deep pools, ponds, or slough-like areas. Needs vegetation for spawning.	None	No pools or ponds occur along the site.
Reptiles				
Anniella stebbinsi southern California legless lizard	None/None SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Low	Potentially suitable habitat for this species occurs within Palos Verdes Reservoir and SLF STA 2109/2114; however, these areas are regularly subject to maintenance and other disturbance.
Phrynosoma blainvillii coast horned lizard	None/None SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	None	No sandy soils occur along the site.
Birds				

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Agelaius tricolor tricolored blackbird	None/FT SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	None	No suitable open water habitats with nesting substrate occurs along the site.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	None	No riparian habitat occurs along the site.
Polioptila californica californica coastal California gnatcatcher	FT/None SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	None	No coastal sage scrub occurs along the site.
Riparia riparia bank swallow	None/ST	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	None	No riparian habitat or vertical banks or cliffs occur along the site.
Sternula antillarum browni California least tern	FE/SE FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.	None	No beaches, alkali flat, or other suitable habitats occur along the site.
Mammals				
Eumops perotis californicus western mastiff bat	None/None SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Low	Potentially suitable roost trees for this species occur within Palos Verdes Reservoir; however, this area is regularly subject to maintenance and other disturbance.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Neotoma lepida intermedia San Diego desert woodrat	None/None SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	Low	Potentially suitable habitat for this species occurs within Palos Verdes Reservoir and SLF STA 2109/2114; however, this area is regularly subject to maintenance and other disturbance.
Nyctinomops femorosaccus pocketed free-tailed bat	None/None SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	None	No rocky areas with high cliffs occur along the site for roosting.
Perognathus longimembris pacificus Pacific pocket mouse	FE/None SSC	Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles County. Seems to prefer soils of fine alluvial sands near the ocean, but much remains to be learned.	None	No alluvial sands occur along the site.
Sensitive Natural Communities				
Southern Coastal Bluff Scrub Southern Coastal Bluff Scrub	None/None		None	This natural community does not occur along the project site.

Regional Vicinity refers to within a 5-mile search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species

SE = State Endangered ST = State Threatened SC = State Candidate SR = State Rare

SSC = CDFW Species of Special Concern

CRPR (CNPS California Rare Plant Rank):

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2A=Plants presumed extirpated in California, but more common elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension:

.1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)

Appendix C
Cultural Resources Study

Revised July 16, 2020
Rincon Project No: 17-04026

Lilia Martínez
Senior Environmental Specialist
The Metropolitan Water District of Southern California
Environmental Planning Section
700 North Alameda Street
Los Angeles, California 90012
Via email: limartinez@mwdh2o.com

Subject: **Cultural Resources Study for the Prestressed Concrete Cylinder Pipe Rehabilitation Program – Second Lower Feeder Reach 3 Project, cities of Los Angeles, Torrance, Lomita, Rolling Hills Estates, Carson, and Long Beach, Los Angeles County, California.**

Dear Ms. Martínez:

Rincon Consultants, Inc. (Rincon) was retained by HELIX Environmental Planning, Inc. on behalf of The Metropolitan Water District of Southern California (Metropolitan) to conduct a cultural resources study for the Prestressed Concrete Cylinder Pipeline (PCCP) Rehabilitation Program – Second Lower Feeder (SLF) Reach 3 Project (project) in the cities of Los Angeles, Torrance, Lomita, Rolling Hills Estates, Carson, and Long Beach, Los Angeles County, California. This letter report presents the results of a cultural resources records search review and field survey completed for the proposed project. This cultural resources study has been completed in accordance with the requirements of Mitigation Measures (MM) CUL-1: Historic Resources Protection Program, CUL-2: Avoidance or Monitoring of Archaeological Sites, and CUL-5: Archaeological Survey of Non-Pipeline Area in Metropolitan's Programmatic Environmental Impact Report (PEIR) Volume 2: Findings of Fact, Mitigation Monitoring and Reporting Program (MMRP; SCH No. 2014121055), and Statement of Overriding Considerations for cultural resources (Metropolitan 2016).

Project Location and Description

The proposed project, Reach 3 of the SLF, covers rehabilitation of portions of a 4.9-mile-long section of the 78-inch-diameter Second Lower Feeder in the cities of Los Angeles, Torrance, Lomita, Rolling Hills Estates, Carson, and Long Beach and a 300-linear-foot section of the 84-inch-diameter Sepulveda Feeder in the cities of Los Angeles and Torrance. Proposed locations for project elements have been identified, including the contractor's work and storage areas, pipe access sites from which the feeder would be relined, installation of large isolation valves, below ground structures that would be improved, air-release/vacuum valves that would be relocated above grade, air-release/vacuum valves that would be improved, and the construction of a service connection (WB-41).

Ground disturbance in the project area is primarily proposed for Stations 1860, 1864, 1916, 1964, 2015, 2022, 2049, 2098, 2104, and 2109/2114, as well as WB-41. The maximum depth of excavation in these

areas would be 20 feet below ground surface. Minor ground disturbance would also occur throughout the project footprint for other project elements (e.g., air-release/vacuum valve relocations). Additional improvements incorporated as part of the project include: the relocation of a vacuum valve to an above ground location within the sidewalk at Station 1565+92 (Reach 2); the relocation of an air release/vacuum valve at Station 1569+91 (Reach 2); and the replacement of an existing 16-inch valve at service connection WB-37 located at Station 1594+15 (Reach 2). All proposed excavation is along the existing pipeline alignment and ground disturbance is expected to remain primarily within disturbed soils.

Existing surface improvements, such as road pavements, sidewalks, and landscaping, would be removed at each excavation area, and soils would be excavated and temporarily removed from the site to expose the existing pipeline. Once rehabilitation is complete, the excavation area would either be backfilled with soils originally excavated or backfilled with slurry, and the surface of each excavation area and surrounding work zone would be restored to existing conditions. This would involve re-paving existing roads, repairing or replacing existing sidewalks, and replanting landscaping.

Rehabilitation activities would take approximately one year, with mobilization of equipment and traffic control setup scheduled to begin as early as October 2021. Water service shutdowns on the Second Lower and Sepulveda Feeders would begin in mid-October 2021, and the proposed project pipeline segment would be returned to service in April 2022. Traffic controls and equipment would be removed by the end of October 2022. The PCCP Program schedule is dependent on risk assessment of the pipeline, thus if inspections reveal another segment is more at risk, the repair schedule will be altered. Shutdowns are primarily scheduled during low water use times (i.e., the optimum time for pipeline shutdowns is winter months when water demand is less than during the summer months).

Regulatory Setting

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires a lead agency to determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC] §21084.1). A historical resource is one listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be *historically significant* (State CEQA Guidelines §15064.5[a][1-3]).

A resource shall be considered *historically significant* if it meets any of the following criteria:

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

Generally, a cultural resource must be at least 50 years old to be considered for listing on the CRHR. Resources that have achieved significance within the past 50 years may also be eligible for inclusion in

the CRHR, provided that enough time has elapsed to obtain a scholarly perspective on the events or individuals associated with the resource (Office of Historic Preservation 2011:3).

If it can be demonstrated a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to allow any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC §21083.2[a], [b]).

PRC §21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person

City of Torrance

The City of Torrance General Plan Community Resources Element contains the following objective and policies pertaining to cultural resources and relevant to the current project:

Objective CR.12: Preservation of sites of local historical or cultural importance

Policy CR.12.1: Encourage the preservation of public and private buildings which are of local, historical, or cultural importance.

Policy CR.12.2: Support the work of local historic groups to identify and preserve local structures and sites of historical interest and importance.

The City of Torrance Historic Preservation Ordinance provides criteria for the designation of “landmarks” and “landmark districts” per the Torrance Municipal Code Section 91.50.010. A cultural resource may be designated as a landmark if it meets one of the following criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of local, regional, state, or national history, or the cultural heritage of the City, California, or the United States;
B. It is associated with an important person or persons who made a significant contribution to the history, development, and/or culture of the City, region, state, or nation;
C. It embodies the distinctive characteristics of a type, period, style, or method of construction;
D. It is representative of the work of a master;
E. It possesses high artistic or aesthetic values;
F. It has yielded or has the potential to yield information important to the prehistory or history of the city, region, state, or nation;
G. It is among the last, best remaining examples of an architectural or historical type or specimen.
H. In addition to having significance, a property or area must demonstrate integrity for the time period in which it is significant. Integrity is defined by seven aspects: location, design, setting,

materials, workmanship, feeling, and association. A property or area need not possess all seven aspects, but must retain enough to convey the reason for its significance.

City of Lomita

The City of Lomita General Plan (1998) includes the following policy regarding cultural resources:

> **Cultural Resources Management:** "This regulation requires that, should archaeological or paleontological resources be uncovered during excavation and grading activities, all work would cease until appropriate salvage measures are established Appendix K of the CEQA Guidelines shall be followed for excavation monitoring and salvage work that may be necessary. The Conservation Element indicates those areas with a "high potential" for cultural sensitivity. Notification that resources have been encountered (notification may come from field monitors, construction crews, etc. Salvage will be undertaken pursuant to Appendix K requirements outlined in CEQA".

City of Rolling Hills Estates

The City of Rolling Hills Estates General Plan Conservation Element contains the following goals and policies pertaining to cultural resources:

Goal 3: Promote the preservation of cultural, historical and natural resources within the City.

> Policy 3.1 Implement General Plan guidelines for the protection of sites of paleontological, archaeological, historical or culturally valuable significance.
>
> > 3.1.1 Implementation Measure: New development in areas designated as having a high cultural sensitivity will be required to have archaeological surveys and on-site monitoring when deemed necessary. All development shall be subject to the provisions of Appendix K in the CEQA Law and Guidelines.

The City of Rolling Hills Estates Cultural Heritage Commission Ordinance provides criteria for the designation of "landmarks" and "landmark districts" per Los Angeles Municipal Code Section 17.38.040. A cultural resource may be designated as a landmark if it meets one of the following criteria:

A. Structures, sites or areas particularly representative of a distinct style, region or way of life;
B. Structures, sites or areas connected with a business or use which was once common but now rare;
C. Buildings and/or associated structures of greater age than surrounding structures;
D. Buildings and/or associated structures containing original materials or workmanship which are valued in themselves;

One or more of the following criteria may be considered in measuring the appropriateness of a potential landmark overlay designation:

E. Buildings and/or associated structures which are preserved or capable of being restored to their former condition;
F. Buildings and/or associated structures particularly well related to their site or area;
G. Buildings and/or associated structures expressing their function well;
H. Structures, sites or areas visible or accessible to the public;
I. Buildings and/or associated structures existing in appropriate settings (trees, walls, yard, etc.);

J. Structures, sites or areas surrounded by land use significant for preservation of the structure, site or area.

City of Los Angeles

The City of Los Angeles Cultural Heritage Commission Ordinance provides criteria for the designation of "landmarks" and "landmark districts" per Los Angeles Municipal Code Section 22.171.7. A cultural resource may be designated as a landmark if it meets one of the following criteria:

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

City of Long Beach

The City of Long Beach (City) Cultural Heritage Commission Ordinance provides criteria for the designation of "landmarks" and "landmark districts" per Long Beach Municipal Code Section 2.63.050. A cultural resource may be designated as a landmark if it meets one of the following criteria:

A. It possesses a significant character interest or value attributable to the development, heritage or cultural characteristics of the city, the southern California region, the state or the nation;
B. It is the site of an historic event with a significant place in history;
C. It is associated with the life of a person or persons significant to the community, city, region or nation;
D. It portrays the environment in an era of history characterized by a distinctive architectural style;
E. It embodies those distinguishing characteristics of an architectural type or engineering specimen;
F. It is the work of a person or persons whose work has significantly influenced the development of the city of the southern California region;
G. It contains elements of design, detail, materials, or craftsmanship which represent a significant innovation;
H. It is a part of or related to a distinctive area and should be developed or presented according to a specific historical, cultural or architectural motif;
I. It represents an established and familiar visual feature of a neighborhood or community due to its unique location or specific distinguishing characteristic;
J. It is, or has been, a valuable information source important to the prehistory or history of the city, the Southern California region or the state; or
K. It is one of the few remaining examples in the city, region, state or nation possessing distinguishing characteristics of an architectural or historical type.

City of Carson

The City of Carson General Plan (2006) includes the following policy regarding cultural resources:

Parks and Recreation Element, Policy P-9.2: Encourage all development or redevelopment occurring in areas identified as a potential historic archaeological site to be surveyed for historic archaeological resources prior to initiation of site preparation for development.

Cultural Resources Records Search

In accordance with MM CUL-2, Rincon conducted a search of the California Historical Resources Information System at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton on November 15, 2017, February 5, 2019, and March 12, 2019. The search was conducted to identify previous cultural resources studies and previously recorded cultural resources within a 0.5-mile radius of the project site. As part of the record search, Rincon also reviewed the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list.

The SCCIC records search identified 38 previously conducted studies within a 0.5-mile radius of the project site (Table 1). Of the 38 previous studies, nine studies (LA-00083, LA-02644, LA-02882, LA-02970, LA-03707, LA-10333, LA-10524, LA-10567, and LA-11150) include portions of the project site.

Table 1. Previously Conducted Studies within 0.5-mile of the Project Site

Report Number	Author	Year	Title	Relationship to Project Site
LA-00083	Rosen, Martin	1975	Evaluation of the Archaeological Resources and Potential Impact of the Joint Outfall System's Improvements on Sewer Treatment Plants and Installation Routes for New Large Diameter Sewers, Los Angeles County	Within
LA-00359	Stickel, Gary and Jerry Howard	1976	*Final Report of a Cultural Resource Survey in Long Beach, California*	Outside
LA-02644	Wlodarski, Robert	1992	The Results of a Phase 1 Archaeological Study for the Proposed Alameda Transportation Corridor Project, Los Angeles County, California	Within
LA-02882	McKenna, Jeanette	1993	Cultural Resources Investigations, Site Inventory, Evaluations, the Cajon Pipeline Project Corridor, Los Angeles and San Bernardino Counties, CA	Within
LA-02950	Unknown	1992	Consolidated Report: Cultural Resource Studies for the Proposed Pacific Pipeline Project	Outside
LA-02970	Chamberlaine, Pat and Jean Rivers-Council	1992	Cajon Pipeline Project Draft Environmental Impact Statement/Environmental Impact Report	Within

Report Number	Author	Year	Title	Relationship to Project Site
LA-03583	Bucknam, Bonnie M.	1974	The Los Angeles Basin and Vicinity: a Gazetteer and Compilation of Archaeological Site Information	Outside
LA-03695	Maki, Mary K.	1997	Negative Phase I Archaeological Survey Harbor Hills Housing Project, Lomita, Los Angeles County, California	Outside
LA-03707	Clewlow Jr., C. William	1974	Preliminary Report of the Potential Impact on Archaeological Resources of the Proposed Gas Transmission Pipeline from Los Angeles Harbor to Yorba Linda – Southern California Gas Co.: Environmental Analysis	Within
LA-05872	Duke, Curt	2002	Cultural Resource Assessment AT&T Wireless Services Facility No. 05072A-01, Los Angeles County, California	Outside
LA-05984	Duke, Curt	2002	Cultural Resource Assessment for Pacific Bell Wireless Facility SM 011-01, County of Los Angeles, CA	Outside
LA-04985	Duke, Curt	2002	Cultural Resource Assessment for AT&T Wireless Services Facility No. D173d, Los Angeles County, CA	Outside
LA-06199	McKenna, Jeanette A.	2003	A Phase I Cultural Resources Investigation, Paleontological Overview, and Architectural Evaluation of the Cypress Street Water Reservoir, Rolling Hills Estates, Los Angeles County, California	Outside
LA-06220	Unknown	2002	Los Angeles Unified School District Proposed Expansion of Narbonne High School Located at 24300 Western Avenue in Harbor City (in the City of Los Angeles)	Outside
LA-06870	Bell, Heather	2001	NEPA Screening for Wireless Telecommunication Site-Harbor City, 24823 Western Avenue, Lomita, Los Angeles County, California	Outside
LA-07950	Harper, Caprice	2006	Archaeological Survey Report for the Interstate 105 (I-105) Dewatering Wells Beneficial Re-use of Groundwater Project, Cities of Paramount, Compton, Long Beach, and Carson, Los Angeles County, California	Outside
LA-07952	Livingstone, David, McDougall, Dennis, Goldberg, Susan and W. Nettles	2006	Trails to Rails: Transformation of a Landscape: History and Historical Archaeology of the Alameda Corridor, Volume 1	Outside

Report Number	Author	Year	Title	Relationship to Project Site
LA-07971	Tang, Bai and Josh Smallwood	2006	Seismic Retrofit of the Union Pacific Railroad (UPRR) Bridge Over Santa Fe Avenue (State Bridge No. 53C0458), on the Boundary Between the Cities of Long Beach and Carson, Los Angeles County	Outside
LA-08059	McKenna, Jeanette A. and Richard S. Shepard	2006	Results of Phase II Cultural Resources Testing Program at CA-LAN-276, CA-LAN-277, and CA-LAN-3583, Three Prehistoric Sites Identified within the Chandler Ranch/Rolling Hills Country Club Property in the Rolling Hills Estates and Torrance Areas of Los Angeles	Outside
LA-08255	Arrington, Cindy and Nancy Sikes	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volumes I and Ii	Outside
LA-08462	Bonner, Wayne H.	2006	Cultural Resources Records Search Results and Site Visit for T-Mobile USA Candidate LA03554a (Barton Properties), 21350 South Alameda Street, Carson, Los Angeles County, California	Outside
LA-10107	McKenna, Jeanette A.	2004	Results of a Phase I Cultural Resources Investigation, Paleontological Overview, and Architectural Evaluation of the Cypress Street Water Reservoir, Rolling Hills Estates, Los Angeles County	Outside
LA-10108	McKenna, Jeanette A.	2006	Results of a Phase I Cultural Resources Investigation and Paleontological Overview of the Chandler Ranch/Rolling Hills Country Club Residential Development, Rolling Hills Estates, Los Angeles County, California	Outside
LA-10333	McKenna, Jeanette A.	2009	Cultural Resource Assessment AT&T Wireless Services Facility No. 05109a, Los Angeles County, California	Within
LA-10524	Horne, Melinda, Hamilton, M. Colleen and Susan Goldberg	2000	Alameda Corridor Project Treatment Plan for Historic Properties Discovered During Project Implementation, Second Draft. Addendum to Finding of Effect (February 21, 1995; October 27, 1998)	Within
LA-10567	Hogan, Michael, Bai “Tom” Tang, Josh Smallwood, Laura Hensley Shaker and Casey Tibbitt	2005	Identification and Evaluation of Historic Properties - West Basin Municipal Water District Harbor- South Bay Water Recycling Project Proposed Project Laterals	Within
LA-10628	McKenna, Jeanette A.	2010	Lomita Reservoir / Cypress Street Archaeological / Paleontological Monitoring	Outside

Report Number	Author	Year	Title	Relationship to Project Site
LA-11063	Losee, Carolyn	2009	Cultural Resources Analysis for Global Tower "Carson, CA" Site, 21136 Wilmington Avenue, Carson, Los Angeles County, CA 90040	Outside
LA-11094	Johnson, B.	2010	Cultural Resources Records Search for T-Mobile USA Inc., LA33771A/Schafer, 1981 E. 213th St, Carson, Los Angeles County, California 90749	Outside
LA-11150	Maxwell, Pamela	2003	West Basin Municipal Water District Harbor/South Bay Water Recycling Project	Within
LA-11227	Hudson, Jonathan	2010	Torrance Hospital, 1808 Abalone Avenue, Torrance, Los Angeles County, CA 90501	Outside
LA-11482	Racer, F.H.	1939	Camp Sites in Harbor District - F.H. Racer	Outside
LA-11551	Maxon, Patrick	2012	Phase I Cultural Resources Assessment, Juanita Millender-McDonald Carson Regional Water Recycling Facility Phase II B Expansion Project, West Basin Municipal Water District, City of Carson, Los Angeles County, California	Outside
LA-12826	Haas, Hannah and Robert Ramirez	2014	Metropolitan Water District of Southern California Palos Verdes Reservoir Upgrades Project	Outside
LA-12870	McKenna, Jeanette A.	n.d.	Cultural Resources Overview and Assessment: The City of Los Angeles, West Carson Transit Oriented District (TOD) Specific Plan Project Area, Los Angeles County, California	Outside
LA-13019	Bonner, Wayne H. and Kathleen A. Crawford	2006	Cultural Resources Records Search and Site Visit Results for T Mobile West, LLC Candidate LA33694A (ATT Switch - Torrance), 1307 Cravens Avenue, Torrance, Los Angeles County, California	Outside
LA-13149	Billet, Loma	2014	New Tower (“NT”) Submission Packet, FCC FORM 620, PROJECT NAME: Wardlow Park, Project Number: EL0238B	Outside
LA-13211	Roland, Jennifer	2016	Phase I Investigation for the Crown Castle LA33771A Antenna Installation Project, Carson, Los Angeles County, California	Outside

Source: South Central Coastal Information Center November 2017, February 2019, March 2019

Twelve previously recorded resources are located within 0.5-mile of the project site and are listed in Table 2 below. None of these resources are located within the project site. The nearest recorded cultural resource is the Palos Verdes Reservoir located approximately 60 feet from the Station 2104. Built in 1939, the reservoir was previously recommended ineligible for listing on the National Register of

Historic Places (NRHP) and the California Register of Historical Resources (CRHR) (Haas and Ramirez 2014). A prehistoric archaeological site (P-19-000281) was also mapped approximately 350 feet northeast of the Station 2109/2114. The site record states P-19-000281 was likely completely destroyed by the construction of the Palos Verdes Reservoir in 1939 (True 1960).

Table 2. Previously Recorded Resources within 0.5-mile of the Project Site

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status	Relationship to Project Site
19-000191	CA-LAN-000191	Multi-component Site	Prehistoric shell midden and historic reservoir	H. Enerhart 1952; D. Brunzell 2003; R.S. Shepard 2010	Unknown	Outside
19-000277	CA-LAN-000277	Prehistoric Site	Lithic scatter	D.L. True 1960; R. Shepard 2005; J. McKenna 2006	Unknown	Outside
19-000278	CA-LAN-000278	Prehistoric Site	Habitation site with lithic scatter	D.L. True 1960	Unknown	Outside
19-000279	CA-LAN-000279	Prehistoric Site	Habitation site with lithic scatter	F.H. Racer 1939; D.L. True 1960	Unknown	Outside
19-000280	CA-LAN-000280	Prehistoric Site	Habitation site	H. Eberhart 1952; D.L. True 1960	Unknown	Outside
19-000281	CA-LAN-000281	Prehistoric Site	Habitation site	D.L. True 1960; L.L. Porras 2017	Unknown	Outside
19-003065	CA-LAN-003065H	Historic Site	Abandoned Railroad Trestle	J. Paniagua and D. Livingstone (2001)	Unknown	Outside
19-003066	CA-LAN-003066H	Historic Site	Septic Tank	J. Paniagua and D. Livingstone (2001)	Unknown	Outside
19-180782	–	Historic Building	Single Family Residence	R. Starzak (1994)	Determined ineligible for listing on the NRHP	Outside
19-187805	–	Historic Structure	Ballona Creek Flood Control Channel & Drainage System	D. Kane (2000); P. Daly (2015)	Recommended ineligible for listing on the NRHP and CRHR	Outside
19-187942	–	Historic Structure	Bridge No. 53C458	J. Smallwood (2006)	Recommended ineligible for listing on the NRHP and CRHR	Outside
19-192333	N/A	Historic Structure	Palos Verdes Reservoir	R. Ramirez 2014	Recommended ineligible for listing on the NRHP or CRHR	Outside

Source: South Central Coastal Information Center November 2017, February 2019, March 2019
NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources

Native American Sacred Lands File Search

In accordance with MM CUL-2, Metropolitan undertook Native American coordination for the PCCP in early 2015 by requesting a Sacred Lands File search from the Native American Heritage Commission. The Sacred Lands File search was completed with negative results for the project site.

Field Survey

Methods

In accordance with MM CUL-5, Rincon staff Tricia Dodds performed a field survey on March 17, 2019 and Mathew Carson and Alondra Garcia performed a field survey of the project site on September 26, 2019. The survey consisted of a pedestrian survey where foot travel could be conducted safely and a windshield survey within paved roadways. During the survey, all exposed ground surfaces were inspected for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics). The windshield survey consisted of driving the pipeline alignment to identify any potential cultural resources within or along the margins of the alignment. A windshield survey allows for an inspection of the project area where foot travel is unsafe (e.g., within high traffic roadways). A Global Positioning System was used to maintain locational accuracy throughout the pedestrian and windshield portions of the survey.

Results

No prehistoric or historic period cultural resources have been recorded within the project site and none were observed during the survey of the excavation sites or pipeline alignment. The project site has been previously developed by modern infrastructure and traverses through mixed commercial and residential space. The proposed excavation sites at Stations 1565+92, 1569+91, 1594+15, 1860, 1864, 1916, 1964, 2015, 2022, and 2049, as well as at WB-41, are paved with asphalt and/or concrete and are located within previously developed roadways or sidewalks. The proposed excavation sites at Stations 2098, 2104, and 2109/2114 extend into unpaved areas adjacent to Palos Verdes Drive East and the Palos Verdes Reservoir. All excavations are expected to remain primarily within previously disturbed soils. Although Station 2104 is located near the historic-age Palos Verdes Reservoir, the proposed project is not expected to impact the reservoir. Additionally, extant data indicate that the prehistoric archaeological site of P-19-000281, which is mapped approximately 350 feet northeast from Station 2109/2114, was destroyed by the construction of the Palos Verdes Reservoir (True 1960).

Although structures are located adjacent to the project locations, Rincon determined that a built environment evaluation is not necessary for the current project as most of the project is within the existing paved right-of-way and primarily limited to excavations and below-grade elements. The project site will also be returned to preconstruction conditions upon completion of the project indicating any indirect impacts to the surrounding environment will be temporary in nature. Thus, it is not necessary to undertake any steps required by MM CUL-1 for this project.

Discussion and Recommendations

Rincon did not identify any cultural resources within the project site as a result of the records search or pedestrian and windshield surveys. The Sacred Lands File search completed by Metropolitan did not identify any cultural resources near the project site. Three previous studies intersect portions of the current project site and no cultural resources were identified within the project site. Thus, the findings of this study are consistent with the findings of the PEIR (Metropolitan 2016). Because no archaeological resources have been identified within or immediately adjacent to the project alignment, archaeological monitoring and Native American monitoring required under MM CUL-2 is not necessary for this portion of the project. The project shall adhere to the requirements of MM CUL-3: Preconstruction Meeting for Identifying Cultural Resources by holding a preconstruction meeting that includes a discussion of identifying cultural resources during ground-disturbing activities. In addition, if cultural resources are identified during project-related ground-disturbing activities, the project shall adhere to MM CUL-4: Previously Unidentified Resources Encountered during Ground-Disturbing Activities, which requires halting construction within 50 feet of the resource until it can be evaluated by a qualified cultural resources specialist and impacts can be mitigated, if necessary.

Thank you for the opportunity to support Metropolitan with this important project. Please contact the undersigned with questions regarding this report or any other matters related to our services.

Sincerely,
Rincon Consultants, Inc.

Breana Campbell-King, MA, RPA
Senior Archaeologist

Jennifer Haddow, PhD
Principal Environmental Scientist

Attachment:
Figure 1 Project Location Map

References:

City of Los Angeles

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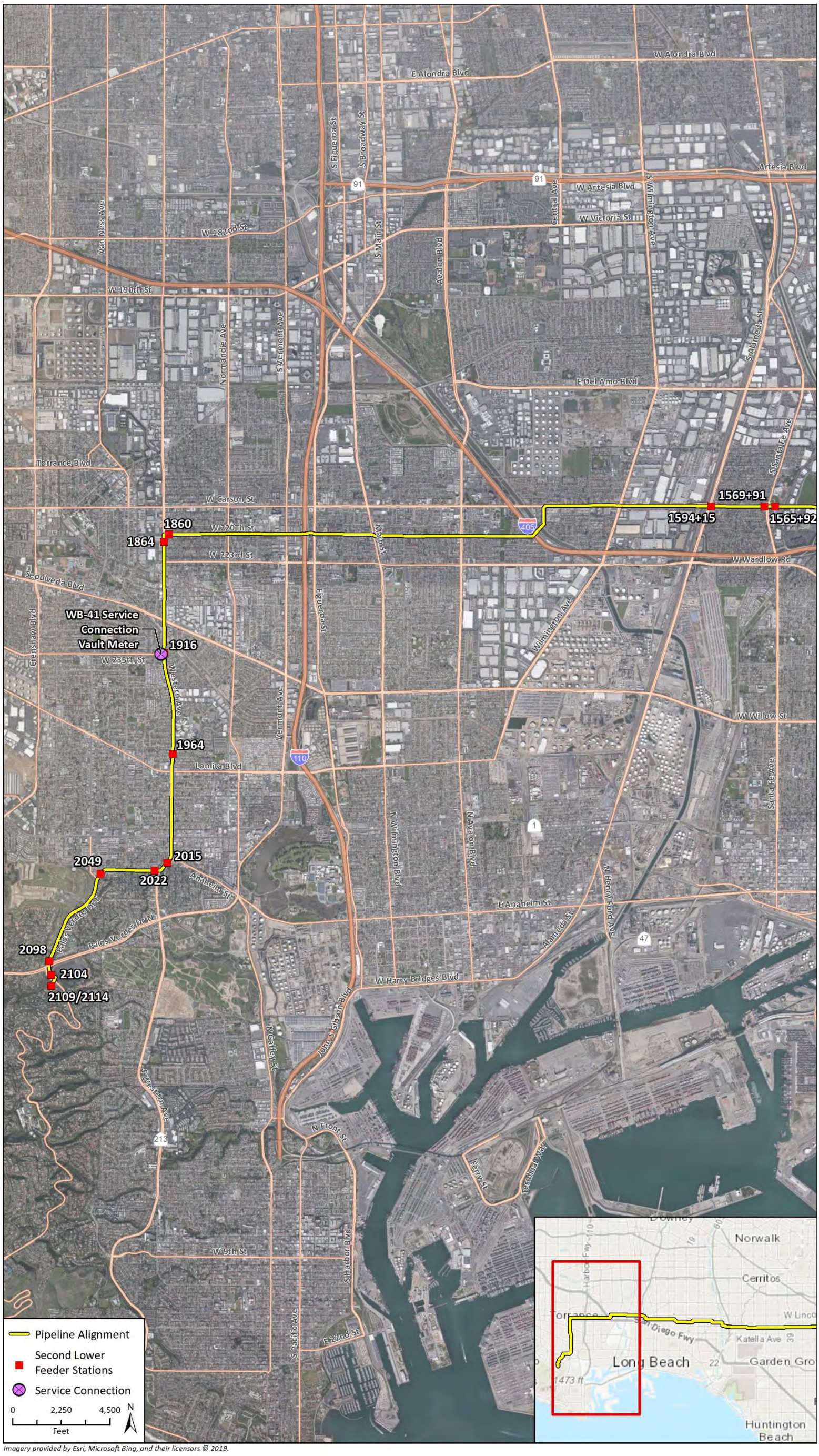
Figure 1 Project Location Map



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Appendix D

Paleontological Resources Impact Mitigation Program

Prestressed Concrete Cylinder Pipe Rehabilitation Program – Second Lower Feeder Reach 3

Paleontological Resources Impact Mitigation Program

prepared for

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

prepared by

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June 2020

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Acronyms and Abbreviations

CEQA	California Environmental Quality Act
CGS	California Geological Survey
NHMLAC	Natural History Museum of Los Angeles County
MM	Mitigation Measure
PCCP	Prestressed Concrete Cylinder Pipeline
PEIR	Programmatic Environmental Impact Report
PRC	Public Resource Code
PRIMP	Paleontological Resources Impact Mitigation Program
SLF	Second Lower Feeder
SVP	Society of Vertebrate Paleontology
UTM	Universal Transverse Mercator
WEAP	Worker Environmental Awareness Program

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1 Introduction

Between 1962 and 1985, 163 miles of Prestressed Concrete Cylinder Pipeline (PCCP) were installed throughout The Metropolitan Water District of Southern California's (Metropolitan) service area. Under certain subsurface conditions, PCCP lines have an elevated risk of failure compared with other types of pipe. In response to this risk of failure, in the late 1990s, Metropolitan inspected and assessed all 163 miles of PCCP within its distribution system. In 2011, Metropolitan initiated a comprehensive program of inspections to evaluate and rank PCCP lines with the highest risk of failure. The data indicate that the following five pipelines represent the highest risk: Allen-McColloch Pipeline, Calabasas Feeder, Rialto Pipeline, Second Lower Feeder (SLF), and Sepulveda Feeder. The PCCP Rehabilitation Program (PCCP Program) was developed to rehabilitate the PCCP portions of the five subsurface water distribution pipelines (also known as feeders) that were identified as having the highest risk as described above.

A Programmatic Environmental Impact Report (PEIR) was prepared for the PCCP Program and certified by the Metropolitan Board of Directors on January 10, 2017 (SCH No. 2014121055). At the request of Metropolitan, Rincon prepared this Paleontological Resources Impact Mitigation Program (PRIMP) for the Second Lower Feeder – Reach 3 (the project) in accordance with Mitigation Measure (MM) CUL-6: Develop a Program to Mitigate Impacts on Paleontological Resources for Each Contract Package.

1.1 Project Location and Description

The proposed project, Reach 3 of the SLF, covers rehabilitation of portions of a 4.9-mile-long section of the 78-inch-diameter SLF in the cities of Los Angeles, Torrance, Lomita, Rolling Hills Estates, Carson, and Long Beach and a 300-linear-foot section of the 84-inch-diameter Sepulveda Feeder in the cities of Los Angeles and Torrance. Proposed locations for project elements have been identified, including the contractor's work and storage area, pipe access sites from which the feeder would be relined, installation of large isolation valves, below ground structures that would be improved, air-release/vacuum valves that would be relocated above grade, air-release/vacuum valves that would be improved, and the construction of a service connection (WB-41).

Ground disturbance in the project area is primarily proposed for Stations 1860, 1864, 1916, 1964, 2015, 2022, 2049, 2098, 2104, and 2109/2114, as well as WB-41. The maximum depth of excavation in these areas would be 20 feet below ground surface. Minor ground disturbance would also occur throughout the project footprint for other project elements (e.g., air-release/vacuum valve relocations). Additional improvements incorporated as part of the project include: the relocation of a vacuum valve to an above ground location within the sidewalk at Station 1565+92 (Reach 2); the relocation of an air release/vacuum valve at Station 1569+91 (Reach 2); and the replacement of an existing 16-inch valve at service connection WB-37 located at Station 1594+15 (Reach 2). All proposed excavation is along the existing pipeline alignment and ground disturbance is expected to remain primarily within disturbed soils. Existing surface improvements, such as road pavements, sidewalks, and landscaping, would be removed at each excavation area, and soils would be excavated and temporarily removed from the site to expose the existing pipeline. Once rehabilitation is complete, the excavation area would either be backfilled with soils originally excavated or backfilled with slurry, and the surface of each excavation area and surrounding work

zone would be restored to existing conditions. This would involve re-paving existing roads, repairing or replacing existing sidewalks, and replanting landscaping.

Rehabilitation activities would take approximately one year, with mobilization of equipment and traffic control setup scheduled to begin as early as October 2021. Water service shutdowns on the Second Lower and Sepulveda Feeders would begin in mid-October 2021, and the proposed project pipeline segment would be returned to service in April 2022. Traffic controls and equipment would be removed by the end of October 2022. The PCCP Program schedule is dependent on risk assessment of the pipeline, thus if inspections reveal another segment is more at risk, the repair schedule will be altered. Shutdowns are primarily scheduled during low water use times (i.e., the optimum time for pipeline shutdowns is winter months when water demand is less than during the summer months). Figure 1, Regional Location, shows the location of the project area in the region.

1.2 Purpose of the Paleontological Resources Impact Mitigation Program

The purpose of this PRIMP is to provide procedures and protocols to reduce impacts to unique paleontological resources potentially encountered during construction of the project. The PRIMP provides monitoring guidelines that must be implemented during construction, procedures to be followed if paleontological resources are discovered during construction, and the procedures for preparation, conservation and curation of recovered paleontological resources.

1.3 Regulatory Framework

Fossils are remains of ancient, often extinct organisms, and as such are a nonrenewable resource. The fossil record is a document of the evolutionary history of life on earth, and fossils can be used to understand evolutionary pattern and process, rates of evolutionary change, past environmental conditions, and the relationships among modern species (i.e., systematics). The fossil record is considered a valuable scientific and educational resource, and individual fossils are afforded protection under state and federal environmental laws, most notably by California Environmental Quality Act (CEQA) Section 15064.5. Regulations applicable to potential paleontological resources in the project area are summarized below.

1.3.1 State Regulations

Paleontological resources (i.e., fossils) are considered nonrenewable scientific resources because once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under the following state regulations:

California Environmental Quality Act

In California, unique paleontological resources, sites, and geologic features, particularly with regard to fossil localities, are afforded protection under a number of state environmental statutes, including CEQA. According to Appendix G of the State CEQA Guidelines, a lead agency must determine if the project would result in the direct or indirect destruction of a unique paleontological resource or site or unique geologic feature, and if such impacts would be significant. Public Resources Code (PRC) § 21081.6 requires the CEQA lead agency to ensure that feasible mitigation measures are implemented to reduce impacts to a less-than-significant level. CEQA does not include

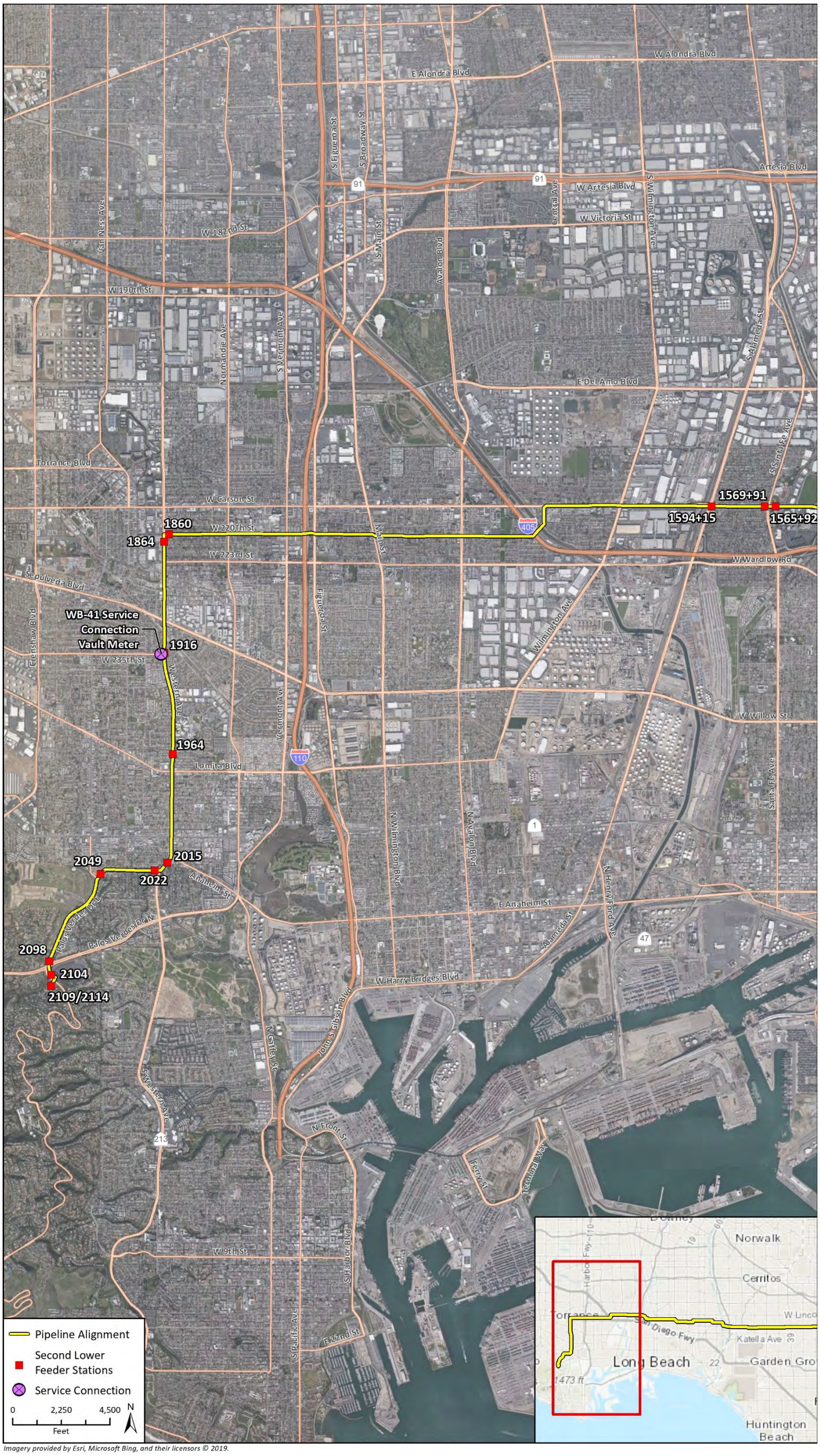
a specific definition of “unique paleontological resource or site,” nor does it establish thresholds for significance.

Public Resources Code Section 5097.5

PRC § 5097.5 prohibits excavation or removal of any vertebrate paleontological site, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on publicly owned lands to preserve or record paleontological resources. Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof. Portions of this project fall outside Metropolitan fee property, on public lands; therefore, Metropolitan will coordinate with the appropriate public land owner and comply with this PRC section.

Violation of the previously outlined state regulations is punishable by civil and criminal penalties, including fines and/or imprisonment, and could result in the revocation of project certification and shut-down of the project at the direction of the appropriate lead agency.

Figure 1 Regional Location



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2 Background

California is divided into 11 geomorphic provinces. These provinces are "naturally defined geologic regions that display a distinct landscape or landform" (California Geological Survey [CGS] 2002). The project is located in the northern Peninsular Ranges Province within the Los Angeles Basin. The Peninsular Ranges trend northwest-southeast and extend 900 miles from the Los Angeles Basin to the tip of Baja California in Mexico. The province varies from 30 to 100 miles wide and is bounded on the east by the Colorado Desert and on the west by the coastal plain and the Gulf of California (Norris and Webb 1990). The regional geology and the geologic units mapped within the project area are described below.

2.1 Regional Geologic Setting

The project area is located in the "petroliferous" Los Angeles Basin, a northwest-trending lowland plain at the northern end of the Peninsular Ranges Province (Yerkes and Campbell 2005). The Los Angeles Basin is approximately 60 miles long and 35 miles wide and is defined by Yerkes et al. (1965) as the region bounded by the northern foothills of the Santa Monica Mountains to the north, the San Jose Hills and the Chino fault on the east, and the Santa Ana Mountains and San Joaquin Hills in the southeast. The Los Angeles Basin is underlain by a structural depression that was the site of extensive accumulation of interstratified fluvial, alluvial, floodplain, shallow marine, and deep shelf deposits on underlying Mesozoic metamorphic and granitic plutonic basement rocks. Sediment accumulation and subsidence has occurred there since the Late Cretaceous and has reached a maximum thickness of more than 20,000 feet (McCulloh and Beyer 2004; Norris and Webb 1990; Yerkes et al. 1965). During that time, transgressions and regressions (rise and fall of relative sea level) related to tectonic uplift, subsidence, and Pleistocene glaciation resulted in both marine and terrestrial sedimentary deposits throughout the Los Angeles Basin (Beyer 1995; McCulloh and Beyer 2004).

The Los Angeles Basin is composed of four structural blocks, designated the southwestern, northwestern, central, and northeastern blocks whose boundaries are formed by major fault zones (Yerkes et al. 1965). The project is located on the southwestern block, a region approximately 28 miles long and 5 to 12 miles wide and defined as bounded by the Santa Monica fault to the north and Newport-Inglewood fault to the south. Significant geologic features in that area include, the Palos Verdes Hills, which consist of low hills and mesas that rise 1,300 feet over the basin floor; the Palos Verdes Fault Zone and Gaffey syncline-anticline; and petroleum-bearing Miocene-Pliocene deposits (Harden 1998; Yerkes et al. 1965). The majority of the southwestern block is immediately underlain by the Monterey Formation, the San Pedro Formation, the Palos Verdes Sand, Quaternary non-marine terrace deposits, and Quaternary alluvial fan, flood plain, and eolian and beach sand deposits (Saucedo et al. 2003; Schoellhamer et al. 1954; Woodring et al. 1946).

2.2 Geologic Units in the Project Area

The geology of the project area is mapped at a scale of 1:100,000 by Saucedo et al. (2016). The project includes six geologic units mapped at ground surface, including younger Quaternary (Holocene to late Pleistocene) alluvium (Qya_2), younger Quaternary (Holocene to late Pleistocene) alluvial fan deposits (Qyf_2), older Quaternary (late to middle Pleistocene) alluvium (Qoa), older

Quaternary (Pleistocene) eolian deposits (Qoe), Pleistocene San Pedro Formation (Qsp, Qspl), and Miocene Monterey Formation (Tma). The surficial geologic units in the project area are described below and depicted in Figure 2, Geologic Units in the Project Area.

Younger Quaternary Alluvium (Qya_2)/Younger Quaternary Alluvial Fan Deposits (Qyf_2)

Younger Quaternary alluvium unit 2 (Qya_2) is mapped at the surface within the northeastern segment of the project area, including SLF Stations 1594+15, 1569+91, and 1565+92. Younger Quaternary alluvial fan deposits, unit 2 (Qyf_2) are mapped at the surface within the southwestern segment of the project area, near SLF Station 2049 (Saucedo et al. 2016). Holocene alluvial sediments were deposited during the latest Pleistocene to the Holocene and are composed of slightly to poorly consolidated clay, silt, sand, and silty sand. These deposits may be obscured at the surface by a slightly to moderately developed soil profile (Saucedo et al. 2016).

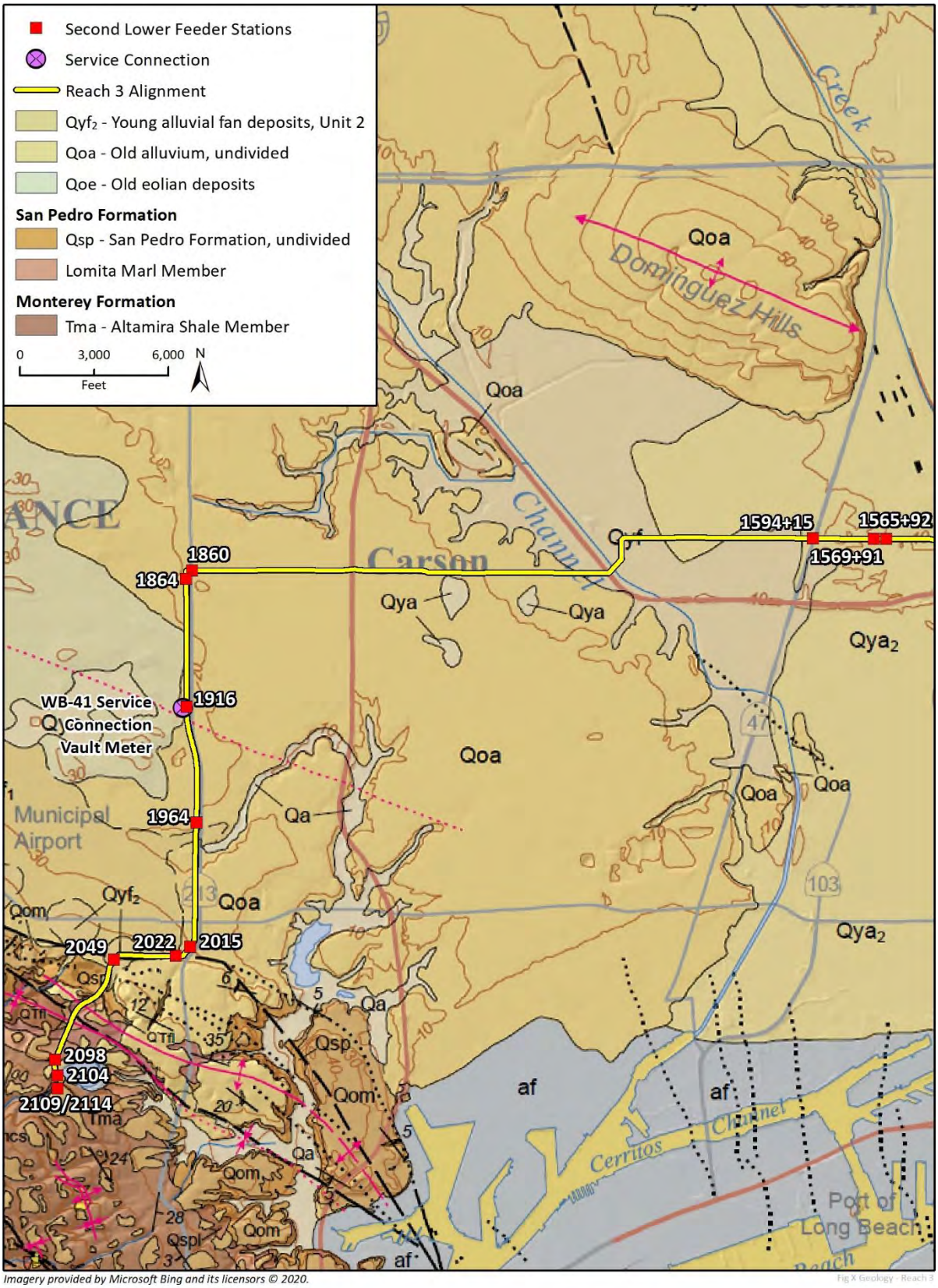
Holocene alluvial deposits at the surface are too young to preserve fossil resources but at unknown depths, sediments may transition from too young to support fossils, to early Holocene or late Pleistocene in age in which unique paleontological resources could occur. Pleistocene alluvial deposits have a well-documented record of abundant and diverse vertebrate fauna throughout California. Existing information (Department of Water Resources 1961) discusses the general range of geologic unit thicknesses in various areas of the Los Angeles Basin; however, specific information on the depth at which Holocene units mapped at the surface become old enough to preserve paleontological resources is not available. While the precise depth of older, fossil yielding deposits is unknown, it may be as few as five feet below ground surface (Maguire and Holroyd 2016; Savage 1951).

Older Quaternary Eolian Deposits (Qoe)/Older Quaternary Alluvium (Qoa)

Near the northernmost segment of the project area, between SLF Stations 1864 and 1916, older Quaternary eolian deposits (Qoe) are exposed at the surface. Locally, these Pleistocene wind-blown deposits, composed of poorly-consolidated, well-sorted, fine- to coarse-grained sand and silty sand, may be interfingered with older alluvial sediments of Pleistocene age. Older Quaternary (late to middle Pleistocene) alluvium (Qoa), which are mapped throughout most of the project area, consist of unconsolidated to moderately consolidated, poorly-sorted, gravel to coarse-grained sand, with slightly to moderately dissected surfaces and moderate soil development (Saucedo et al. 2016; Yerkes and Campbell 2005).

Alluvial sediments of Pleistocene age have a well-documented record of abundant and diverse vertebrate fauna throughout California, especially within the Los Angeles Basin. Fossil specimens of whale, sea lion, horse, ground sloth, bison, camel, mammoth, dog, pocket gopher, turtle, ray, bony fish, shark, and bird have been reported (Agenbroad 2003; Bell et al. 2004; Jefferson 1985, 1989, 1991; Maguire and Holroyd 2016; Merriam 1911; Reynolds et al. 1991; Savage 1951; Savage et al. 1954; Scott and Cox 2008; Springer et al. 2009; Tomiya et al. 2011; Wilkerson et al. 2011; Winters 1954; University of California Berkeley Museum of Paleontology [UCMP] 2018). Significant invertebrate and plant fossils have also been recovered from Pleistocene alluvial deposits, providing important paleoecologic information on the environmental setting of the Pleistocene.

Figure 2 Geologic Units in the Project Area



San Pedro Formation (Qsp, Qspl)

The Pleistocene San Pedro Formation is mapped in the Los Angeles Basin in the southwestern project area, just south of SLF Station 2049, and is divided into three formal members, from oldest to youngest: the Lomita Marl, Timms Point Silt, and San Pedro Sand (Jacobs 2005; LaFollette 2009; Woodring et al. 1946). Only the San Pedro Sand (Qsp) and Lomita Marl (Qspl) members are mapped in the project area (Yerkes and Campbell 2005). The Lomita Marl consists of unconsolidated carbonate gravel and marl, with localized induration resulting from secondary calcareous cementation. The San Pedro Sand is approximately 100 to 300 feet thick and is predominately composed of horizontally- and cross-bedded fine- to medium-grained sand, with subordinate subrounded fine to coarse pebbles, and common silt. Fossiliferous beds of marine shells are widespread, with isolated dense lens concentrations. Secondary limonite is common throughout the unit (Woodring et al. 1946; Powell and Stevens 2000).

The San Pedro Formation has yielded an abundant and diverse marine fauna within Los Angeles County. Numerous invertebrate localities have been recorded within the San Pedro Formation, which yielded several hundred different taxa of gastropods, pelecypods, scaphopods, arthropods, bryozoans, crustaceans, echinoids, and foraminifera (DeBusk and Corsetti 2011; Jacobs 2005; Powell and Stevens 2000). Mollusks are by far the most abundant fossil in the San Pedro Formation and as many as 242 species of mollusk have been recovered from one locality within the San Pedro Sand member (DeBusk and Corsetti 2011). Marine vertebrates have also been recovered from the San Pedro Formation, including whale, bony fish, rays, and sharks. In addition, terrestrial vertebrates including horse, bison, camel, saber-toothed tiger, ground sloth, elephant, rodent, turtle, and numerous specimens of birds have been discovered in the San Pedro Sand, including fossil specimens of ducks, gull, sea eagle, and quail. Between 2007 and 2008, during excavations and construction activities in the San Pedro Sand deposits near Knoll Hill and Pacific Street in San Pedro (less than five miles southeast of the project area), over 15,000 invertebrate and 450 vertebrate fossil were recovered, including specimens of bony fish, shark, ray, amphibian, snake, turtle, bird, rodent, horse, hare, rabbit, gopher, vole, deer, squirrel, and mollusk (DeBusk et al. 2009).

Monterey Formation (Tma)

The Miocene Monterey Formation is mapped in the southernmost segment of the project area, and is divided into three formal members, from oldest to youngest: the Altamira Shale, Valmonte Diatomite, and Malaga Mudstone (Saucedo et al. 2003). These Miocene deposits are typically recognized by its pale buff to white fine-grained deposits, dark brown to black siliceous laminations, and common fossils (Berndmeyer et al. 2012). Only the Altamira Shale (Tma), the thickest of the three members, is mapped in the project area and consists of siliceous shale, silty and sandy shale, cherty shale, chert, siltstone, diatomaceous shale, diatomite, phosphatic shale, and tuffaceous shale (Woodring et al. 1946; Bramlette 1946).

The Monterey Formation is well exposed along coastal California from San Francisco south to Los Angeles. Numerous vertebrate localities have been documented from the Monterey Formation, which yielded specimens of large sea turtles, whale, dolphins, sea lions, shark bones and teeth, sea cows, desmostylians, fish, birds, and many other fauna (Bramlette 1946; Harden 1998; Koch et al. 2004).

2.3 Paleontological Resource Assessment

Rincon evaluated the paleontological resource potential of the geologic units present in the project area based on the results of a paleontological locality search at the Natural History Museum of Los Angeles County (NHMLAC) and review of existing information in the primary literature on known fossils within those geologic units. Rincon reviewed geologic maps and primary literature including: Agenbroad 2003; Bell et al. 2004; CGS 2002; Jacobs 2005; Jefferson 1985, 1989, 1991; Maguire and Holroyd 2016; Merriam 1911; Powell and Stevens 2000; Reynolds et al. 1991; Saucedo et al. 2003; Savage et al. 1954; Scott and Cox 2008; Springer et al. 2009; Tomiya et al. 2011; Wilkerson et al. 2011; Winterer and Durham 1962; Winters 1954. Following the records search and literature review, Rincon assigned a paleontological sensitivity to each geologic unit within the project area.

2.3.1 Locality Search

A search of the paleontological collections records at the NHMLAC resulted in no previously recorded fossil localities within the project boundary; however, at least 11 vertebrate localities were identified within San Pedro Formation, Monterey Formation, and older Quaternary alluvial deposits in the general vicinity of the project (McLeod 2015). The NHMLAC reports several vertebrate localities, including LACM 3805, LACM 3823, and LACM 1839, were identified near the Harbor Freeway (I-110) from older Quaternary deposits. Near the intersection of Sepulveda Boulevard and Figueroa Street, approximately 1.5 miles to the east of the WB-41, LACM 3823 produced a specimen of fossil camel (*Camelops*) at a depth of 12 to 14 feet. LACM 3805 yielded fossil specimens of eagle ray (Myliobatiformes) and dolphin (Delphinidae) near the intersection of Main Street and Lomita Boulevard, less than two miles east of SLF Station 1964. To the west of the Harbor Freeway (I-110), near the intersection of Crenshaw Boulevard and 236th Street, LACM 1839 produced a fossil specimen of horse (*Equus*) at approximately 35 feet below ground surface.

NHMLAC reports four additional fossil localities within Pleistocene alluvial deposits near the southern segment of the project area. Less than a mile east of SLF Station 2098, LACM 1228 yielded fossil specimens of camel (Camelidae) and bison (*Bison*) from older alluvial deposits. Farther to the east, in Green Hills Memorial Park, LACM 3200 produced fossil specimens of ground sloth (*Paramylodon*) and bison (*Bison*). Immediately to the west of this portion of the project area, LACM 1087 and 1277 yielded various marine and terrestrial fossil specimens from Pleistocene alluvial deposits including loon (*Gavia*), geese (*Chendytes lawi* and *Chendytes milleri*), grebe (*Aechmophorus occidentalis*), sloth (Pilosa), mastodon (*Mammut americanum*), mammoth (*Mammuthus*), sea lion (*Eumetopias*), horse (*Equus occidentalis*), tapir (*Tapirus* californicus), whale (Cetacea), camels (*Tanupolama* and *Camelops*), and bison (*Bison*).

Approximately 0.2 mile southwest of SLF Station 2049, LACM 1053 and 3065 yielded several marine fossil specimens from the Lomita Marl Member, including bony fish (Teleostei), common loon (*Gavia immer*), sea cow (Hydrodarnalinae), sea lion (*Allodesmus*), and whale (Cetacea). Less than 0.25 mile west of SLF Station 2098, LACM 1099 produced fossil specimens from the Altamira Shale Member, including mackerel (*Thyrsocles*), and an extinct marine quadruped (*Desmostylus Hesperus*). Further to the southwest, south of Palos Verdes Drive North and east of Portuguese Bend Road, LACM 1098 yielded a nearly complete skull and skeleton holotype of a fossil sea lion (*Allodesmus courseni*) from the Altamira Shale Member (McLeod 2015). The results of the museum records search are summarized in Table 1.

Table 1 Museum Records Search Results

Locality No.	Geologic Unit	Age	Taxa	Depth of Recovery (below ground surface)
LACM 1839, LACM 3805, LACM 3823	Qoa	Pleistocene	Camel (*Camelops*), eagle ray (Myliobatiformes), dolphin (Delphinidae), horse (*Equus)*	12 to 35 feet
LACM 1228	Qoa	Pleistocene	Camel (Camelidae), bison (*Bison*)	Unreported
LACM 3200	Qoa	Pleistocene	Ground sloth (*Paramylodon*), bison (*Bison*)	Unreported
LACM 1087, LACM 1277	Qoa	Pleistocene	Loon (*Gavia*), geese (*Chendytes lawi* and *Chendytes milleri*), grebe (*Aechmophorus occidentalis*), sloth (Pilosa), mastodon (*Mammut americanum*), mammoth (*Mammuthus*), sealion (*Eumetopias*), horse (*Equus occidentalis*), tapir (*Tapirus californicus*), whale (Cetacea), camels (*Tanupolama* and *Camelops*), bison (*Bison*)	Unreported
LACM 1053, LACM 3065	Qspl	Pleistocene	Bony fish (Teleostei), common loon (*Gavia immer*), sea cow (Hydrodarnalinae), sea lion (*Allodesmus*), whale (Cetacea)	Unreported
LACM 1098-1099	Tma	Miocene	Snake mackerel (*Thyrsocles*), extinct marine quadruped (*Desmostylus Hesperus*), sea lion (*Allodesmus courseni*)	Unreported

Source: McLeod 2015

2.3.2 Paleontological Significance and Sensitivity

Evaluating Paleontological Significance

Guidance for evaluating paleontological significance can be found in Scott and Springer (2003). Those authors stated that significant paleontological resources include "fossil remains of large to very small aquatic and terrestrial vertebrates, remains of plants and animals previously not represented in certain portions of the stratigraphy, and fossils that might aid stratigraphic correlations, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, and the relationships of aquatic and terrestrial species" (2003:6). Furthermore, they also advised that impacts might be considered less than significant if dense concentrations of plant and/or invertebrate fossil remains were "so locally abundant that the impacts to the resources do not appreciably diminish their overall abundance or diversity" (2003:6).

More recent guidance has been developed by the Society for Vertebrate Paleontology (SVP 2010), which defines significant paleontologic resources as:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years). (p. 11)

Therefore, any identifiable vertebrate fossil remains would be considered unique under CEQA, and direct or indirect impacts on such remains would be considered significant. Identifiable invertebrate

and plant fossils would be considered unique if they meet the criteria presented above. Determinations should take into account the abundance and densities of fossil specimens or newly and previously recorded fossil localities in exposures of the rock units present at a project area.

Classifying Paleontological Sensitivity

The SVP (2010) describes sedimentary rock units as having high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. While these standards were specifically written to protect vertebrate paleontological resources, all fields of paleontology have adopted these guidelines:

I. **High Potential (sensitivity).** Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as significant.

II. **Low Potential (sensitivity)**. Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well-documented and understood taphonomic, phylogenetic species and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. However, as excavation for construction gets underway it is possible that significant and unanticipated paleontological resources might be encountered and require a change of classification from Low to High Potential and, thus, require monitoring and mitigation if the resources are found to be significant.

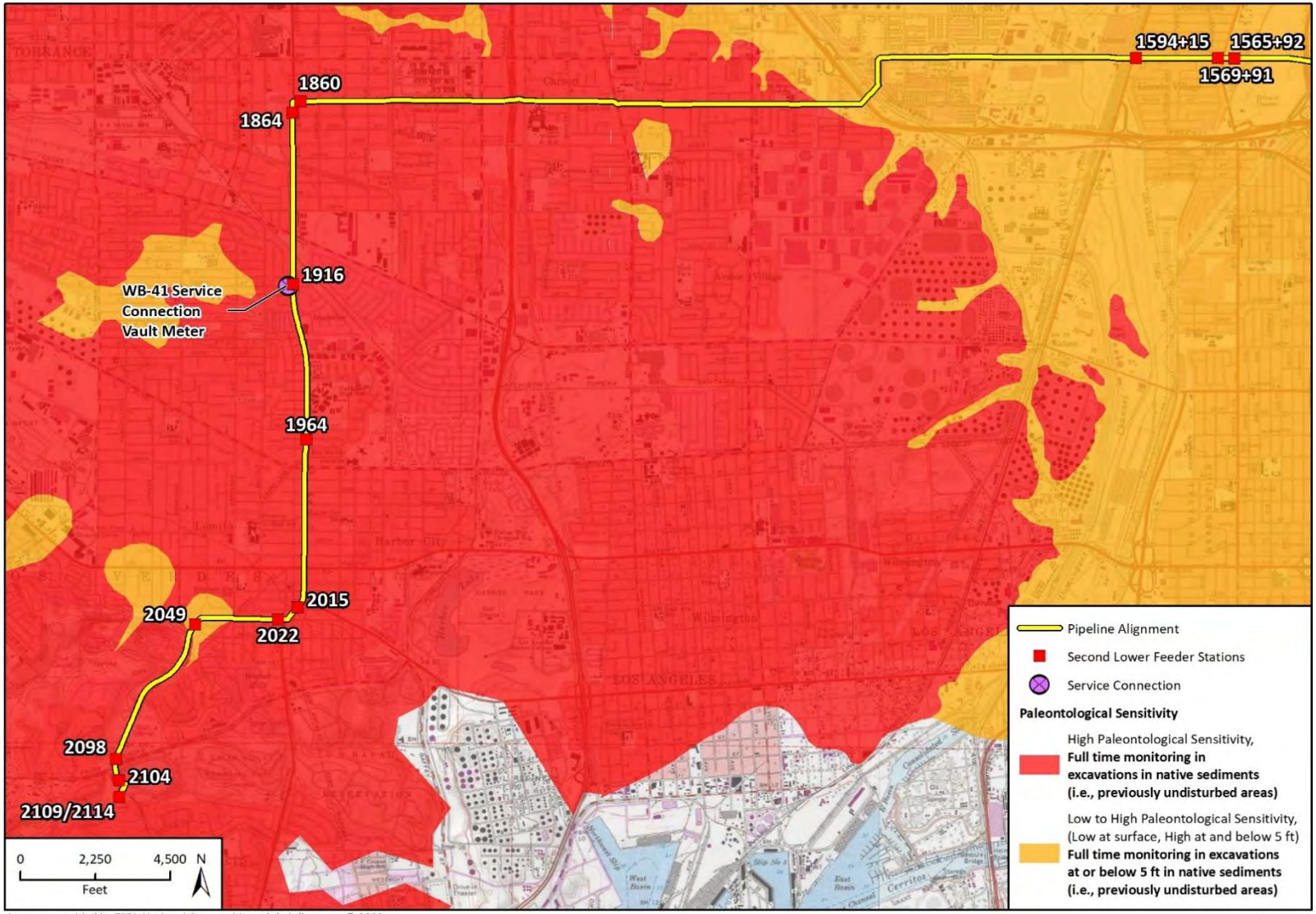
III. **Undetermined Potential (sensitivity)**. Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

IV. **No Potential.** Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

2.3.3 Paleontological Resource Potential of the Project Area

Consistent with SVP (2010) resource assessment guidelines, Rincon determined the paleontological sensitivity of the project area based on a comprehensive literature review and museum locality search. The results of the study indicate that the geologic units underlying the project area have a paleontological sensitivity ranging from low to high. The older Quaternary alluvium, older Quaternary eolian deposits, San Pedro Formation, and Monterey Formation immediately underlying most of the project area are all assigned a high paleontological sensitivity because they have proven to yield vertebrate fossils near the project area and throughout the Los Angeles Basin. Holocene surficial alluvial deposits ($Qya_{2,}$ Qyf_2), underlying the northeastern project area and a small segment of the southwestern project area, have a low paleontological sensitivity at the surface because they are too young to preserve fossilized remains. At shallow depth, the Holocene alluvial deposits overlie sensitive Pleistocene age deposits across the project area. Therefore, the paleontological sensitivity of the Holocene deposits is determined to be low to high, increasing at a depth of about five feet below ground surface. Refer to Figure 3 for a map showing the paleontological sensitivity of the project area.

Figure 3 Paleontological Sensitivity of the Project Area



Imagery provided by ESRI, National Geographic and their licensors © 2020;
Additional data provided by Saucedo, et al., Geologic Map of Long Beach, 2016.

Fig 3 Paleo Sensitivity_Reach 3

3 Paleontological Resources Impact Mitigation Program

This PRIMP complies with mitigation measure (MM) CUL-6 *Develop a Program to Mitigate Impacts on Paleontological Resources for Each Contract Package* identified in the PEIR for the PCCP Program (Metropolitan 2016), elements of SVP Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010), and Conditions of Receivership for Paleontologic Salvage Collections (SVP 1996).

3.1 Retention of a Qualified Paleontologist

Prior to the start of ground disturbance Metropolitan will retain an experienced Qualified Paleontologist to implement this PRIMP and assign a Paleontological Monitor to be present during ground disturbance within *in situ* paleontologically sensitive strata (i.e., geologic deposits that are determined to have a high paleontological sensitivity and that have not been previously disturbed). A Qualified Paleontologist is defined by the SVP standards as an individual preferably with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, preferably southern California, and who has at least two years of experience as a paleontological mitigation project supervisor (SVP 2010). The Qualified Paleontologist will be responsible for the following tasks:

- **Worker Environmental Awareness Program (WEAP):** Supervise implementation of the WEAP training and conduct initial training session, or as directed by Metropolitan.
- **Implementation of PRIMP:** Ensure that the PRIMP is implemented in compliance with the approved mitigation measures and SVP (1996, 2010) standard guidelines.
- **Salvage Operations:** Be available for consultation with field monitors and Metropolitan staff on salvage operations, particularly when equipment and additional temporary monitors are needed to speed up fossil recovery.
- **Monitor Scheduling:** Coordinate and communicate with Metropolitan staff to determine the schedule for work in areas where disturbance will require a Paleontological Monitor (i.e., areas underlain by sediments that have been assigned a high paleontological sensitivity and that have not been previously disturbed).
- **Paleontological Oversight:** Directly oversee monitoring to ensure the collection of a representative sample of fossils when and if uncovered by ground-disturbing activities.
- **Locality and Site Data:** Ensure the proper documentation of associated specimen/sample data and corresponding geologic and geographic site data and the plotting of fossil/sample sites on maps.
- **Sediment Sampling:** Direct field and laboratory processing of sediment samples for microvertebrate fossils.
- **Fossil Identification:** Oversee and/or ensure the identification of fossils and the determination of significance (this may require consultation with other paleontological experts).
- **Curation:** Ensure that a proper curation facility is identified and a curation agreement is implemented. Ensure that all fossils and pertinent associated data are properly transferred to the curatorial institution.

- **Reporting:** Ensure preparation and Quality Assurance/Quality Control of the draft and final monitoring

The Paleontological Monitor(s) will be assigned by the Qualified Paleontologist and will meet the minimum qualifications per standards set forth by the SVP (2010), which include a B.S. or B.A. degree in geology or paleontology and one year of monitoring experience. The Paleontological Monitor(s) will be responsible for the following tasks.

- **WEAP Training:** Conduct initial training session in accordance with the WEAP, or as directed by Metropolitan.
- **Paleontological Monitoring:** Conduct day-to-day monitoring of all earth-moving activities in any area underlain by sediments that have been assigned a high paleontological sensitivity and that have not been previously disturbed.
- **Fossil Discoveries:** Flag newly discovered fossil sites and temporarily divert ground-disturbing equipment around the site, as necessary, until the fossil(s) has been evaluated and, if warranted, salvaged.
- **Fossil Salvage:** Salvage fossils uncovered by ground-disturbing activities.
- **Sediment Samples:** Collect potentially fossiliferous sediment samples to recover microfossils.
- **Log Construction Activity:** Document project-related ground-disturbing activities, their location, and other relevant information including a photographic record.
- **Fossil Data:** Take accurate and detailed field notes and photographs, and record associated specimen/sample and corresponding geologic and geographic site data including Universal Transverse Mercator (UTM) coordinate data.
- **Field Preparation:** Conduct initial (field) processing of fossiliferous sediment samples for microvertebrate fossils.
- **Fossil Preparation:** If directed, prepare fossils to the point of identification.
- **Reporting:** If directed, assist with the preparation of the draft and final reports.

3.2 Worker Environmental Awareness Program

Prior to construction, a WEAP presentation will be prepared and used to train site personnel prior to the start of work. The WEAP will include at a minimum the following information:

1) Review of local, state, and federal laws and regulations pertaining to paleontological resources.
2) The types of fossils that could be encountered during ground-disturbing activity.
3) Photos of example fossils for reference.
4) The paleontological monitoring that will be required during the project (including the types, depths and locations of ground-disturbing activity that will require paleontological monitoring or spot checking).
5) Instructions on the procedures to be implemented should unanticipated fossils be encountered during construction, including stopping work in the vicinity of the find and contacting a qualified professional paleontologist (Qualified Paleontologist).

In addition to these instructions, the Resident Engineer and Inspectors will also receive a list and contact info of the paleontological specialists and other environmental specialist associated with paleontological resources for this project.

3.3 Curation Agreement

Prior to the commencement of construction, Metropolitan, in coordination with the Qualified Paleontologist, should obtain a curation agreement with an accredited museum repository.

Conditions of acceptance of recovered fossils will be spelled out in a letter from the designated repository. In addition to the specimens, the repository must maintain "a complete set of GPS data, field notes, photographs, locality forms, and stratigraphic sections." Also, "specimens must be stored in a fashion that allows retrieval of specific, individual specimens by future researchers." An appropriate institution for curation of unique paleontological resources from this project area would preferentially be the NHMLAC.

3.4 Monitoring Earth Moving

Monitoring guidelines will follow procedures established by the SVP (2010). Paleontological monitoring is only required in areas that have not been previously disturbed. While it is anticipated that the majority of ground-disturbing activity would not disturb intact native geologic units due to the extensive previous development (e.g., residential, industrial, roads, etc.), project-related excavations that exceed previously disturbed areas in width or depth would require paleontological monitoring as detailed below and in Table 2.

All construction activities that disturb intact native sediments within areas of high paleontological sensitivity at the ground surface (i.e., Qoa, Qoe, Qsp, Qspl, Tma) will be monitored on a full-time basis by a qualified Paleontological Monitor. All construction activities that disturb intact native sediments at a depth greater than five feet below ground surface within areas of low-to-high paleontological sensitivity (i.e., Qya_2 and Qyf_2) will be monitored on a full-time basis by a qualified Paleontological Monitor.

Table 2 Paleontological Sensitivity Summary and Monitoring Locations of Excavation Areas

Geologic Unit(s)	Paleontological Sensitivity	Monitoring Recommendation and Duration	Excavation Areas (SLF Station #)
Quaternary younger alluvium (Qya_2 Qyf_2)	Low (surface), High (below 5 feet)	Full time in excavations below 5 feet in native sediments (i.e., previously undisturbed areas)	1594+15 (WB-37), 1569+91, 1565+92, 2049
Older Quaternary eolian deposits (Qoe)	High	Full time excavation in native sediments (i.e., previously undisturbed areas)	N/A
Older Quaternary alluvium (Qoa)	High	Full time excavation in native sediments (i.e., previously undisturbed areas)	1860, 1864, 1916, 1964, 2015, 2022, 2104, 2109/2114, WB-41
San Pedro Formation (Qsp, Qspl)	High	Full time excavation in native sediments (i.e., previously undisturbed areas)	2098
Monterey Formation (Tma)	High	Full time excavation in native sediments (i.e., previously undisturbed areas)	N/A

Full-time monitoring is defined as during 100% of earth-moving activities. If, no fossils of any kind have been discovered after 50% of excavations are complete in an excavation area, then the level of monitoring may be reduced or suspended, at the Qualified Paleontologist's discretion.

The SVP (2010) guidelines recommend paleontologists who monitor excavations must be experienced in locating and salvaging fossils and collecting necessary associated critical data. The Paleontological Monitor must be able to document the stratigraphic context of fossil discovery sites. Paleontological Monitors must be properly equipped with tools and supplies to allow rapid removal of specimens (see Section 3.5). The monitor must also be empowered to temporarily halt or redirect the excavation equipment away from fossils to be salvaged, including the implementation a 50-foot safety buffer and equipment exclusion zone around the area of a fossil discovery and salvage. The Qualified Paleontologist will consult with Metropolitan on salvage operations, particularly regarding the need for extra equipment and operator(s) to accelerate salvage operations.

Excavation methods will vary depending on the type of fossil and the nature of the surrounding matrix. Many macrofossils are easily recognized and removed by hand or with small hand tools. Some may be fragile and require treatment with a hardener before salvage. Others may require encasement within a plaster jacket. Specimens representing all or much of a skeleton may require removal as a whole or in large blocks. Such specimens typically require additional time to excavate and stabilize before removal. Construction schedules will be considered during the recovery of unique fossils, with the goal of reducing or avoiding construction delays.

After excavating the specimen or specimens, the Paleontological Monitor will assign a unique field number to each fossil specimen, fossil locality or sediment sample and record the field number and associated specimen/sample data (identification by taxon and element, sample size, etc.), corresponding geologic data (particularly lithology, stratigraphic unit, stratigraphic level within the unit, inferred age, etc.), and geographic site data (UTM coordinate location, elevation, etc.) in the field notes. Each field number and fossil/sampling site will be plotted on both a 1:24,000-scale topographic map and a measured section of the exposed stratigraphic sequence (if sufficiently exposed). Fossils will be prepared to the point of identification and identified to the lowest possible taxonomic level by a paleontologist who specializes in the appropriate taxonomic group (this may require outside consultation on fossil identifications). Specimen salvage and/or sediment sample

collection and recording of associated data will be completed as quickly as possible to minimize potential delays to excavation activities.

Immediately after the salvage of the specimen or collection of the sample(s), the Paleontological Monitor will remove all materials from the exclusion zone and notify Metropolitan of the status of the salvage operation. Upon receiving approval from Metropolitan and the Qualified Paleontologist, the Paleontological Monitor will communicate to the Construction Manager/Heavy Equipment Operator that earth moving can proceed. Provisions will be made for additional Paleontological Monitors to monitor or help in removing large or abundant fossils to reduce potential delays to excavation schedules.

3.5 Equipment and Supplies

Each Paleontological Monitor will be equipped with hand tools and supplies (e.g., geological hammer, shovel, pick, chisels, whisk broom, buckets, specimen bags, field notebook, daily monitoring report forms, pens, markers, and glue) to allow for the rapid salvage of fossil remains. Additional equipment and supplies (e.g., plaster, burlap, screens, wash tubs, hoses) for stabilizing and salvaging delicate fossil specimens and field processing of fossiliferous sediment samples will be kept on hand and made available when and if required to properly salvage fossil discoveries. The Construction Contractor may be requested to supply heavy equipment (typically a front-end loader) and an operator to assist in the rapid removal of a large fossil specimen(s) or sediment sample(s). Equipment and supplies for preparing fossil specimens, laboratory processing of screened matrix generated by field processing of sediment samples, and for temporary storage of all salvaged fossil specimens will be available via the Qualified Paleontologist.

3.6 Bulk Matrix Sampling

In accordance with MM CUL-6, bulk matrix sampling may be necessary to recover small invertebrates or microvertebrates from within sensitive Pleistocene deposits. SVP (2010) provides clear guidelines for the volume of bulk samples to be collected during construction monitoring activities. Fine-grained sedimentary horizons (e.g., mudstones and paleosols) can contain fossils that are too small to be readily visible within the sedimentary matrix and are referred to as "microvertebrates". These microvertebrates may be unique (e.g., small mammal, bird, reptile, amphibian, or fish remains) or may be associated with non-vertebrate paleoenvironmental indicators (e.g., foraminifers, small gastropods, and plant seeds) that can only be recovered through a process of bulk matrix sampling followed by screen washing through mesh screens. If indicators of potential microvertebrate fossils are found (e.g., plant debris, abundant mollusks, clay clasts, carbonate-rich paleosols, or mudstones), screening of a "test sample" (0.4 cubic yard/meter, ~600 lbs) may produce significant returns and indicate whether or not a larger sample needs to be screen washed. If a test sample returns unique fossils, a “standard sample” (4.0 cubic yards/meters, ~6,000 lbs or 2,500 kg) of matrix from each site, horizon, or paleosol should be collected and screen washed. However, the uniqueness of the microvertebrate fossils recovered may justify screen washing even larger amounts. With this possibility in mind, two standard samples (~8.0 cubic yards/meters) or more as determined by the Qualified Paleontologist should be collected when the discovery is first made and set aside in case processing of a larger sample is later determined to be necessary.

To avoid construction delays, samples of matrix may need to be removed from the project area and processed elsewhere. Chemicals (e.g., detergents, weak acids, orange oil, etc.) may be necessary to facilitate the breakdown of matrix. In some cases, the concentrate will need to be further processed using heavy liquids (e.g., zinc bromide, polytungstate, or tetrabromide) to remove mineral grains and create a concentrate enriched with microvertebrate bones and teeth. The concentrate should be directly examined under a microscope to locate and remove individual microfossils.

When warranted, sediment samples will be obtained and stored for potential future analysis by scientists. Such samples may include fine-grained sediment for pollen analysis; organic-rich sediments that may yield important scientific information on the age, paleoecology, or depositional environment of sedimentary units exposed by construction excavations; samples for paleomagnetic or radiometric analysis; and coarse sediment for clast source analysis. The Qualified Paleontologist will determine what samples should be collected during the construction excavation; however, these decisions should be made in the context of reasonable expectations that sample collection will yield valuable results that will add to the scientific record of the geologic units from which samples are collected. Reasonable expectations of positive results might include such evidence as abundant macrofossil discoveries in the immediate vicinity, the presence of abundant fragmentary fossils and lithology indicators of potentially fossiliferous units.

3.7 Laboratory Preparation and Curation

Fossil remains collected during monitoring will be sorted/picked, identified, and catalogued. Once collected, preparation of fossil specimens may involve removal of extraneous and concealing sedimentary matrix from specimens using simple hand tools (e.g., hammers, chisels, X-acto knives, brushes, dental picks, and pin vises), and stabilization with glues or consolidants (e.g., butvar). Once sorted, prepared and stabilized, individual fossils will then be identified to the lowest taxonomic level possible (e.g., class, family, genus, species). Descriptions of fossil localities, including geographic, stratigraphic, geologic, and taphonomic data, will be compiled and stored electronically for submission at the time of curation. Curation would require placement of fossils into archival specimen trays with labels containing relevant curatorial information. Field collection and preparation of fossil specimens will be performed by the Qualified Paleontologist with further preparation as needed by an accredited museum repository institution at the time of curation.

Following preparation, fossils will be temporarily stored in an appropriate storage space within the office of the Qualified Paleontologist until they can be properly accessioned at the designated curatorial institution for permanent storage. All fossil resources collected on private property are the property of the land owner. Fossils collected on public lands remain the property of the public entity responsible for those lands (i.e., State, County, City, etc.).

3.8 Report of Findings

Following the completion of paleontological monitoring for the project, a final technical report of findings will be prepared under the direction of the Qualified Paleontologist and will include the results of the paleontological monitoring. The final report will include or discuss the following (as applicable):

1) Presentation of background for the project's paleontological monitoring program.
2) Discussion of the geology and stratigraphy of units exposed during excavations.

3) Discussion of mitigation methods, including fossil treatment, and recommendations for additional work.
4) Discussion of the uniqueness and importance of salvaged fossil remains (if any).
5) Presentation of the results and findings of analyses conducted on the fossil remains (if any) including all associated locality data included as an appendix.
6) Discussion of the research questions that were resolved or raised as a result of the analyses.
7) Faunal list of any fossils collected.
8) Brief statement of the significance and relationship of the site to similar fossil localities.
9) A complete set of field notes.
10) Geological maps.
11) Stratigraphic sections.
12) Photographs.
13) A list of identified specimens, if recovered.
14) Locality data, including United States Geological Survey standard 1:24,000-scale topographic map showing each locality from which a significant fossil was collected and a measured stratigraphic section or sections, as appropriate, should be included as a *Confidential Appendix*.

The final report, together with its accompanying documents, constitutes the final objective of the PRIMP. Copies of the final report will be deposited with Metropolitan and with the designated museum repository, if applicable. Acceptance of the final report by Metropolitan and accession of any fossil remains discovered into an accredited museum repository will confirm that the project has caused less-than-significant impacts to unique paleontological resources and will signify completion of the mitigation program for the project.

4 Conclusions

As detailed above, paleontological monitoring will only be necessary when construction activity results in ground disturbances within previously undisturbed intact (native) geologic units (refer to Table 2 and Figure 3). This includes full-time monitoring for excavations of intact (native) sediments in older Quaternary alluvium, older Quaternary eolian deposits, San Pedro Formation, and Monterey Formation (i.e., SLF Stations 1860, 1864, 1916, 1964, 2015, 2022, 2098, 2104, 2109/2114, and WB-41) and when ground disturbance exceeds five feet in younger Quaternary alluvium (i.e., SLF Stations 1594+15 (WB-37), 1569+91, 1565+92, 2049). Full implementation of and compliance with the mitigation measures in this PRIMP will reduce adverse impacts to paleontological resources to a less than significant level as required under CEQA.

5 Preparers

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Jorge L. Mendieta, B.A., serves as an Associate Paleontologist/Geologist with Rincon Consultants. Mr. Mendieta received a bachelor's degree in geology from Hamilton College. He has three years of paleontological consulting experience performing geologic and paleontological assessments, including field work, construction monitoring, preparation of CEQA environmental documents, fossil salvage, and geologic mapping. Mr. Mendieta has conducted field work on federal, state, and private land throughout California for a variety of project types including water delivery infrastructure, transportation, renewable energy, power generation and transmission, and residential and commercial developments.

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Appendix E
Construction Noise Technical Report

Second Lower Feeder Reach 3 Project

Construction Noise Technical Report

December 2021 | 00501.00024.003

Prepared for:

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

Prepared by:

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December 2021 | 00501.00024.003

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ACRONYMS AND ABBREVIATIONS

ADT	average daily traffic
ANSI	American National Standards Institute
CadnaA	Computer Aided Noise Abatement
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dB	decibel
dBA	A-weighted decibel
Defra	Department of Environment, Food and Rural Affairs (United Kingdom)
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Hz	Hertz
in/sec	inches per second
kHz	kilohertz
L_{DN}	Day-Night level
L_{EQ}	equivalent sound level
Metropolitan	The Metropolitan Water District of Southern California
mPa	micro-Pascals
NSLU	noise-sensitive land use
PCCP	Prestressed Concrete Cylinder Pipeline
PEIR	Programmatic Environmental Impact Report
RCNM	Roadway Construction Noise Model
SF	Sepulveda Feeder
SLF	Second Lower Feeder
SPL	sound pressure level
S_{WL}	sound power level
USDOT	U.S. Department of Transportation

EXECUTIVE SUMMARY

This noise impact report assesses the potential acoustical impacts from construction of The Metropolitan Water District of Southern California's (Metropolitan) Second Lower Feeder Reach 3 of the Prestressed Concrete Cylinder Pipeline (PCCP) Rehabilitation Program (project). A Programmatic Environmental Impact Report (PEIR) was prepared for the PCCP Rehabilitation Program and it concluded that noise impacts from project construction would be significant and unavoidable at some locations. The PEIR, therefore, requires subsequent project-specific noise analyses to be conducted for future construction activities located in close proximity to noise-sensitive land uses (NSLUs) such as residences or schools. This report identifies ambient noise levels, construction-related noise levels at specific noise-sensitive locations (receptors), and measures that can be used to reduce noise levels (as appropriate).

The project's pipeline alignment traverses the cities of Los Angeles, Torrance, Lomita, Rolling Hills Estates, Long Beach, and Carson. The project would reline approximately 26,000 linear feet (4.9 miles) of PCCP in the Second Lower Feeder and approximately 300 linear feet in the Sepulveda Feeder with prefabricated coiled steel liner, and upgrade additional components associated with the pipeline.

Vibration from construction is not anticipated to cause significant impacts to nearby receptors.

Construction activity would generate elevated noise levels at each pipe access site and at multiple locations along the alignment for additional infrastructure improvements, such as manholes, isolation valves, and service connections. Elevated noise levels would lead to significant impacts at multiple locations during both daytime and nighttime hours. The PEIR requires the implementation of mitigation measures (MM) NOI-1 to reduce vibration levels, and MM NOI-2 through MM NOI-4 to reduce noise levels.

To comply with PEIR MM NOI-3, additional project-specific measures are required to attenuate noise levels (see Section 4.4.4 for MM NOI-3.1 through MM NOI-3.4). Mitigation measure NOI-3.1 would require construction activity to comply with the thresholds of each jurisdiction, as feasible. Mitigation measure NOI-3.2 would require noise-reduction measures for excavation at pipe access sites and for pipeline relining activities, including noise attenuation devices/modifications to construction equipment, limiting hours of operation, or erecting construction noise barriers. To reduce noise levels, MM NOI-3.3 would require setback distances for mobile operations along the pipeline alignment. Mitigation measure NOI-3.4 would require implementation of a Nighttime Construction Management Plan for proposed nighttime construction activity.

Even with implementation of project-specific measures (MM NOI-3.1 through MM NOI-3.4), construction-related noise levels may not be reduced to local standards during daytime and nighttime hours, and impacts would remain potentially significant and unavoidable. The severity of impacts, however, would be the same as that identified in the PEIR.

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

In December 2016, a Programmatic Environmental Impact Report (PEIR) was prepared for The Metropolitan Water District of Southern California's (Metropolitan) Prestressed Concrete Cylinder Pipeline (PCCP) Rehabilitation Program (SCH #2014121055). The PEIR concluded that noise impacts from project construction would be significant and unavoidable at some locations. PEIR MM NOI-3 from the PEIR requires project-level noise studies to be conducted for construction activities located near noise-sensitive land uses or NSLUs (such as residences or schools).

This report satisfies the requirements of PEIR MM NOI-3 by providing project-level analysis of potential construction-related noise impacts associated with construction of Reach 3 of the Second Lower Feeder (project). The analysis identifies ambient noise levels, construction-related noise levels at specific noise-sensitive locations (receptors), and measures that can be used to reduce noise levels (as appropriate).

1.2 PROJECT DESCRIPTION

The proposed project covers rehabilitation of a 4.9-mile section of the 78-inch-diameter Second Lower Feeder in the city of Los Angeles (Los Angeles), city of Torrance (Torrance), city of Lomita (Lomita), and city of Rolling Hills Estates (Rolling Hills Estates) and a 300-linear-foot section of the 84-inch-diameter Sepulveda Feeder in Los Angeles and Torrance (see Figure 1, *Regional Location*, and Figure 2, *Project Components*).

The proposed project would reline approximately 26,000 linear feet (4.9 miles) of PCCP along the Second Lower Feeder and approximately 300 linear feet along the Sepulveda Feeder with prefabricated coiled steel liner, extending from Second Lower Feeder (SLF) Station 1860+10 (located at the intersection of Western Avenue and 220th Street in the Los Angeles) to SLF Station 2116+84 (located adjacent to the Palos Verdes Reservoir in Rolling Hills Estates) and from Sepulveda Feeder (SF) Station 2270+46 to SF Station 2273+29 (located along Western Avenue between 219th Street and 220th Street in Torrance and Los Angeles). Rehabilitation activities would occur throughout the project footprint including air release/ vacuum valve relocations, valve replacements, pumpwell air vent installations, maintenance hole enlargements, incorporation of new maintenance holes, and other minor work.

Construction within the pipelines would occur over three phases referred to as Phase 3a, Phase 3b, and Phase 3c. Each of the three phases would include a four-month shut down period (January to April 2023 for Phase 3a, January to April 2024 for Phase 3b, and January to April 2025 for Phase 3c). During these shut downs, the Second Lower Feeder would be shutoff and dewatered from Station 1475+25 (located on Bixby Road west of Long Beach Boulevard in the city of Long Beach) to Station 2116+84 (located adjacent to the Palos Verdes Reservoir in the city of Rolling Hills Estates) and the Sepulveda Feeder would be shut down and dewatered from Station 1927+65 (located on Van Ness Avenue at El Segundo Boulevard in the city of Gardena) to Station 2273+36 (located on Western at 220th Street in the city of Torrance). Construction activities would include:

- Approximately 21 months of mobilization and traffic control work, including 12 months of pipeline rehabilitation activities as follows: Beginning in December 2022, equipment would be mobilized, and traffic control would be set up. Water service shutdowns would begin in

January 2023 and the pipelines returned to service the end of April 2023. Traffic controls and equipment would be removed by the end of June 2023. In December 2023, equipment would again be mobilized, and traffic control set up. Water service shutdowns would begin in January 2024, and the pipelines returned to service in April 2024. Traffic controls and equipment would be removed by the end of June 2024. In December 2024, equipment would again be mobilized for a third time, and traffic control would be set up. Water service shutdowns would begin in January 2025 and the pipelines returned to service in April 2025. Traffic controls and equipment would be removed by the end of June 2025.

- Dewatering activities, as well as pipeline relining activities and ventilation would generally occur 24 hours per day, Monday through Sunday. Other construction activities, such as excavation, would generally be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday, and on Saturdays when necessary and with prior approval of the Engineer in accordance with local cities and municipalities. Noise attenuation measures would be implemented where needed, consistent with the PEIR, and appropriate jurisdictional permits will be obtained.

- After all rehabilitation activities have been completed, for a period of five to ten days, the Second Lower Feeder and Sepulveda Feeder would be disinfected in accordance with American Water Works Association (AWWA) and American National Standards Institute (ANSI) standards. After disinfection, both feeders would be returned to service.

The following sections describe the components of the PCCP Program generally and how those components would be implemented as part of the proposed project.

1.2.1 Project Components

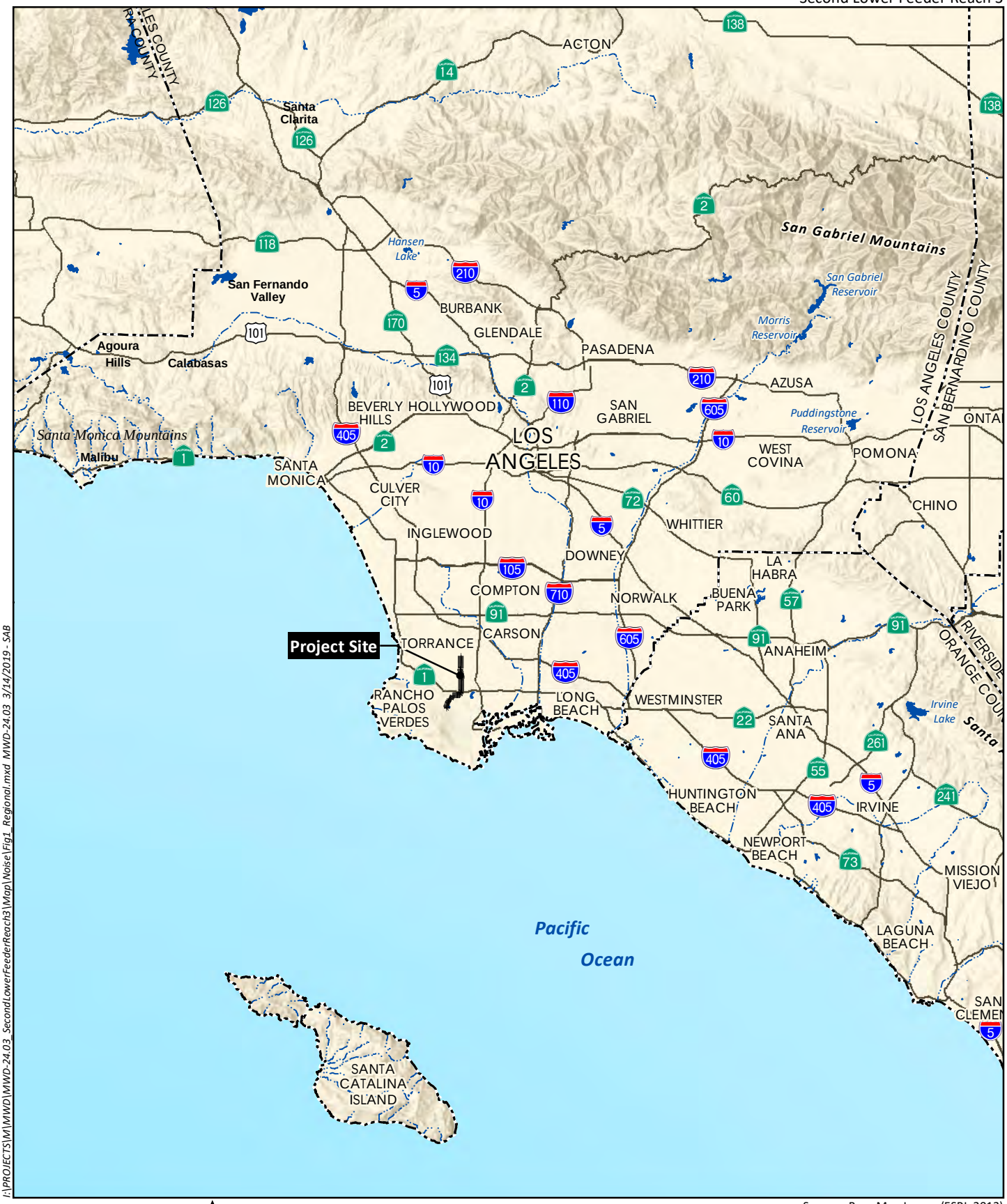
As discussed in the PEIR, rehabilitation of PCCP can be categorized as primary, secondary, and associated temporary construction components. These components and the various methods needed to construct, install, and operate the pipeline are summarized below and would be used as appropriate for rehabilitation efforts under the proposed project.

- Primary components include the different methods of rehabilitation considered for segments of the pipelines under the PCCP Program. The rehabilitation method that would be used for this proposed project would be steel cylinder relining with coiled pipe.

- Secondary components include permanent appurtenant structures. These appurtenant structures include buried (underground) structures and aboveground enclosures. Buried structures include vaults that house piping such as those at interconnections and equipment such as valves, meters, service connections, and blow-offs. Above ground enclosures, typically located on sidewalks or median strips, house air release/vacuum valves and air vents.

- Temporary construction components include pipe access sites, structure excavation sites, contractor work areas, and equipment staging areas.

Second Lower Feeder Reach 3



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Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1

Second Lower Feeder Reach 3

Second Lower Feeder Project Alignment
Sepulveda Feeder Project Alignment
Pipe Access Site
City Boundary

1863
1860
1916
1964
2022
2015
2034
2098
2109
2114

Western Ave
223rd St
W 223rd St
Plaza Del Amo
Maple Ave
Sepulveda Blvd
Arlington Ave
Cabrillo Ave
W 228th St
W Sepulveda Blvd
235th St
Los Angeles Unincorporated
Lomita Blvd
Torrance
Los Angeles
Torrance
Lomita
Narbonne Ave
Skypark Dr
Normandie Ave
Eshelman Ave
Lomita Blvd
W Lomita Blvd
Crenshaw Blvd
Pacific Coast Hwy
Western Ave
S Vermont Ave
Lomita
Lomita
Los Angeles
W Anaheim St
Torrance
Rolling Hills Estates
Rolling Hills Estates
N Gaffey St
Palos Verdes Dr N
Western Ave
Palos Verdes Dr E
Lomita
Rancho Palos Verdes
Rolling Hills Estates
Rancho Palos Verdes
Rancho Palos Verdes
Los Angeles
Rolling Hills Estates
Rolling Hills

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0 1,500 Feet

Source: Aerial (Maxar, 2020)

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Project Components

Figure 2

1.2.1.1 Primary Project Components

Steel cylinder relining rehabilitation of PCCP would involve the following:

- Inserting coiled steel cylinders into the existing PCCP line;
- Expanding the coiled steel cylinder to fit properly within the PCCP interior;
- Welding the steel cylinder within the PCCP;
- Filling the annular space between the steel cylinder and existing PCCP with concrete grout; and
- Applying a cement mortar lining to the interior surface of the steel cylinder.

Most of the rehabilitation activities would occur within the existing pipeline, and site impacts would occur primarily at the pipe access sites. All the work described above would be done inside the existing pipeline and at pipe access sites along the existing pipeline alignment.

1.2.1.2 Secondary Project Components

Pipeline systems typically include equipment vaults that house water meters, isolation valves, check valves, bypass valves, back-flow preventer valves, pressure-reducing valves, pump wells, service connections, and blow-offs. The top of the structures are typically several feet below ground surface and the structures are accessed via ladders from street-level hatches or maintenance holes.

Maintenance Holes and Aboveground Enclosures

Maintenance holes typically provide access for maintenance and repairs and are spaced at regular intervals along pipelines. Existing maintenance holes would be used for ventilation, as well as for access to the interior of the pipeline for personnel, small equipment, and materials during rehabilitation of other project components (e.g., pipeline relining).

The proposed project would include the following four activities related to maintenance holes: maintenance hole enlargement, maintenance hole refurbishment, relocation of air release and vacuum valves at nine maintenance hole vaults to above-ground location, and installation of new maintenance hole sleeve outlets. Each activity is further described below.

Maintenance hole enlargement would occur at the five existing maintenance holes shown in Table 1, *Maintenance Hole Enlargement Sites*. If determined to be necessary, the five maintenance hole enlargement sites may also be used as pipe access sites. Therefore, in order to provide flexibility during construction, these sites are conservatively assumed to also be used as pipe access sites with an average excavation area of 86 feet by 34 feet.

Table 1
MAINTENANCE HOLE ENLARGEMENT SITES

Site	Location	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)
SLF Sta. 1875+56	Within the center of Western Avenue, immediately south of W 223rd Street	150 x 35
SLF Sta. 1899+76	Within the east side of Western Avenue, north of Sepulveda Boulevard	200 x 40
SLF Sta. 1957+80	Within the Western Ave median adjacent to W 246th Street	20 x 40
SLF Sta. 2034+32	On the north side of 262nd Street, west of Monte Vista Avenue	40 x 15
SLF Sta. 2045+04	Within the grassy parkway on the south side of 262nd Street west of Murad Avenue	20 x 40

Note: For irregularly shaped work areas, the maximum width and length are presented in the table.
SLF = Second Lower Feeder; Sta. = Station Number

California State Water Resources Control Board regulations require that all treated water supply systems be protected from potential contamination. Air release/vacuum valves currently located in vaults along the project pipeline have a potential to introduce contaminants into the Second Lower Feeder. The purpose of these valves is to control air pressure in the mainline by automatically opening to the atmosphere to allow air into or out of the pipeline during dewatering or filling operations. Being located in underground vaults that are susceptible to flooding with rain runoff or seepage water, there is a possibility that as these valves open, they will allow water that has flooded the vault into the pipeline, thereby contaminating it with rain-runoff or seepage water pollutants. Therefore, per the aforementioned regulations, existing air release/vacuum valves in underground vaults along the project will be relocated above ground.

The relocation of air release/vacuum valves from below ground to above ground would involve running new piping from the existing valve connection point in the vault to a nearby above-ground location and installing a new valve above ground. This would require shallow trenching from the existing belowground vault to the parkway location.

For the proposed project, the trench would be approximately two feet wide and about five feet deep. The length of the trench would vary with the size of the street to be crossed, as valves would be moved from their current underground locations within the roadway to a nearby area outside the roadway. In addition, the access structures would be retrofitted with locking manhole covers, and the access structure ring would be removed.

The new above ground air release/vacuum valves would be housed in small enclosures within the public right-of-way in a median or within Metropolitan-owned property. Table 2, *Air Release/Vacuum Valve Relocation Sites*, identifies the locations where air release/vacuum valves would be relocated above ground.

Following the equipment relocation, the remaining equipment in the maintenance vaults would be repainted. Additionally, existing mortar coating would be removed, existing steel pipe coated, and new steel pipe sleeves would be installed in 24 maintenance holes and in two side outlets.

Table 2
AIR RELEASE/VACUUM VALVE RELOCATION SITES

Site	Location	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)
SLF Sta. 1863+24	Within the sidewalk on the east side of Western Avenue south of 220th Street	20 x 40
SLF Sta. 1910+14	Within the Western Avenue median north of 234th Street	20 x 40
SLF Sta. 1918+31	Within the sidewalk on the west side of Western Avenue south of 235th Street	20 x 40
SLF Sta. 1934+77	Within the Western Avenue median south of 238th Street	20 x 40
SLF Sta. 1957+80	Within the Western Avenue median adjacent to W 246th Street	20 x 40
SLF Sta. 1963+48	Within the east side of Western Avenue adjacent to W 247th Place	20 x 40
SLF Sta. 2034+32	On the north side of 262nd Street, west of Monte Vista Avenue	40 x 14.5
SLF Sta. 2045+04	Within the grass parkway on the south side of 262nd Street west of Murad Avenue	20 x 40
SLF Sta. 2101+17	Within the dirt parkway on Palos Verdes Drive E south of Palos Verdes Drive N	20 x 40

Note: For irregularly shaped work areas, the maximum width and length are presented in the table.
SLF = Second Lower Feeder; Sta. = Station Number

Pumpwells and Blow-off Structures

As discussed in the PEIR, pumpwells and blow-off structures along pipelines are used to dewater the pipeline into natural creeks, channels, waterways, and storm drains when a shutdown of the pipeline is necessary. Pumpwells allow temporary pumps to be used to dewater a pipeline. Blow-offs allow gravity to dewater the pipelines. Pumpwells and blow-offs also provide access points for routine maintenance or pipeline inspection. These structures are typically located within the buried equipment vaults.

Table 2, *Pumpwell Isolation Valve Replacement and Blow-off Structure Improvement Locations*, identifies the location and improvements that would occur at the one pumpwell and three blowoff isolation structures within the project limits.

Table 3
PUMPWELL ISOLATION VALVE REPLACEMENT AND BLOW-OFF STRUCTURE IMPROVEMENT LOCATIONS

Site	Location	Improvement	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)
SLF Sta. 1875+56	Within the sidewalk on the east side of Western Avenue south of 223rd Street	Install new vent stack for pump well structure	50 x 20
SLF Sta. 1920+30	Within the Western Avenue median south of W 235th Street	Modify blow-off structure	140 x 40
SLF Sta. 1961+70	Within the Western Avenue median south of W 247th Street	Modify blow-off structure	140 x 40
SLF Sta. 1973+18	Within the southbound lanes of Western Avenue on the southwest corner of Western Avenue and Lomita Boulevard	Modify blow-off structure	140 x 40

Note: For irregularly shaped work areas, the maximum width and length are presented in the table.
SLF = Second Lower Feeder; Sta. = Station Number

Isolation Valves and Flow Meters

The proposed project would involve the removal of three existing and installation of three new mainline isolation valves, including rehabilitation of the existing valve vault structures and replacement of appurtenances. The work also includes removal of two existing flow meters within the valve vault structures, and replacement of both meters within the new pipe sections. The proposed project also includes removal of one existing and installation of one new stand-alone meter within Oak Street. The three new isolation valves would require structural modifications to the existing large reinforced concrete vault structures within existing developed streets, including mechanical, electrical, instrumentation, and controls equipment. Table 4, *Sectionalizing Valve Vault and Flow Meter Vault Structures Improvement Locations*, identifies the location and improvements that would occur at the three isolation valve vaults and two flow meter vault structures within the project limits.

Table 4
SECTIONALIZING VALVE VAULT AND FLOW METER VAULT STRUCTURES
IMPROVEMENT LOCATIONS

Site	Location	Improvement	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)
SLF Sta. 1859+80	Within westbound lane of 220th Street east of Western Avenue	Isolation valve and flow meter replacement, and modify existing vault structure	230 x 45
SLF Sta. 1865+41	Within the median on Western Avenue south of 220th Street and north of 221st Street	Isolation valve and flow meter replacement, and modify existing vault structure	200 x 40
SLF Sta. 2050+00	In Oak Street south of 262nd Street	Remove existing flow meter and install new flow meter	100 x 40
SLF Sta. 2270+35	Within the median on Western Avenue north of 220th Street and south of 219th Street	Isolation valve and flow meter replacement, and modify existing vault structure	200 x 40

Note: For irregularly-shaped work areas, the maximum width and length are presented in the table.
SLF = Second Lower Feeder; Sta. = Station Number

Other Improvements

In addition to the isolation valve replacements at the improvement locations previously described, multiple other isolation valves and three service connection valves would be replaced.

1.2.1.3 Temporary Construction Components

As discussed in the PEIR, the temporary construction components include pipe access sites, installation of a temporary bulkhead, vault excavation sites, contractor work areas, and equipment staging areas. The temporary construction components would be present during rehabilitation activities only. After construction, these components would be removed, and the sites would be returned to pre-construction conditions.

Bulkhead Installation

As discussed in the PEIR, bulkheads may be required along various sections of the pipelines to isolate one section of the pipeline from another and to ensure continued and reliable water supply delivery to member agencies while rehabilitation is being performed on another section of pipe. For the proposed project, one bulkhead would be installed at SLF Station 1594+20.

Contractor's Work Areas

Contractor's work areas allow for construction activities to occur safely and efficiently within a construction site. Construction activities would include excavation, shoring, pipe removal, pipeline rehabilitation, electrical panel installation, and construction support activities such as ventilation, dewatering, pipe disinfection, and refilling.

Pipe Access Sites

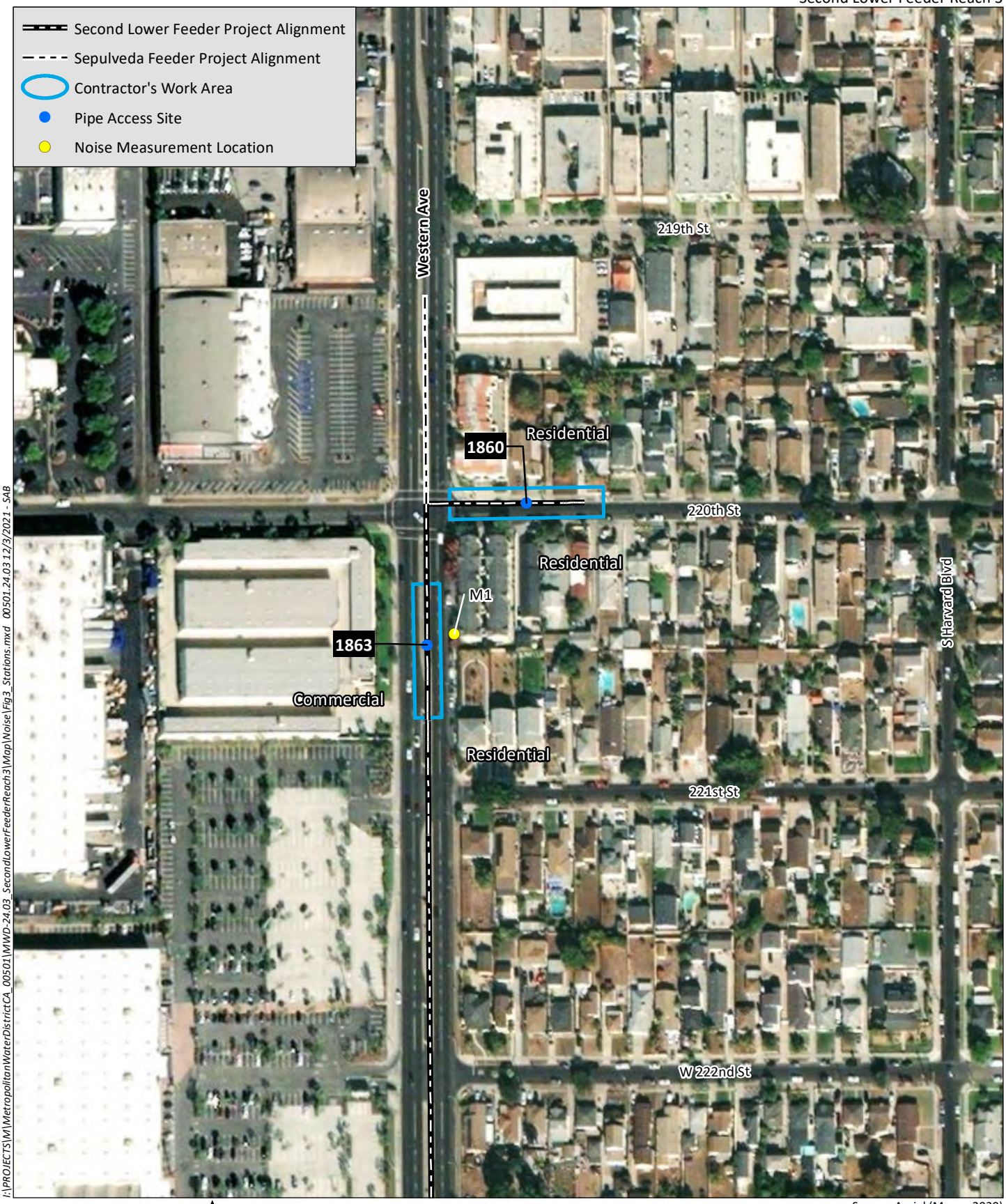
A pipe access site is defined as the entry or exit portal that exposes the underground PCCP section of the pipe or equipment vault to be rehabilitated (i.e., it is the trench from which new coiled steel cylinders, valves, and/or temporary bulkheads would be installed). Each pipe access site would be located within a contractor's work area with space to stage liner pipe prior to installation. Multiple pipe access sites would be needed to rehabilitate the pipelines and buried equipment vaults included in the PCCP Program.

Spacing of pipe access sites would vary based on a number of factors, including the horizontal and vertical bends of the pipe; the locations of valves, vaults, and other equipment; and other factors. The proposed pipe access site locations are identified in Figure 2. The pipe access sites would vary in size but would be up to 20 feet deep for the proposed project. The locations and approximate sizes of the pipe access sites are identified in Table 5, *Proposed Project Pipe Access Sites for PCCP Relining*, and shown on Figures 3a-f. As previously discussed, the five maintenance hole enlargement sites may also be used as pipe access sites. Therefore, in order to provide flexibility during construction, these sites are conservatively assumed to also be used as pipe access sites with an average excavation area of 86 feet by 34 feet.

Table 5
PROPOSED PROJECT PIPE ACCESS SITES FOR PCCP RELINING

SLF Pipe Access Site	Location	Alignment	Approximate Excavation Dimensions (Length x Width x Depth, in feet)	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)	Location Type
1860	On the north side of W 220th Street, east of Western Avenue	East/West	40 x 18 x 20	230 x 45	Public ROW Roadway Utility
1863	Within the median on Western Avenue, south of 220th Street	North/South	40 x 18 x 20	200 x 40	Public ROW Roadway Utility
1916	Within the median on Western Avenue, north of W 235th Street	North/South	40 x 18 x 17	200 x 40	Public ROW Roadway Utility
1964	Within the median on Western Avenue, south of W 247th Place	North/South	40 x 18 x 18	200 x 40	Public ROW Roadway Utility
2015	Within the median on Western Avenue, north of W 261st Street	North/South	40 x 18 x 25	220 x 35	Public ROW Roadway Utility
2022	On the north side of 262nd Street, east of Cayuga Avenue	East/West	40 x 18 x 19	140 x 30	Public ROW Roadway Utility
2034	On the north side of 262nd Street, west of Monte Vista Avenue	East/West	40 x 15 x 18	140 x 30	Public ROW Roadway Utility
2098	On Palos Verdes Drive E north of Palos Verdes Drive N	North/South	40 x 13 x 21.5	215 x 30	Public ROW Roadway Utility

Second Lower Feeder Reach 3



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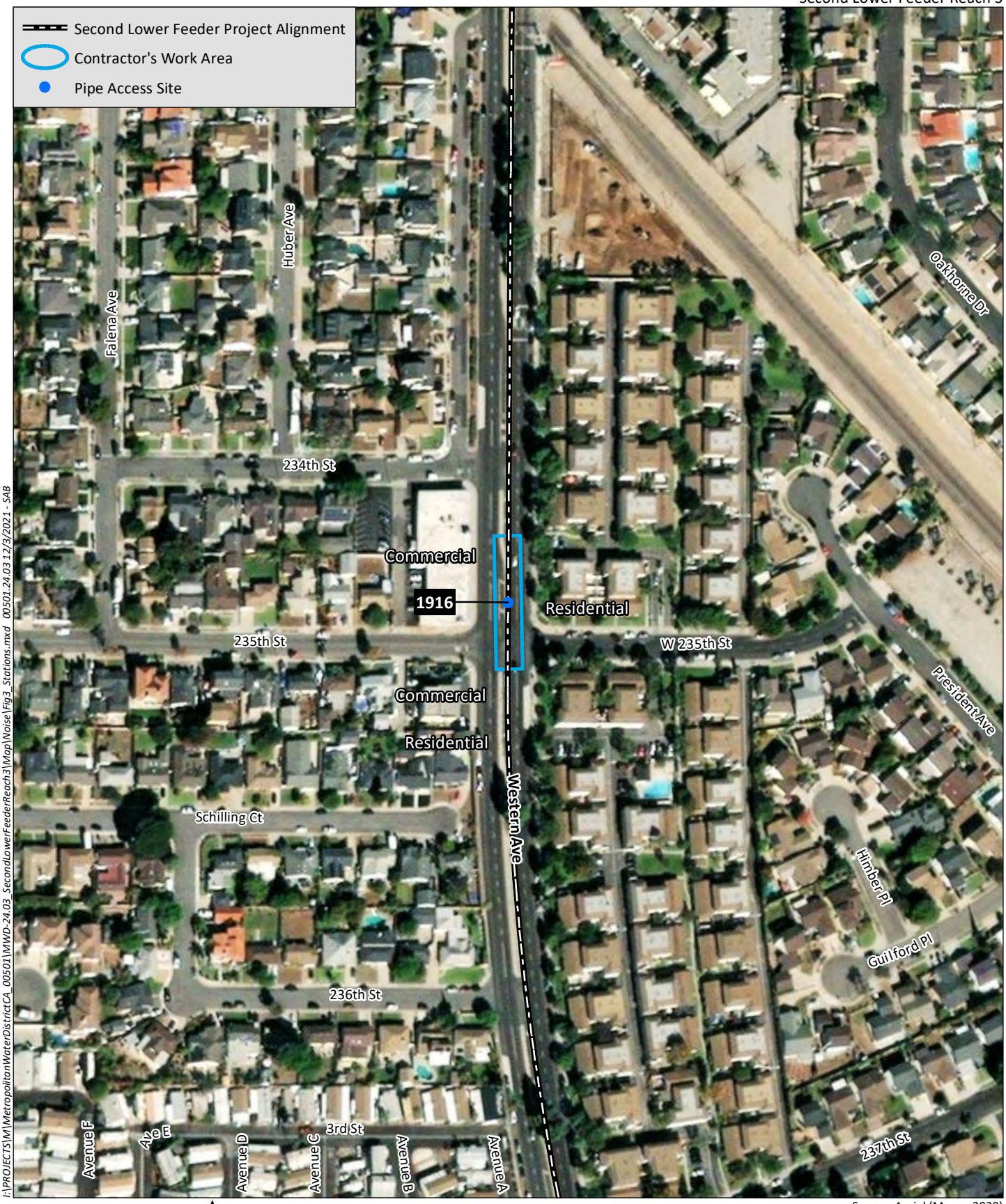
SLF Pipe Access Site 1860 & 1863

Figure 3a

Second Lower Feeder Reach 3



Source: Aerial (Maxar, 2020)

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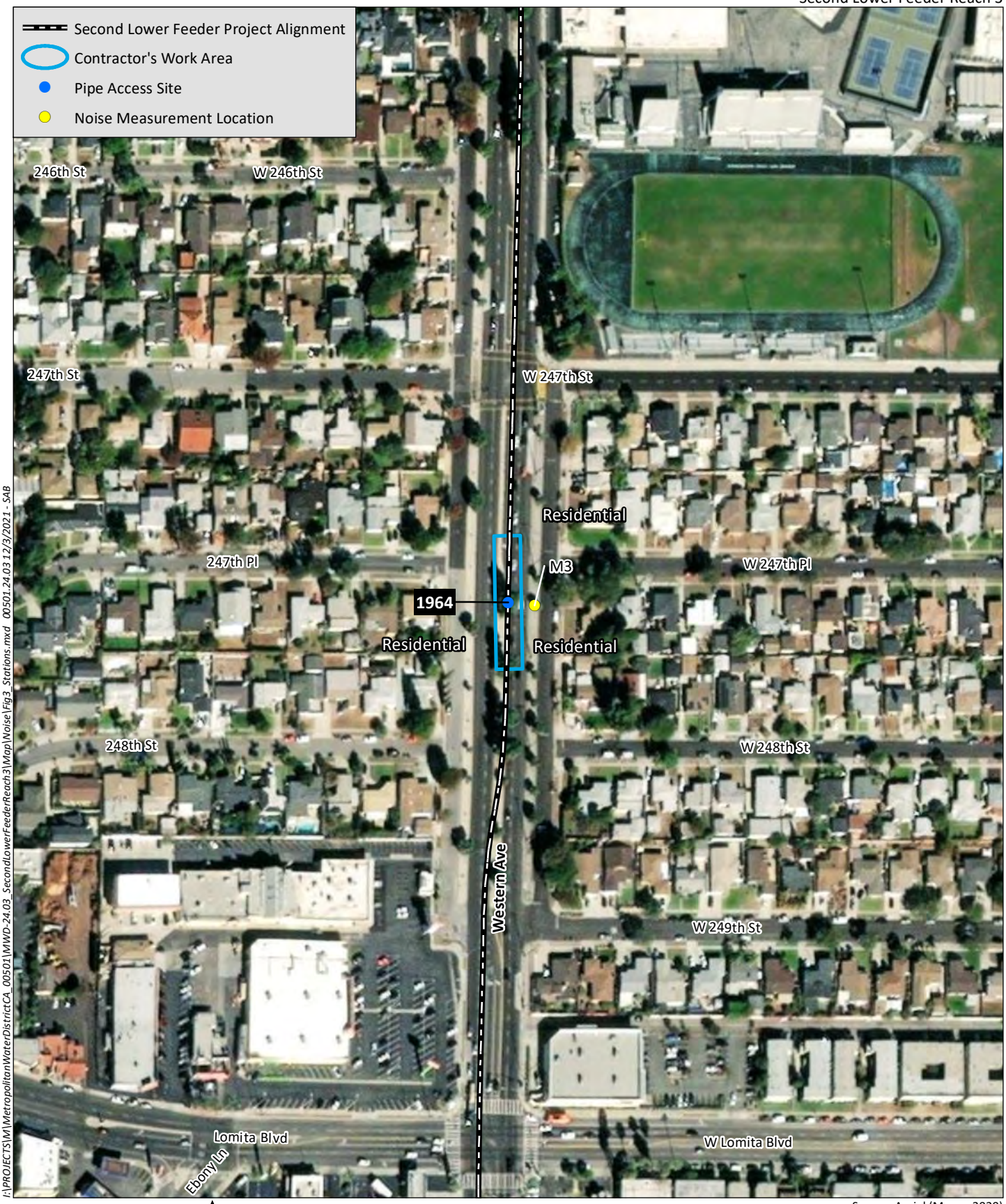
SLF Pipe Access Site 1916

Figure 3b

Second Lower Feeder Reach 3



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Source: Aerial (Maxar, 2020)

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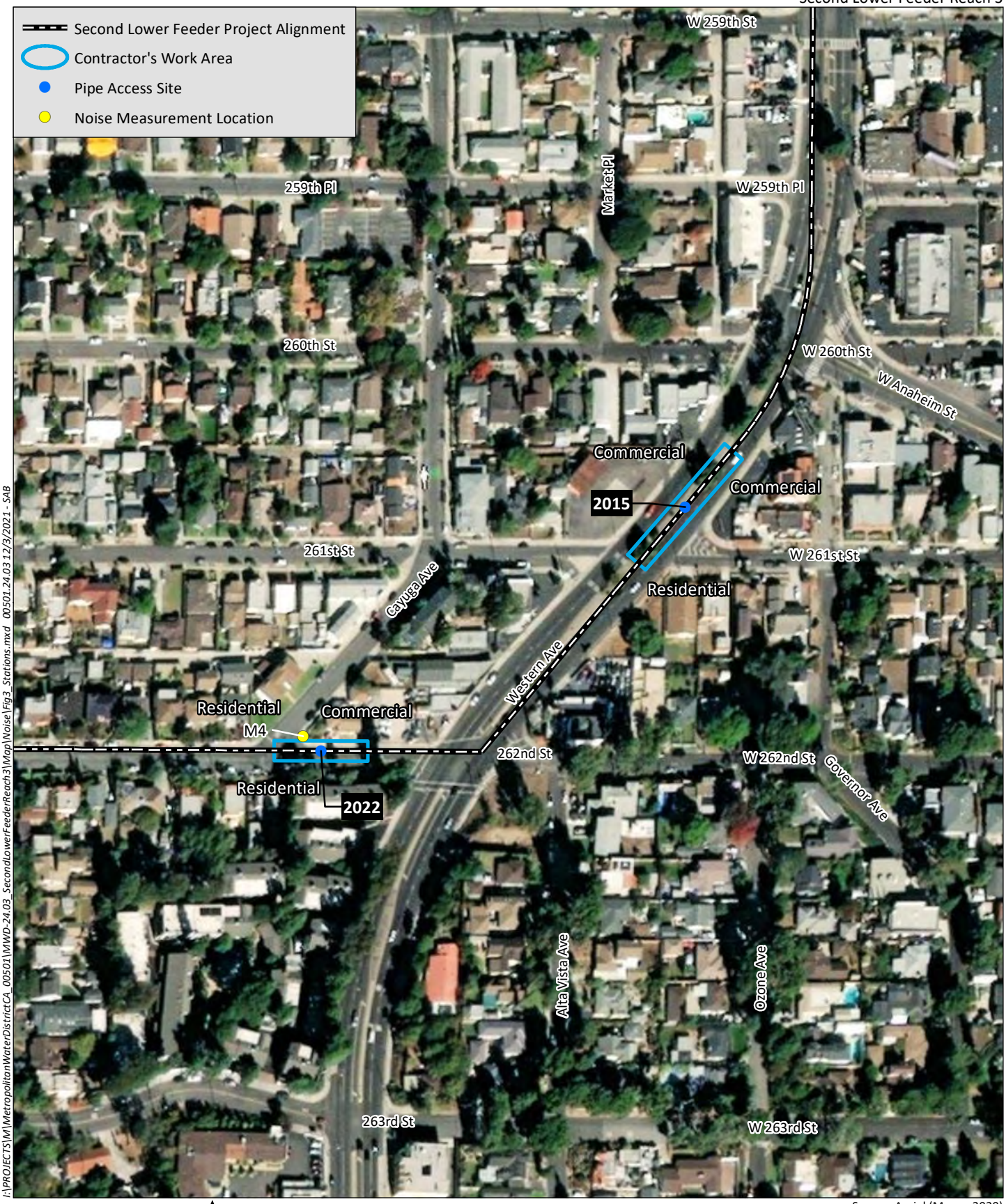
SLF Pipe Access Site 1964

Figure 3c

Second Lower Feeder Reach 3



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SLF Pipe Access Site 2015 & 2022

Figure 3d

Second Lower Feeder Reach 3

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0 200 Feet

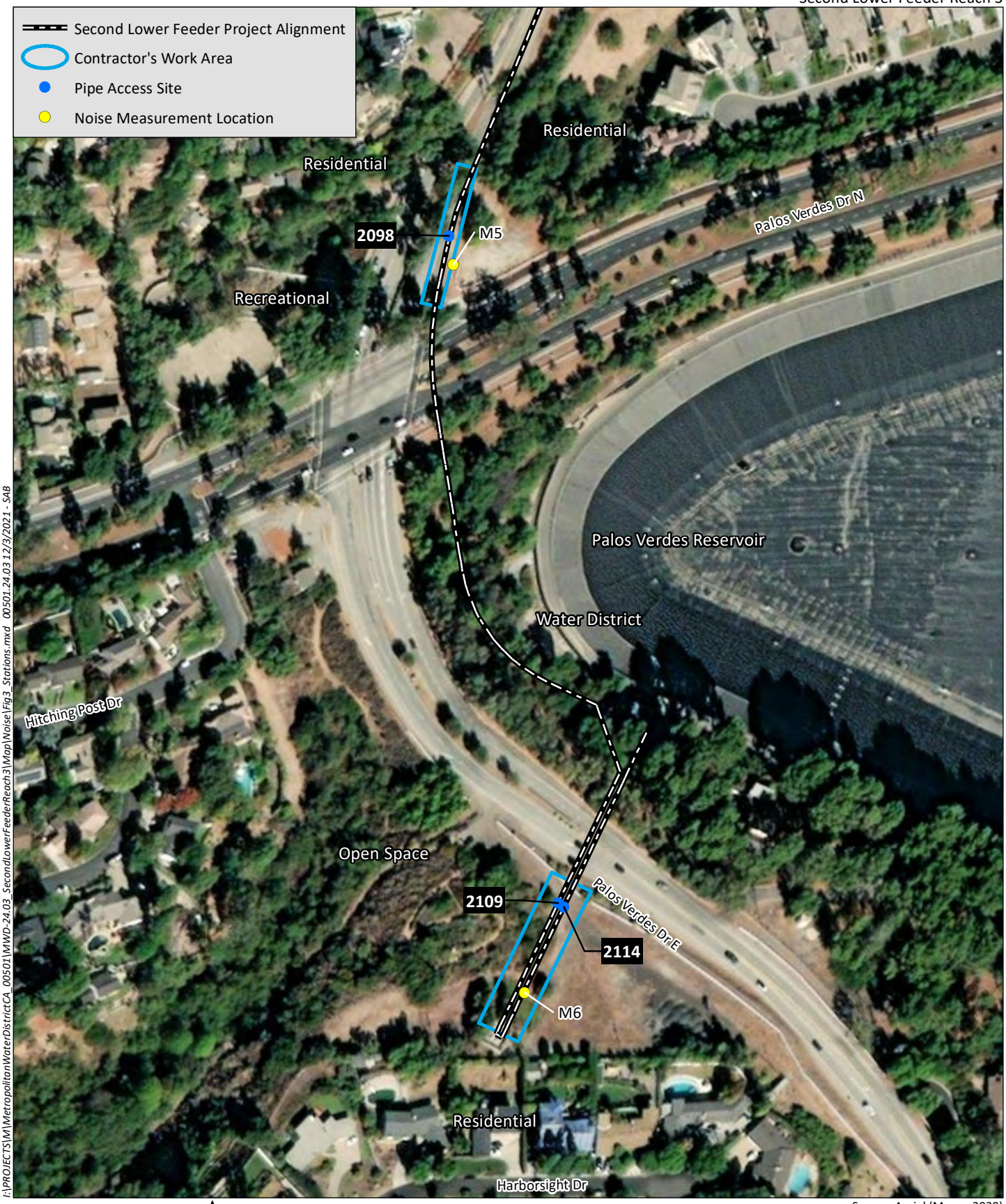
Source: Aerial (Maxar, 2020)

HELIX Environmental Planning

SLF Pipe Access Site 2034

Figure 3e

Second Lower Feeder Reach 3



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0 200 Feet

Source: Aerial (Maxar, 2020)

HELIX Environmental Planning

SLF Pipe Access Site 2098, 2109 & 2114

Figure 3f

SLF Pipe Access Site	Location	Alignment	Approximate Excavation Dimensions (Length x Width x Depth, in feet)	Approximate Contractor's Work Area Dimensions (Length x Width, in feet)	Location Type
2109 and 2114	Southwest of Palos Verdes Drive E	North/South	40 x 18 x 15.5	250 x 65	MWD Permanent Easement 1413-22-1 Utility

Note: For irregularly shaped work areas, the maximum width and length are presented in the table.
SLF = Second Lower Feeder; ROW = right-of-way

Existing surface improvements, such as road pavements, sidewalks, and landscaping, would be removed at each pipe access site, and soils would be excavated and temporarily removed from the site to expose the existing pipeline. Tree removal and/or trimming would be required at multiple pipe access sites, and overhead utility line relocation would be required at SLF Station 1859+80. Once rehabilitation is complete, many of the pipe access sites would have maintenance holes installed for future maintenance/repairs and the surrounding area would either be backfilled with soils originally excavated or backfilled with cement slurry, and the surface of each access site and surrounding work zone would be restored to existing conditions with the addition of maintenance hole covers in some locations. This would involve re-paving existing roads, repairing or replacing existing sidewalks, and replanting landscaping.

Pipe Access Sites Ingress/Egress

Pipe access sites within roadways would generally be accessed via the roadway; however, access to Pipe Access Sites 2109 and 2114 would require additional ingress/egress routes. Ingress to the Pipe Access Sites 2109 and 2114 would be achieved by traveling west along Palos Verdes Drive North and then south along Palos Verdes Drive East. Egress would involve a U-turn across Palos Verdes Drive East to exit the area traveling north and then east on Palos Verdes Drive North.

Additionally, ingress to the flow meter vault at SLF Station 2050, located near the southern terminus of Oak Street, would be achieved via Oak Street. Egress would either be achieved via Oak Street or from Oak Street through a Metropolitan-owned property and out to Palos Verdes Drive North.

Contractor Storage Areas

Contractor storage areas provide space to temporarily store liner pipes, construction materials such as shoring boxes and pipe bedding materials, and equipment such as excavators and dump trucks. Space within the contractor's work areas may be used as a temporary staging area; however, space limitations require that most materials and equipment be stored at a larger staging area.

The main contractor staging area would be located at an approximately 12-acre vacant lot at Los Angeles Harbor College, one mile east of the project alignment. Metropolitan would lease the site from Los Angeles Harbor College from February 2020 through January 31, 2023, with the potential for one or two 1-year extensions. In addition to storing equipment, materials, and vehicles at the site, Metropolitan would install temporary office trailers as well as security gates. Metropolitan determined through previous environmental documentation (dated November 2019) that there would be no

potential significant impacts associated with using the Los Angeles Harbor College site as contractor storage areas for the PCCP Program and are therefore not included in the analysis of this document.

Three additional staging areas are proposed along the project alignment. The first would be located in the City of Rolling Hills Estates at the northeast corner of Palos Verdes North and Palos Verdes East. At this location, the project would either use the existing dirt lot as a storage area or would create a laydown area within the street adjacent to the dirt lot. The second staging area would be located in the vacant area immediately southeast of the pipe access site at SLF Station 2109+65, southwest of Palos Verdes Drive East. The third smaller staging area would be located in the City of Torrance on the northeast corner of West 223rd Street and Abalone Avenue. This site would be primarily used for staging during the proposed valve replacement at the intersection of 220th Street and Western Avenue. At this location, existing trees and utilities would be avoided.

Upon completion of construction work on the Second Lower Feeder, the contractor storage and staging areas would be returned to their pre-construction condition, as appropriate and pursuant to any agreements. For example, if the pavement were to be damaged during staging, Metropolitan would re-pave the area.

1.3 PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT

The PEIR identified that noise levels during rehabilitation activities would likely reach very high levels, generally exceeding any set noise-level restrictions. Impacts relating to the exposure of persons to or generating of noise levels in excess of standards would be significant at some locations. The PEIR concluded that implementation of PEIR MM NOI-2 through PEIR MM NOI-4 would reduce impacts, but not to a less-than-significant level.

The PEIR also concluded that vibration from construction activities would not be great enough to result in impacts on vibration-sensitive receptors at most locations. However, at some locations, excavation, concrete-sawing, and other construction activities could generate vibration levels that could affect adjacent activities, such as near performing arts centers or hospitals, or where residences are close to the excavation site. The PEIR concluded that implementation of PEIR MM NOI-1 would reduce vibration impacts to less-than-significant levels.

PEIR MM NOI-1 **Locate Excavation Sites Away from Vibration-Sensitive Uses.** A noise and vibration consultant will be retained during excavation site planning to determine if there are vibration-sensitive land uses that could be affected by construction. Whenever possible, excavation sites will then be located so that vibration impacts would not affect vibration-sensitive land uses or mitigation would be included to reduce vibration levels at vibration-sensitive land uses to less-than-significant levels.

PEIR MM NOI-2 **Locate Excavation Sites Away from Noise-Sensitive Receptors Where Feasible.** A noise consultant will be retained during excavation site planning to determine if there are sensitive receptors that could be affected by construction. Whenever possible, the excavation sites will be located in areas that would not affect sensitive receptors or where receptors can be shielded from construction noise.

PEIR MM NOI-3 **Conduct Project-Level Noise Studies at Each Excavation Site Where Noise-Sensitive Receptors Are Present.** Project-level noise studies will be required at all excavation

sites where sensitive receptors are present, as required in the planning stage by PEIR MM NOI-2. Such noise studies will identify the ambient noise levels, the receptors that would be affected, the noise levels the receptors will experience during construction, and any measures that can be used to reduce noise levels. All feasible mitigation measures identified in this noise study will be implemented.

PEIR MM NOI-4 **Locate Staging Areas Away from Noise-Sensitive Receptors or Provide Noise Attenuation.** Whenever feasible, staging areas will be located in areas that would not affect sensitive receptors or where receptors can be shielded from staging-area noise. Where possible, noise screening will include temporary noise barriers with openings in the barriers kept to the minimum necessary for access.

1.4 NOISE AND SOUND LEVEL DESCRIPTORS AND TERMINOLOGY

1.4.1 Descriptors

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on dBA. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

1.4.2 Terminology

1.4.2.1 Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

1.4.2.2 Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

1.4.2.3 Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this wide range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 mPa.

Because decibels are logarithmic units, SPL cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an SPL of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1 dBA changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dBA in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

No known studies have directly correlated the ability of a healthy human ear to discern specific levels of change in traffic noise over a 24-hour period. Many ordinances, however, specify a change of 3 CNEL as the significant impact threshold. This is based on the concept of a doubling in noise energy resulting in a 3 dBA change in noise, which is the amount of change in noise necessary for the increase to be perceptible to the average healthy human ear.

1.5 REGULATORY FRAMEWORK

1.5.1 California Noise Control Act

The California Noise Control Act is a section within the California Health and Safety Code that describes excessive noise as a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

1.5.2 Los Angeles CEQA Thresholds Guide

Los Angeles developed a CEQA Thresholds Guide (Los Angeles 2006) to establish significance thresholds for construction activities. These thresholds would be applicable to construction activities within

500 feet of a noise-sensitive use. A project would normally have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise-sensitive use;
- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use; or
- Construction activities would exceed the ambient noise level by 5 dBA at a noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

1.5.3 Torrance Municipal Code

1.5.3.1 Chapter 46.3.1, Construction of Buildings and Projects

It shall be unlawful for any person within Torrance to operate power construction tools, equipment, or engage in the performance of any outside construction or repair work on buildings, structures, or projects in or adjacent to a residential area involving the creation of noise beyond 50 dBA as measured at property lines, except between the hours of 7:30 a.m. and 6:00 p.m. Monday through Friday and 9:00 a.m. to 5:00 p.m. on Saturdays. Construction shall be prohibited on Sundays and holidays observed by City Hall.

1.5.4 Lomita Municipal Code

1.5.4.1 Chapter 4.4.04

It shall be unlawful for any person within Lomita to produce or cause to allow to be produced noise which is received on property occupied by another person within the designated region, in excess of levels shown in Table 6, *Lomita Noise Limits*.

Table 6
LOMITA NOISE LIMITS

Time Period	Residential	Commercial	Manufacturing
Day	65 dBA	75 dBA	80 dBA
Night	55 dBA	70 dBA	75 dBA

Source: City of Lomita Municipal Code Chapter 4.4.04.
dBA = A-weighted decibels

1.5.4.2 Chapter 4.4.11

It shall be unlawful for any person to operate construction equipment or power tools in the performance of any outside construction or repair work on buildings, structures, or project in or adjacent to a residential area, except between the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, except holidays, and 9:00 a.m. to 5:00 p.m. Saturday, Sunday, and holidays. During the lawful times of use, such construction equipment and power tools shall not reach a level of more than 35 dBA for a cumulative period of 15 minutes in any given hour at any receiving property line.

1.5.5 Rolling Hills Estates Municipal Code

1.5.5.1 Chapter 8.32.210, Permitted – Construction Hours and Days

Any person within Rolling Hills is permitted to operate power construction equipment or use tools for the purpose of conducting construction or repair work on buildings, structures or projects between 7:00 a.m. and 5:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturday. Construction activities are not allowed at any time on Sundays and holidays. For the purpose of this chapter, holidays shall consist of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. Construction shall also not violate the noise standards set forth in Section 8.32.050. A variance shall be required for any type of construction which would violate these noise standards.

1.5.5.2 Chapter 8.32.050, Noise Standards – Exterior

The exterior noise levels shown in Table 7, *Rolling Hills Estates Exterior Noise Limits*, unless otherwise specifically indicated, shall apply to all receptor properties within a designated noise zone and shall constitute the ambient noise level for the purpose of establishing standards.

Table 7
ROLLING HILLS ESTATES EXTERIOR NOISE LIMITS

Time Period	Residential	Commercial	Industrial
7:00 a.m. to 10:00 p.m.	55 dBA	65 dBA	75 dBA
10:00 p.m. to 7:00 a.m.	45 dBA	55 dBA	45 dBA

Source: City of Rolling Hills Estates Municipal Code Chapter 8.32.050.
dBA = A-weighted decibels

1.5.6 Long Beach Municipal Code (Chapter 8.80, Noise)

No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 p.m. and 7:00 a.m. the following day on weekdays, Saturdays before 9:00 a.m., Saturdays after 6:00 p.m., and all day on Sundays, except for emergency work authorized by Long Beach. For purposes of this Section, a federal holiday shall be considered a weekday.

1.5.7 Carson Municipal Code (Chapter 5, Noise Control Ordinance)

Carson has adopted the Los Angeles County Noise Control Ordinance, with amendments to the limits on noise from construction activities. The amended construction noise restrictions are listed in Table 8, *Carson Construction Noise Restrictions*.

Table 8
CARSON CONSTRUCTION NOISE RESTRICTIONS

Time Period	Single-Family Residential	Multi-Family Residential
For Short-term operations at Residential Structures[1]		
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	64 dBA
For Long-term operations at Residential Structures[2]		
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	55 dBA	60 dBA

[1] Short-term is defined as non-scheduled, intermittent, short-term operation (20 days or less).
[2] Long-term is defined as repetitively scheduled and relatively long-term operation (periods of 21 days or more).
dBA = A-weighted decibels

2.0 ENVIRONMENTAL SETTING

2.1 EXISTING NOISE ENVIRONMENT

2.1.1 Project Alignment

The project relining alignment begins at SLF Station 1860+10, located near the intersection of Western Avenue and 220th Street in Los Angeles. The alignment travels approximately 220 feet west toward the intersection of Western Avenue and 220th Street. Here it turns both north on Western Avenue for 300 feet along the Sepulveda Feeder and south on Western Avenue for three miles along the Second Lower Feeder in Los Angeles and Torrance to 262nd Street in Lomita. The alignment then travels west for 0.5 mile along 262nd Street to the intersection with Oak Street where it turns off to Palos Verdes Drive East and travels approximately one mile before it turns off to Metropolitan's existing weir structure located west of Palos Verdes Drive East in Rolling Hills Estates. The alignment then turns back to cross Palos Verdes Drive East to end at SLF Station 2116+84 adjacent to Palos Verdes Reservoir.

Land uses surrounding the northern portion of the pipeline alignment, along Western Avenue, consist mainly of single-family and multi-family residences and commercial properties, as well as churches and a library. Narbonne High School is located adjacent to the pipeline alignment on the eastern side of Western Avenue between West 242nd Place and 247th Street. Land uses surrounding the southern portion of the pipeline alignment consist mainly of single-family residences, as well as a country club, an equestrian park, and recreational trails.

The locations of the various pipe access sites are described in Table 9, *Pipe Access Site Noise-sensitive Land Uses.*

Table 9
PIPE ACCESS SITE NOISE-SENSITIVE LAND USES

SLF Pipe Access Site	Approximate Location of Station	Nearby Noise-sensitive Land Uses (NSLUs)	Approximate Distance to Closest NSLU
1860	North side of W 220th Street, east of Western Avenue	Single-family and multi-family residences	10 feet
1863	Within the median on Western Avenue, south of 220th Street	Single-family and multi-family residences	40 feet
1916	Within the median on Western Avenue, north of W 235th Street	Single-family and multi-family residences	40 feet
1964	Within the median on Western Avenue, south of W 247th Place	Single-family residences	100 feet
2015	Within the median on Western Avenue, north of W 261st Street	Single-family residences	90 feet
2022	North side of 262nd Street, east of Cayuga Avenue	Single-family and multi-family residences	20 feet
2034	North side of 262nd Street, west of Monte Vista Avenue	Single-family residences	20 feet
2098	On Palos Verdes Drive E north of Palos Verdes Drive N.	Park; single-family residences	130 feet
2109 and 2114	Southwest side of Palos Verdes Drive E	Single-family residences	200 feet

2.1.2 Noise-Sensitive Land Uses

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, including residences, hospitals, schools, hotels, resorts, libraries, sensitive wildlife habitat, or similar facilities where quiet is an important attribute of the environment. Noise receptors are individual locations that may be affected by noise. In general, the pipeline alignment is located within roadways in urbanized residential and commercial areas. NSLUs in the project vicinity include residences, a school, churches, a library, and equestrian uses.

Most construction work would occur at the pipe access sites. NSLUs surrounding these sites are summarized in Table 8. Refer to Figures 3a through 3f, for the pipe access site locations and surrounding NSLUs.

2.1.3 Vibration-Sensitive Land Uses

Land uses in which ground-borne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations are considered vibration-sensitive (Federal Transit Administration [FTA] 2006). The degree of sensitivity depends on the specific equipment that would be affected by the ground-borne vibration. Excessive levels of ground-borne vibration of either a regular or intermittent nature can result in annoyance to land uses such as residences and buildings where people sleep such as hotels, hospitals, and dormitories. Vibration-sensitive land uses in the vicinity of the pipe access sites are the single-family and multi-family residences identified in Table 7.

2.1.4 Existing Noise Conditions

Site visits along the alignment route were conducted on Friday, December 7, 2018. Ambient noise measurements were conducted at or near six proposed pipe access site locations. These sites were chosen based on the noise generation anticipated to occur at these locations during pipe access excavation activities. Ambient noise measurements ranged from 57.3 to 76.1 dBA L_{EQ}. Roadway traffic was the primary noise source at the six measurement locations. The measured noise levels and nearby land uses are shown in Table 10, *Site Survey Noise Measurement Results,* and on Figures 3a-f.[1] See Appendix A, *Site Survey Measurement Sheets*, for survey notes.

Table 10
SITE SURVEY NOISE MEASUREMENT RESULTS

Site	Location	Time	Nearby Land Uses	Measurement (dBA L_{EQ})
M1	SLF Sta. 1863	11:24 a.m.	Commercial/industrial; multi-family residential	73.7
M2	SLF Sta. 1897	11:05 a.m.	Commercial; single-family residential	76.1
M3	SLF Sta. 1964	10:42 a.m.	Single-family residential	72.3
M4	SLF Sta. 2022	10:18 a.m.	Single-family and multi-family residential	62.3
M5	SLF Sta. 2098	9:51 a.m.	Disturbed land/landscaping; recreational (equestrian park); single-family residential	68.0
M6	SLF Sta. 2114	7:36 a.m.	Disturbed land/landscaping; recreational (open space trails); single-family residential	57.3

Note: Refer to Appendix A for site survey sheets
SLF = Second Lower Feeder; dBA = A-weighted decibels; L_{EQ} = equivalent sound level

3.0 ANALYSIS, METHODOLOGY, AND ASSUMPTIONS

3.1 METHODOLOGY

3.1.1 Ambient Noise Survey

The following equipment was used to measure existing noise levels along the project alignment:

- Larson Davis LxT Noise Meter
- Larson Davis Model CA250 Calibrator
- Windscreen and tripod for the sound level meter

The sound level meter was field-calibrated immediately prior to the noise measurements to ensure accuracy. All sound level measurements conducted and presented in this report were made with a

[1] The noise measurement conducted at SLF Sta. 1897 was done prior to finalization of the pipe access site locations. Because there is no pipe access planned at SLF Sta. 1897, this noise measurement location is not depicted on a figure.

sound level meter that conforms to the ANSI specifications for sound level meters (ANSI SI.4-1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

3.1.2 Noise Modeling Software

Modeling of the exterior noise environment for this report was accomplished using a computer noise model: Computer Aided Noise Abatement (CadnaA) version 2019. CadnaA is a model-based computer program developed by *DataKustik* for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project-related information, such as noise source data, barriers, structures, and topography to create a detailed model, and uses the most up-to-date calculation standards to predict outdoor noise impacts.

Project construction noise was also analyzed using the Roadway Construction Noise Model (RCNM; USDOT 2008), which utilizes estimates of sound levels from standard construction equipment.

3.2 ASSUMPTIONS

3.2.1 Pipeline Relining Construction Phases and Noise Sources

Construction would require the use of equipment throughout the site for the full term of construction. Table 11, *Construction Assumptions*, summarizes the key noise-generating construction equipment and activities analyzed in this report. Exact planning information cannot be known at this stage in project design. Therefore, equipment types and completion times are estimates and may vary due to differing site conditions.

Table 11
CONSTRUCTION ASSUMPTIONS

Construction Activity	Equipment Types
Pipe Access Site Excavation	Excavator, Dump Truck
Pipeline Relining	Generator, grouting mixer, welder, crane
Ventilation	Generator, Blower, Welder
Maintenance Hole Replacement and Blow-off Structure Improvements	Jackhammer, Welder
Valve Relocation and Replacement	Backhoe, Concrete Saw, Handheld Tools
Dewatering	Generator

Construction equipment may not be used for the entirety of a given hour. Table 12, *Construction Equipment Use Per Hour*, identifies percentages used as a basis for construction equipment noise modeling.

Table 12
CONSTRUCTION EQUIPMENT USE PER HOUR

Typical Equipment	Percentage Used per Hour
Backhoe	50
Excavator	40
Generator	100
Crane or Excavator used as crane	75
Dump Truck	20
Blower/Fan	100
Jackhammer	50
Concrete Saw	100
Grouting Plant and Pump	100
Welding Rig	100

3.2.2 Equipment Noise Levels

Table 13, *Construction Equipment Noise Data*, presents the calculated Sound Power Levels (S_{WL}) for typical equipment used for pipeline relining. This table includes data from the site measurements, the Federal Highway Administration (FHWA) table of construction equipment noise levels (FHWA 2007), and the United Kingdom's Department for Environment, Food and Rural Affairs (Defra) construction noise database (Defra 2005). The calculated S_{WL} are a measure of the total acoustic power radiated from a given sound source; they do not incorporate a distance component.

Table 13
CONSTRUCTION EQUIPMENT NOISE DATA[1]

Source	One-octave Center Band Frequency (Hertz)									Overall A-weighted Value (dBA)
	31.5	63	125	250	500	1,000	2,000	4,000	8,000	
Excavator with Steel Plates	-	63.0	78.3	77.9	77.0	75.3	72.9	69.5	64.7	80.3
Crane	116.7	111.8	103.7	102.9	98.7	96.6	93.5	88.7	80.7	102.0
Annular Grouting Mixer	98.7	113.6	97.8	103.5	104.1	106.5	103.8	98.1	90.3	110.1
Dump Truck	110.3	113.2	115.4	105	103.6	104	101.9	97.4	90	108.9
Concrete Saw	109.7	106.7	123.7	115.7	114.7	114.7	116.7	120.7	119.7	125.3
Jackhammer	124.5	117.7	117.8	115.7	108.3	107.8	110.7	112.9	111.7	118.3
Welder	100.3	95.2	92.7	87.8	88.9	90.9	86.7	82.6	80.7	94.3
Blower/Fan	105.3	106.7	102.5	99.4	95.8	95.5	91.1	85.6	81.4	99.8

Source: FHWA 2007, Defra 2005, and on-site measurements.

[1] All source data for equipment noise presented as Sound Power levels (S_{WL}).

3.2.3 Site-Specific Information

The distances to nearby NSLUs and noise barriers, if needed, were used in the CadnaA noise model or RCNM to determine expected noise levels. These distances are based on the approximate center of the pipeline, station, or typical utilization location for construction equipment. Eleven pipe access sites are to be used during construction.

3.2.4 Vehicular Traffic

Construction would require the use of additional trips for worker vehicles and hauling of materials. The total number of vehicles in use for each site will vary, depending on the nature of the work, time of day, and exact needs of the contractor as construction progresses. A conservative estimate for average daily project traffic (ADT) for each pipe access site work area would be 64 passenger vehicle trips and 40 truck trips, for a total 104 ADT (Linscott, Law & Greenspan, Engineers [LLG] 2019).

3.3 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines and noise regulations of local jurisdictions, implementation of the project would result in a significant adverse impact if it would:

Threshold 1: *Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.*

Impacts would be significant if operation of the project would generate noise levels above the standards specified in the Los Angeles, Torrance, Lomita, Rolling Hills Estates, Long Beach, and Carson General Plans or Noise Ordinances. Impacts would be significant if construction would expose nearby receptors to noise levels above the levels set in Threshold 4 below.

Threshold 2: *Expose persons to or generation of excessive ground-borne vibration or ground-borne noise levels.*

Excessive ground-borne vibration is defined as equal to or more than 0.2 inch per second (in/sec) peak particle velocity (PPV). Construction activities within 200 feet and pile driving within 600 feet of a vibration-sensitive use would be potentially disruptive to vibration-sensitive operations (Caltrans 2013).

Threshold 3: *Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.*

Impacts would be significant if operation of the project would permanently increase ambient noise levels above the standards specified in the Los Angeles, Torrance, Lomita, Rolling Hills Estates, Long Beach, and Carson General Plans or Noise Ordinances.

Threshold 4: *Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.*

A temporary or periodic increase in ambient noise levels due to construction would be considered significant if:

a. Within the Angeles, noise generated from construction activity exceeds 5 dBA above ambient noise levels for construction lasting more than 10 days in a three-month period (Los Angeles 2006). Ambient noise conditions can be determined by the Presumed Ambient Noise Levels set forth in the Los Angeles Municipal Code. Exhibit I.1-3 in the Los Angeles CEQA Guidelines states that the Municipal Code's presumed ambient noise levels for residential zones is 50 dBA during the day and 40 dBA at night. Therefore, impacts would be significant if noise from construction exceeds noise levels of 55 dBA L_{EQ} during the day or 45 dBA L_{EQ} during the night at a noise-sensitive use;

b. Within Torrance, noise from construction activity exceeds 50 dBA between the hours of 6:00 p.m. and 7:30 a.m. on weekdays, Saturdays before 9:00 a.m. and after 5:00 p.m., and all day on Sundays;

c. Within Lomita, noise from construction exceeds the limits as shown in Table 6, or if construction occurs between the hours of 6:00 p.m. and 7:00 a.m. on weekdays, or before 9:00 a.m. and after 5:00 p.m. on Saturdays, Sundays, or Holidays. It must be noted that Lomita's 35 dBA maximum noise level for construction equipment and power tools, as measured at any receiving property line, is particularly stringent (refer to Section 1.5.4.2). For example, a noise level of 35 dBA is comparable to a soft whisper. Because the 35 dBA standard would be physically infeasible for the project to achieve, the analysis in this report focuses on compliance with Lomita's property line noise limits, as shown in Table 5;

d. Within Rolling Hills Estates, noise from construction exceeds the limits as shown in Table 7, or if construction occurs between the hours of 5:00 p.m. and 7:00 a.m. on weekdays, Saturdays before 9:00 a.m. and after 5:00 p.m., or at any time on Sundays;

e. Within Long Beach, construction noise is generated between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, Saturdays before 9:00 a.m. and after 6:00 p.m., and all day on Sundays; or

f. Within Carson, noise from construction activity exceeds the limits as shown in Table 8.

***Threshold 5*:** *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 use airport or private airstrip, expose people residing or working in the project area to excessive noise*.

Impacts would be significant if the project would expose people (including temporary construction workers) to excessive noise from aircrafts using nearby public airports or private airstrips.

4.0 IMPACTS

4.1 ISSUE 1: EXCESSIVE NOISE LEVELS

Would operation of the project expose persons to or generate noise levels in excess of standards established by local jurisdictions?

Excessive noise levels due to construction of the project are described under Section 4.4 below. The project involves the relining of an existing underground pipeline, and no new permanent operational noise-generating components would be introduced. Operation of the project would therefore not generate or expose persons to excessive noise levels, and impacts would be less than significant.

4.2 ISSUE 2: EXCESSIVE VIBRATION

Would the project expose persons to or generate excessive ground-borne vibration or noise levels?

Numerous pipe access sites would be within 200 feet of single-family and multi-family residences, with the nearest sensitive use living area approximately 30 feet from Pipe Access Site 1860. PEIR MM NOI-1

has been implemented to locate pipe access sites away from vibration-sensitive uses to the extent feasible. The greatest source of vibration would be from compaction of the soil following relining activities and prior to final paving of each site. Due to the size of the pipe access sites, a small vibratory plate compactor or tamping rammer would likely be used. These are handheld units and would have no measurable vibration beyond 10 to 15 feet. Impacts from excessive vibration would therefore be less than significant.

4.3 ISSUE 3: PERMANENT INCREASE IN AMBIENT NOISE LEVELS

Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As noted in Section 4.1 above, operation of the project would not result in noise-generating components that would cause a substantial permanent increase in ambient noise levels. No impact would occur.

4.4 ISSUE 4: TEMPORARY INCREASE IN AMBIENT NOISE

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

4.4.1 Daytime Construction Operations

4.4.1.1 Pipe Access Sites

Initial construction work to access the PCCP would require excavation at the pipe access sites within Los Angeles, Torrance, Lomita, and Rolling Hills Estates. The five maintenance hole enlargement sites may also be used as pipe access sites. Initial excavation at pipe access sites would require the use of a single excavator and dump truck to deposit soil. These would be used simultaneously and represent the loudest equipment use for short-term construction at the access sites. Noise impacts vary by jurisdiction. Significance criteria for short-term construction were assessed at each pipe access site and are provided in Table 14, *Pipe Access Site Construction Noise*. Noise levels from the combined use of an excavator and dump truck would be elevated at nearby NSLUs at all pipe access sites. Torrance does not set daytime construction noise level limits in its municipal code; therefore, provided that construction excavation activities are conducted between the hours of 7:30 a.m. and 6:00 p.m. on weekdays and between 9:00 a.m. and 5:00 p.m. on Saturdays, impacts would be less than significant. Table 14 also provides noise levels with the incorporation of temporary 12-foot noise barriers, and the resulting noise levels with the inclusions of the barriers. As shown, noise levels at all access sites would remain above applicable thresholds even with use of a 12-foot barrier. A 12-foot barrier would be the maximum feasible barrier height, given the spatial restrictions of the pipe access sites.

Table 14
PIPE ACCESS SITE CONSTRUCTION NOISE

Site	NSLU Jurisdiction	NSLU Type	NSLU Distance	Threshold at NSLU (dBA L_{EQ} [1 hour])	No Barrier		12-foot Barrier	
					Modeled Noise Levels (dBA L_{EQ} [1 hour])	Exceed Standard at NSLU?	Modeled Noise Levels (dBA L_{EQ} [1 hour])	Exceed Standard at NSLU?
Pipe Access Sites								
1860	Los Angeles	Single-family and multi-family residences	10 feet	55	89.1	Yes	85.7	Yes
1863	Los Angeles	Single-family and multi-family residences	40 feet	55	77.1	Yes	73.7	Yes
1916	Los Angeles/ Torrance	Single-family and multi-family residences	40 feet	55 / NA	77.1	Yes / NA	73.7	Yes / NA
1964	Los Angeles	Single-family residences	100 feet	55	69.1	Yes	65.7	Yes
2015	Los Angeles/ Lomita	Single-family residences	90 feet	55 / 65	70.0	Yes	66.6	Yes
2022	Lomita	Single-family and multi-family residences	20 feet	65	83.1	Yes	79.7	Yes
2034	Lomita	Single-family residences	20 feet	65	83.1	Yes	79.7	Yes
2098	Rolling Hills Estates	Park; single-family residences	130 feet	55	66.8	Yes	63.4	Yes
2109 and 2114	Rolling Hills Estates	Single-family residences	200 feet	55	63.1	Yes	59.7	Yes
Maintenance Hole Enlargement Sites (Potential Pipe Access Sites)								
SLF Sta. 1875+56	Los Angeles	Single-family residences	50 feet	55	75.1	Yes	71.7	Yes
SLF Sta. 1899+76	Torrance	Single-family residences	60 feet	NA	73.5	NA	70.1	NA
SLF Sta. 1957+80	Los Angeles	School/Single-family residences	50 feet	55	75.1	Yes	71.7	Yes
SLF Sta. 2034+32	Lomita	Single-family residences	20 feet	65	83.1	Yes	79.7	Yes
SLF Sta. 2045+04	Lomita	Single-family residences	10 feet	65	89.1	Yes	85.7	Yes

NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level
NA = not applicable (Torrance does not have daytime noise level limits for construction activities)

4.4.1.2 Pipeline Relining Activity

Following the initial excavation of each pipe access site, relining work would be conducted within the excavated area within Los Angeles, Torrance, Lomita, and Rolling Hills Estates. Noise generating equipment used for this stage of construction includes a generator, grouting mixer, welder, and crane, and would be located at street level. The loudest equipment types would be a grouting mixer and a generator in use simultaneously.

Noise impacts vary by jurisdiction. Significance criteria for long-term construction were assessed at each excavation location and are provided in Table 15, *Relining Activity Site Construction Noise*. Noise levels from the combined use of a generator and grouting mixer would exceed the thresholds at nearby NSLUs at all pipe access sites. Torrance does not set daytime construction noise level limits in its municipal code; therefore, provided that pipeline relining activities are conducted between the hours of 7:30 a.m. and 6:00 p.m. on weekdays and between 9:00 a.m. and 5:00 p.m. on Saturdays, impacts would be less than significant. Table 15 also provides noise levels with the incorporation of temporary 8-foot and 12-foot noise barriers, and the resulting noise levels with the inclusions of the barriers. As shown, the incorporation of an 8-foot barrier would reduce noise levels to within thresholds at Pipe Access Site 2015 (for noise in Lomita). With a 12-foot barrier, noise from work at Pipe Access Sites 1964, 2098, 2109, and 2114 would be reduced to within thresholds.

Table 15
RELINING ACTIVITY SITE CONSTRUCTION NOISE

Site	NSLU Jurisdiction	NSLU Type	NSLU Distance	Threshold at NSLU (dBA L_{EQ} [1 hour])[1]	No Barrier		8-foot Barrier[2]		12-foot Barrier[2]	
					Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?	Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?	Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?
Pipe Access Sites										
1860	Los Angeles	Single-family and multi-family residences	10 feet	55	92.4	Yes	74.8	Yes	71.5	Yes
1863	Los Angeles	Single-family and multi-family residences	40 feet	55	80.4	Yes	68.6	Yes	62.0	Yes
1916	Los Angeles/ Torrance	Single-family and multi-family residences	40 feet	55 / NA	80.4	Yes	68.6	Yes / NA	62.0	Yes / NA
1964	Los Angeles	Single-family residences	100 feet	55	72.2	Yes	61.3	Yes	54.6	No
2015	Los Angeles/ Lomita	Single-family residences	90 feet	55 / 65	73.2	Yes	62.1	Yes / No[3]	55.5	Yes / No[3]
2022	Lomita	Single-family and multi-family residences	20 feet	65	86.4	Yes	73.0	Yes	66.9	Yes
2034	Lomita	Single-family residences	20 feet	65	86.4	Yes	73.0	Yes	73.0	Yes
2098	Rolling Hills Estates	Park; single-family residences	130 feet	55	69.9	Yes	59.1	Yes	52.5	No
2109 and 2114	Rolling Hills Estates	Single-family residences	200 feet	55	66.0	Yes	55.5	Yes	48.8	No
Maintenance Hole Enlargement Sites (Potential Pipe Access Sites)										
SLF Sta. 1875+56	Los Angeles	Single-family residences	50 feet	55	78.4	Yes	67.0	Yes	60.3	Yes
SLF Sta. 1899+76	Torrance	Single-family residences	60 feet	NA	76.8	NA	65.6	NA	58.9	NA

Site	NSLU Jurisdiction	NSLU Type	NSLU Distance	Threshold at NSLU (dBA L_{EQ} [1 hour])[1]	No Barrier		8-foot Barrier[2]		12-foot Barrier[2]	
					Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?	Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?	Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?
SLF Sta. 1957+80	Los Angeles	School/Single-family residences	50 feet	55	78.4	Yes	67.0	Yes	60.3	Yes
SLF Sta. 2034+32	Lomita	Single-family residences	20 feet	65	86.4	Yes	73.0	Yes	66.9	Yes
SLF Sta. 2045+04	Lomita	Single-family residences	10 feet	65	92.4	Yes	74.8	Yes	71.5	Yes

[1] Relining activity would fall under the Los Angeles standard for construction activity lasting more than 10 days in a three-month period, which is 5 dBA above the 50 dBA ambient noise levels presumed for a residential neighborhood.

[2] Barrier is assumed to be 8 feet from the noise source.

[3] Noise from relining activities at this station would exceed noise thresholds for Los Angeles, but not those for Lomita.

NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level

NA = not applicable (Torrance does not have noise level limits for construction activities)

4.4.1.3 Ventilation

Ventilation and access to support relining work would be conducted along the project alignment within the Los Angeles, Torrance, Lomita, and Rolling Hills Estates at manhole locations, to provide adequate air supply and access for workers and equipment. Expected noise sources at these locations include the use of a fan/blower for ventilation, a generator for power, and a welder for relining activities.

Noise calculations for ventilation activities include the use of a generator, blower, and welder. Together, this equipment generates 80 dBA at approximately 15 feet. Because ventilation equipment would potentially move to different locations along the pipeline alignment as construction proceeds, calculation of noise levels at specific receptor locations is not possible at this time. Instead, the setback distances needed to meet Los Angeles', Lomita's, and Rolling Hills Estates' noise thresholds are provided in Table 16, *Ventilation Location Setback Distances*. Distances are provided without barriers and with the incorporation of 6-foot and 8-foot barriers located 8 feet from the noise-generating equipment.

Table 16
VENTILATION LOCATION SETBACK DISTANCES

Jurisdiction	Threshold at NSLU (dBA L_{EQ} [1 hour]) [1]	Land Use Type	Distance Within Which Noise Levels Would Exceed Threshold		
			No Barrier	With 6-foot Barrier[2]	With 8-foot Barrier[2]
Los Angeles	55	Residential	265 feet	110 feet	70 feet
Torrance	No Limit	Residential	NA	NA	NA
Lomita	65	Residential	90 feet	33 feet	20 feet
	75	Commercial	30 feet	11 feet	6 feet
Rolling Hills Estates	55	Residential	265 feet	110 feet	70 feet
	65	Commercial	90 feet	33 feet	20 feet

Note: Ventilation activity assumes the use of a generator, blower, and welder.

[1] Ventilation activity would fall under the Los Angeles limit for construction activity lasting more than 10 days in a three-month period is 5 dBA above the 50 dBA ambient noise levels presumed for a residential neighborhood.

[2] Barrier is assumed to be approximately 8 feet from the noise source.

NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level

NA = not applicable (the Torrance does not have noise level limits for construction activities)

Ventilation activities conducted within the setback distances from NSLUs in the Los Angeles, Lomita, and Rolling Hills Estates would result in a potentially significant impact. Torrance does not set daytime construction noise level standards in its municipal code, and impacts would therefore be less than significant when conducted between the hours of 7:30 a.m. and 6:00 p.m. on weekdays and between 9:00 a.m. and 5:00 p.m. on Saturdays.

4.4.1.4 Maintenance Hole Refurbishment and Blow-Off Structure Improvements

Refurbishment would be required for 24 maintenance holes, two side outlets, one pumpwell structure, and three blow-off structures within Los Angeles, Torrance, Lomita, and Rolling Hills Estates. A jackhammer would be the loudest equipment type and would be required for access to the manholes, outlets, blow-off structures, and pumpwell structure.

A jackhammer in use for 50 percent of an hour would generate 80 dBA at approximately 100 feet. Because equipment would potentially move to different locations along the pipeline alignment as

construction proceeds, noise levels at specific receptor locations is not possible at this time. Instead, the setback distances needed to meet Los Angeles', Lomita's, and Rolling Hills Estates' noise thresholds are provided in Table 17, *Jackhammer Setback Distances*. Distances are provided without barriers, and with the incorporation of a 6-foot barrier located 8 feet from the noise-generating equipment.

Table 17
JACKHAMMER SETBACK DISTANCES

Jurisdiction	Threshold at NSLU (dBA L_{EQ} [1 hour]) [1]	Land Use Type	Distance Within Which Noise Levels Would Exceed Threshold	
			No Barrier	With 6-foot Barrier[2]
Los Angeles	60	Residential	1,000 feet	180 feet
Torrance	No Limit	Residential	NA	NA
Lomita	65	Residential	550 feet	100 feet
	75	Commercial	180 feet	32 feet
Rolling Hills Estates	55	Residential	1,750 feet	325 feet
	65	Commercial	550 feet	100 feet

[1] Jackhammer use would fall under the Los Angeles standard for construction activity lasting more than one day, but less than 10 days in a three-month period is 10 dBA above the 50 dBA ambient noise levels presumed for a residential neighborhood.

[2] Barrier is assumed to be approximately 8 feet from noise source.

NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level

NA = not applicable (Torrance does not have noise level limits for construction activities)

Jackhammer use within the setback distances from NSLUs in Los Angeles, Lomita, and Rolling Hills Estates would result in a potentially significant impact. Torrance does not set daytime construction noise level standards in its municipal code, and impacts would therefore be less than significant when conducted between the hours of 7:30 a.m. and 6:00 p.m. on weekdays and between 9:00 a.m. and 5:00 p.m. on Saturdays.

4.4.1.5 Valve Relocation and Replacement

Relocation of the underground air release/vacuum valves from below ground to above ground would involve running new piping from the existing valve connection point in the vault to a nearby above-ground location and installing a new vault above ground. This would require shallow trenching from the existing below-ground vault to a parkway location. Shallow trenching would require the short-term use of a concrete saw and backhoe. Similarly, the replacement of and improvements to isolation valves, flow meters, other isolation valves, and service connections would also require shallow trenching, which would require a backhoe and concrete saw. Valve relocation and replacement work is anticipated to be required within Los Angeles, Torrance, Lomita, Rolling Hills Estates, Long Beach, and Carson.

A backhoe in use for 50 percent of an hour would generate 65 dBA within approximately 150 feet and a concrete saw in continuous use for one hour would generate 100 dBA within approximately 20 feet. Because these pieces of equipment would be used at numerous and variable locations along the pipeline alignment, noise levels at specific receptors are not provided. Instead, the setback distances needed to meet Los Angeles', Lomita's, Rolling Hills Estates', and Carson's exterior noise thresholds at land uses located in proximity to anticipated work sites are provided in Table 18, *Backhoe Setback Distances,* and Table 19, *Concrete* Saw *Setback Distances*. Due to the short-term use of a backhoe and the mobile nature of its use, a temporary sound barrier would not likely be used. Distances for the

concrete saw, however, are provided without barriers and with the incorporation of a 6-foot barrier located 8 feet from the noise-generating equipment.

Table 18
BACKHOE SETBACK DISTANCES

Jurisdiction	Threshold at NSLU (dBA L_{EQ} [1 hour])	Land Use Type	Distance Within Which Noise Levels Would Exceed Threshold
Los Angeles	60[1]	Residential	270 feet
Torrance	No Limit	Residential	NA
Lomita	65	Residential	150 feet
	75	Commercial	48 feet
Rolling Hills Estates	55	Residential	480 feet
	65	Commercial	150 feet
Long Beach	No Limit	Residential	NA
Carson	75[2]	Single-family Residential	48 feet
	80[3]	Multi-family Residential	27 feet

[1] Backhoe use would fall under the Los Angeles standard for construction activity lasting more than one day, but less than 10 days in a three-month period is 10 dBA above the 50 dBA ambient noise levels presumed for a residential neighborhood.

[2] Backhoe use would fall under the Carson definition of nonscheduled, intermittent, short-term operation, with a 75 dBA L_{EQ} standard for single-family residences.

[3] Backhoe use would fall under the Carson definition of nonscheduled, intermittent, short-term operation, with an 80 dBA L_{EQ} standard for multi-family-family residences.

NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level

NA = not applicable (Torrance and Long Beach do not set daytime noise level limits for construction activities in their municipal codes)

Table 19
CONCRETE SAW SETBACK DISTANCES

Jurisdiction	Threshold at NSLU (dBA L_{EQ} [1 hour])	Land Use Type	Distance Within Which Noise Levels Would Exceed Threshold	
			No Barrier	With 6-foot Barrier[1]
Los Angeles	60[2]	Residential	2,000 feet	300 feet
Torrance	No Limit	Residential	NA	NA
Lomita	65	Residential	1,150 feet	160 feet
	75	Commercial	350 feet	50 feet
Rolling Hills Estates	55	Residential	3,500 feet	500 feet
	65	Commercial	1,150 feet	160 feet
Long Beach	No Limit	Residential	NA	NA
Carson	75[3]	Single-family Residential	350 feet	50 feet
	80[4]	Multi-family residential	200 feet	30 feet

1 Barrier is assumed to be approximately 8 feet from noise source.
2 Concrete saw use would fall under the Los Angeles standard for construction activity lasting more than one day, but less than 10 days in a three-month period is 10 dBA above the 50 dBA ambient noise levels presumed for a residential neighborhood.
3 Concrete saw use would fall under the Carson definition of nonscheduled, intermittent, short-term operation, with a 75 dBA L_{EQ} standard for single-family residences.
4 Concrete saw use would fall under the Carson definition of nonscheduled, intermittent, short-term operation, with an 80 dBA L_{EQ} standard for multi-family-family residences.
NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level
NA = not applicable (Torrance and Long Beach do not set daytime noise level limits for construction activities in their municipal codes)

Backhoe or concrete saw use within the setback distances from NSLUs in Los Angeles, Lomita, Rolling Hills Estates, and Carson would result in a potentially significant impact. Torrance does not set daytime construction noise level standards in its municipal code, and impacts would therefore be less than significant when conducted between the hours of 7:30 a.m. and 6:00 p.m. on weekdays and between 9:00 a.m. and 5:00 p.m. on Saturdays. Similarly, Long Beach does not set daytime construction noise level standards in its municipal code, and impacts would therefore be less than significant when conducted between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and between 9:00 a.m. and 6:00 p.m. on Saturdays.

4.4.1.6 Dewatering

Dewatering would be required prior to excavation and relining activity. The exact dewatering locations are not known at this time, but may occur within Los Angeles, Torrance, Lomita, Rolling Hills Estates, Long Beach, and Carson. Dewatering would require the use of a submersible pump and generator to power the pump. The only audible equipment would be the generator. Dewatering would occur 24 hours per day for up to seven days.

A generator in continuous use for one hour would generate 75 dBA within approximately 12 feet. Because equipment would potentially move to different locations along the pipeline alignment as dewatering proceeds, calculation of noise levels at specific receptor locations is not possible at this time. Instead, the setback distances needed to meet Los Angeles', Lomita's, Rolling Hills Estates', and Carson's

noise thresholds are provided in Table 20, *Generator Setback Distances*. Distances are provided without barriers, and with the incorporation of a 6-foot barrier located 8 feet from the noise-generating equipment.

A generator used within the setback distances from NSLUs in Los Angeles, Lomita, Rolling Hills Estates, and Carson would result in a potentially significant impact. Torrance does not set daytime construction noise level limits in its municipal code, and impacts would therefore be less than significant provided that it is conducted between the hours of 7:30 a.m. and 6:00 p.m. on weekdays and between 9:00 a.m. and 5:00 p.m. on Saturdays. Similarly, Long Beach does not set daytime construction noise level standards in its municipal code, and impacts would therefore be less than significant when conducted between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and between 9:00 a.m. and 6:00 p.m. on Saturdays.

Table 20
GENERATOR SETBACK DISTANCES

Jurisdiction	Threshold at NSLU (dBA L_{EQ} [1 hour])	Land Use Type	Distance Within Which Noise Levels Would Exceed Threshold	
			No Barrier	With 6-Foot Barrier[1]
Angeles	60[2]	Residential	75 feet	25 feet
Torrance	No Limit	Residential	NA	NA
Lomita	65	Residential	40 feet	14 feet
	75	Commercial	12 feet	5 feet
Rolling Hills Estates	55	Residential	120 feet	45 feet
	65	Commercial	40 feet	14 feet
Long Beach	No Limit	Residential	NA	NA
Carson	75[3]	Single-family Residential	12 feet	5 feet
	80[4]	Multi-family residential	7 feet	3 feet

1 Barrier is assumed to be approximately 8 feet from noise source.
2 Generator use would fall under the Los Angeles standard for construction activity lasting more than one day, but less than 10 days in a three-month period is 10 dBA above the 50 dBA ambient noise levels presumed for a residential neighborhood.
3 Generator use would fall under the Carson definition of nonscheduled, intermittent, short-term operation, with a 75 dBA L_{EQ} standard for single-family residences.
4 Generator use would fall under the Carson definition of nonscheduled, intermittent, short-term operation, with an 80 dBA LEQ standard for multi-family-family residences.
NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level
NA = not applicable (Torrance and Long Beach do not have noise level limits for construction activities)

4.4.2 Nighttime Construction Operations

The noise-producing construction activities that would require nighttime work would be dewatering, pipeline relining, and ventilation to support relining work. While pipeline relining and ventilation would occur only within Los Angeles, Torrance, Lomita, and Rolling Hills Estates, dewatering may occur within these four cities as well as within Long Beach and Carson. In the City of Los Angeles CEQA Thresholds Guide, nighttime hours are defined as between 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, and at any time on Sunday. Nighttime construction noise is limited to 45 dBA for residential zones in Los Angeles, which is 5 dBA above the 40 dBA nighttime

ambient noise level presumed for residential zones. In the Torrance Municipal Code, nighttime hours are defined as between 6:00 p.m. and 7:30 a.m. Monday through Friday, before 9:00 a.m. and after 5:00 p.m. on Saturday, and at any time on Sunday. Nighttime construction noise is limited to 50 dBA for residential zones in Torrance. In the Lomita Municipal Code, nighttime hours are defined as between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday, and before 9:00 a.m. and after 5:00 p.m. Saturday, Sunday, and Holidays. In the Rolling Hills Estates Municipal Code, nighttime hours are defined as between 5:00 p.m. and 7:00 a.m. Monday through Friday, before 9:00 a.m. and after 5:00 p.m. on Saturday, and at any time on Sunday. In the Long Beach Municipal Code, nighttime hours are defined as between 7:00 p.m. and 7:00 a.m. on weekdays, before 9:00 a.m. and after 6:00 p.m. on Saturdays, and all day on Sundays. In the Carson Municipal Code, nighttime hours are defined as between 8:00 p.m. and 7:00 a.m. or any time on Sundays or holidays. Nighttime noise limits in Carson are shown above in Table 7.

Dewatering would involve the use of a submersible pump that would not be audible and a generator. Dewatering would take place for approximately four to seven days at each dewatering location. Exceedances of nighttime limits for dewatering activities are shown with and without barriers in Table 21, *Generator Setback Distances – Nighttime Hours*. For relining activities, exceedances of nighttime noise limits with and without barriers are shown in Table 22, *Relining Activity Site Construction Noise – Nighttime Hours*. For the use of ventilation equipment to support nighttime relining activities, exceedances of nighttime thresholds are shown with and without barriers in Table 23, *Ventilation Location Setback Distances – Nighttime Hours*.

Table 21
GENERATOR SETBACK DISTANCES – NIGHTTIME HOURS

Jurisdiction	Threshold at NSLU (dBA L_{EQ} [1 hour])	Land Use Type	Distance Within Which Noise Levels Would Exceed Threshold	
			No Barrier	6-foot Barrier[1]
Los Angeles	45	Residential	380 feet	135 feet
Torrance	50	Residential	215 feet	80 feet
Lomita	No construction allowed	Residential	NA	NA
	No construction allowed	Commercial	NA	NA
Rolling Hills Estates	No construction allowed	Residential	NA	NA
	No construction allowed	Commercial	NA	NA
Long Beach	No construction allowed	Residential	NA	NA
Carson	60[2]	Single-family Residential	65 feet	25 feet
	64[3]	Multi-family Residential	45 feet	15 feet

[1] Barrier is assumed to be approximately 8 feet from the noise source.
[2] Generator use would fall under the Carson definition of nonscheduled, intermittent, short-term operation, with a 60 dBA L_{EQ} standard for single-family residences.
[3] Generator use would fall under the Carson definition of nonscheduled, intermittent, short-term operation, with a 64 dBA L_{EQ} standard for multi-family-family residences.
NA = not applicable.
NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level

Table 22
RELINING ACTIVITY SITE CONSTRUCTION NOISE – NIGHTTIME HOURS

Site	NSLU Jurisdiction	NSLU Type	NSLU Distance	Threshold at NSLU (dBA L_{EQ} [1 hour]) [1]	No Barrier		8-foot Barrier[1]		12-foot Barrier[1]	
					Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?	Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?	Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?
Pipe Access Sites										
1860	Los Angeles	Single-family and multi-family residences	10 feet	45	92.4	Yes	74.8	Yes	71.5	Yes
1863	Los Angeles	Single-family and multi-family residences	40 feet	45	80.4	Yes	68.6	Yes	62.0	Yes
1916	Los Angeles/ Torrance	Single-family and multi-family residences	40 feet	45 / 50	80.4	Yes	68.6	Yes	62.0	Yes
1964	Los Angeles	Single-family residences	100 feet	45	72.2	Yes	61.3	Yes	54.6	Yes
2015	Los Angeles/ Lomita	Single-family residences	90 feet	45 / No construction allowed	73.2	Yes / NA	62.1	Yes / NA	55.5	Yes / NA
2022	Lomita	Single-family and multi-family residences	20 feet	No construction allowed	86.4	NA	73.0	NA	66.9	NA
2034	Lomita	Single-family residences	20 feet	No construction allowed	86.4	Yes	73.0	Yes	73.0	Yes
2098	Rolling Hills Estates	Park; single-family residences	130 feet	No construction allowed	69.9	NA	59.1	NA	52.5	NA
2109 and 2114	Rolling Hills Estates	Single-family residences	200 feet	No construction allowed	66.0	NA	55.5	NA	48.8	NA

Site	NSLU Jurisdiction	NSLU Type	NSLU Distance	Threshold at NSLU (dBA L_{EQ} [1 hour]) [1]	No Barrier		8-foot Barrier[1]		12-foot Barrier[1]	
					Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?	Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?	Noise Levels (dBA L_{EQ} [one hour])	Exceed Standard at NSLU?
Maintenance Hole Enlargement Sites (Potential Pipe Access Sites)										
SLF Sta. 1875+56	Los Angeles	Single-family residences	50 feet	45	78.4	Yes	67.0	Yes	60.3	Yes
SLF Sta. 1899+76	Torrance	Single-family residences	60 feet	50	76.8	Yes	65.6	Yes	58.9	Yes
SLF Sta. 1957+80	Los Angeles	School/Single-family residences	50 feet	45	78.4	Yes	67.0	Yes	60.3	Yes
SLF Sta. 2034+32	Lomita	Single-family residences	20 feet	No construction allowed	86.4	Yes	73.0	Yes	66.9	Yes
SLF Sta. 2045+04	Lomita	Single-family residences	10 feet	No construction allowed	92.4	Yes	74.8	Yes	71.5	Yes

[1] Barrier is assumed to be 8 feet from the noise source.

NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level; NA = not applicable

Table 23
VENTILATION LOCATION SETBACK DISTANCES – NIGHTTIME HOURS

Jurisdiction	Threshold at NSLU (dBA L_{EQ} [1 hour])	Land Use Type	Distance Within Which Noise Levels Would Exceed Threshold	
			No Barrier	With 8-foot Barrier[1]
Los Angeles	45	Residential	850 feet	170 feet
Torrance	50	Residential	500 feet	95 feet
Lomita	No construction allowed	Residential	NA	NA
	No construction allowed	Commercial	NA	NA
Rolling Hills Estates	No construction allowed	Residential	NA	NA
	No construction allowed	Commercial	NA	NA

Note: Ventilation activity assumes the use of a generator, blower, and welder.
[1] Barrier is assumed to be approximately 8 feet from the noise source.
NSLU = Noise Sensitive Land Use; dBA = A-weighted decibels; L_{EQ} = equivalent sound level; NA = not applicable

4.4.2.1 Additional Potential Nighttime Construction Activities

The proposed valve replacement at Service Connection T-08, located at SLF STA 1902+95 near the intersection of Western Avenue and Sepulveda Boulevard, and modifications to a blow-off structure, located at STA 1973+18 near the intersection of Western Avenue and Lomita Boulevard, may require nighttime work to minimize traffic effects at these major intersections. Construction work associated with improvements to Service Connection T-08 would occur as close as 200 feet from a residential NSLU within Torrance, where nighttime construction work is limited to 50 dBA L_{EQ} (1-hour). Improvements would involve construction activities similar to those described in Section 4.4.1.5 (trenching using a concrete saw and backhoe). At 200 feet, a backhoe would generate a noise level of 62.5 dBA L_{EQ} and a concrete saw would generate a noise level of 77.6 dBA L_{EQ}. As discussed in Section 4.4.1.5, due to the short-term and mobile nature of the use of a backhoe, a barrier would likely not be used, and noise levels would exceed the Torrance nighttime noise limit of 50 dBA L_{EQ} (1-hour). For use of concrete saw, a 6-foot barrier would attenuate noise levels to approximately 60 dBA L_{EQ}, and noise levels at the nearby residential NSLUs would exceed the 50-dBA L_{EQ} (1-hour) nighttime noise limit for Torrance.

Construction work associated with modifications to the blow-off structure at SLF STA 1973+18 would occur as close as 120 feet from a residential NSLU within Los Angeles, where nighttime construction work is limited to 45 dBA L_{EQ} (1-hour). Blow-off structure modifications would require the use of a jackhammer, as described in Section 4.4.1.4. At 120 feet, a jackhammer would generate a noise level of 78.3 dBA L_{EQ}. With a 6-foot barrier, noise levels would be reduced to approximately 63 dBA L_{EQ}, and noise levels at the nearby residential NSLUs would exceed the 45-dBA L_{EQ} (1-hour) nighttime noise limit for Los Angeles.

4.4.3 Construction Traffic

As described in Section 3.2.4, construction would add a maximum of 104 daily trips per pipe access site to nearby roadways. This would consist of 64 passenger vehicles and 40 trucks per day, or approximately 8 vehicles and 4 trucks during a peak hour. A general rule of thumb is that a doubling of traffic would cause a doubling in sound energy (a 3-dBA increase), which would be perceptible and, therefore, a significant increase.

Because of the location of the pipe access sites, construction traffic would be required on local streets. An additional 104 vehicle trips over the course of a day would represent less than a doubling in trips and therefore would not be expected to cause a doubling in noise. Furthermore, it is unlikely that 104 trips would be needed for extended periods of time, and overall construction noise impacts would be temporary. The addition of construction traffic would be less than significant, and no mitigation is required.

4.4.4 Mitigation Measures

The project would be required to comply with PEIR MM NOI-2, PEIR MM NOI-3, and PEIR MM NOI-4 to reduce noise levels, as feasible. To comply with PEIR MM NOI-3, the following additional project measures shall be implemented:

MM NOI-3.1 **Construction Exterior Noise Level Standards.** Construction noise from project construction activities shall comply with the daytime and nighttime thresholds and hours specified by Los Angeles, Torrance, Lomita, Rolling Hills Estates, Long Beach, and Carson for sensitive receptors to the maximum extent feasible.

Within Los Angeles, daytime construction activities lasting more than one day and less than 10 days in a three-month period shall comply with the 60 dBA L_{EQ} standard for residential zones. Daytime construction activities lasting more than 10 days in a three-month period shall comply with the 55 dBA L_{EQ} standard for residential zones. Nighttime (9:00 p.m. to 7:00 a.m. on weekdays, before 8:00 a.m. and after 6:00 p.m. on Saturday, and any time on Sunday) shall comply with the 45 dBA L_{EQ} standard for residential zones.

Within Torrance, construction activities shall occur only between 7:30 a.m. and 6:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturdays. If construction occurs outside these hours, noise levels shall not exceed 50 dBA as measured at property lines.

Within Lomita, construction activities shall occur only between 7:00 a.m. and 6:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturdays, Sundays, and Holidays. In addition, daytime construction noise shall comply with the 65 dBA standard for residential land uses and the 75 dBA standard for commercial land uses.

Within Rolling Hill Estates, construction activities shall occur only between 7:00 a.m. and 5:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturdays. In addition, daytime construction noise shall comply with the 55 dBA standard for residential land uses and the 65 dBA standard for commercial uses.

MM NOI-3.2 **Noise Reduction Measures for Pipe Access Site Excavation and Relining Activities**. Measures to reduce noise levels to below a level of significance may include the use of noise barriers, noise attenuation devices/modifications to construction equipment, limiting hours of operation, or a combination of these measures.

For excavation activities at all proposed pipe access sites, a 12-foot barrier shall be required to reduce noise levels.

For pipeline relining activities at all proposed pipe access sites, a 12-foot barrier shall be required to reduce noise levels.

If a temporary barrier is used, all barriers shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and must be at least ¾-inch thick or have a surface density of at least 3.5 pounds per square foot. Sheet metal of 18 gauge (minimum) may be used if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation. The noise control barrier enclosures should be of an elongated "U" shape, with the elongated sides parallel to the pipeline.

MM NOI-3.3 **Setback Distances for Mobile Operations (Ventilators, Manholes, Valves).** For construction operations that would occur at movable locations along the pipeline alignment, the following setback distances and/or barriers shall be necessary to maintain noise levels to within local standards for residential land uses in Los Angeles, Torrance, Lomita, Rolling Hills Estates, Long Beach and Carson, and for commercial land uses in the Lomita and Rolling Hills Estates. Setback distances and/or barriers shall be used to the extent feasible.

<u>Daytime</u>

For ventilation activities, equipment shall be set back outside of the distances within which noise levels would exceed thresholds, as presented in Table 15 of this noise report, for Los Angeles, Lomita, and Rolling Hills Estates.

For the continuous use of a jackhammer during a single hour, equipment shall be setback outside of the distances within which noise levels would exceed thresholds, as presented in Table 16 of this noise report, for Los Angeles, Lomita, and Rolling Hills Estates.

For use of a backhoe, equipment shall be setback outside of the distances within which noise levels would exceed thresholds, as presented in Table 17 of this noise report, for Los Angeles, Lomita, Rolling Hills Estates, and Carson.

For the continuous use of a concrete saw during a single hour, equipment shall be setback outside of the distances within which noise levels would exceed thresholds, as presented in Table 18 of this noise report, for Los Angeles, Lomita, Rolling Hills Estates, Carson.

For the continuous use of a generator during a single hour, equipment shall be setback outside of the distances within which noise levels would exceed thresholds, as presented in Table 19 of this noise report, for Los Angeles, Lomita, Rolling Hills Estates, and Carson.

Nighttime

For the continuous use of a generator during a single hour at night, equipment shall be setback outside of the distances within which noise levels would exceed thresholds, as presented in Table 20 of this noise report, for Los Angeles, Torrance, and Carson.

For nighttime ventilation activities, equipment shall be setback outside of the distances within which noise levels would exceed thresholds, as presented in Table 22 of this noise report, for Los Angeles and Torrance.

MM NOI-3.4 **Nighttime Construction Management Plan.** The project specifications shall require preparation of a Nighttime Construction Management Plan prior to the onset of construction. The plan shall describe measures to reduce noise levels for any nighttime work that may occur. Specific measures to reduce construction noise may include:

- Placement of noise-generating equipment as far as feasible from noise-sensitive land uses.
- Utilization of enclosures or other barriers for equipment to reduce noise levels.
    - If work at Service Connection T-08 using a concrete saw occurs during nighttime hours, a 6-foot noise barrier shall be required between the equipment and residential land uses to reduce noise levels.
    - If work at the blow-off structure located at SLF STA 1973+18 using a jackhammer occurs during nighttime hours, a 6-foot noise barrier shall be required between the equipment and residential land uses to reduce noise levels.
- Construction equipment properly outfitted and maintained with manufacturer-recommended noise-reduction devices.
- Diesel equipment operated with closed engine doors and equipped with factory-recommended mufflers.
- Written notification to residents within 100 feet of the project's property line, provided a minimum of one week prior to nighttime construction activity. Notification to include a description of activities anticipated, expected dates and hours for construction, and contact information with details of a complaint and response procedure.

4.4.5 Significance After Mitigation

4.4.5.1 Daytime Construction Operations

Impacts from pipe access site excavation would remain significant at all pipe access sites with the use of a 12-foot barrier. Impacts from relining activities would remain significant at all pipe access sites except for Pipe Access Sites 1964, 2098, 2109, and 2114 with the use of a 12-foot barrier. Impacts associated with pipe access site excavation and relining are therefore considered significant and unavoidable. As

noted in Section 1.3, however, impacts would be consistent with those identified in the PEIR. For activities that would occur at various, movable locations along the pipeline alignment, provided the setback distances with or without inclusion of barriers as described in MM NOI-3.3 and listed in Tables 15 through 19 are maintained, impacts would be reduced to less-than-significant levels.

4.4.5.2 Nighttime Construction Operations

Noise levels from nighttime relining activities at all pipe access sites within Los Angeles and Torrance would exceed respective nighttime standards at nearby NSLUs, and impacts would be significant and unavoidable; however, impacts would be consistent with those identified in the PEIR. Similarly, noise levels from nighttime work at Service Connection T-08 in Torrance and at the blow-off structure located at SLF STA 1973+18 in Los Angeles would exceed respective nighttime standards at nearby NSLUs, even with the use of temporary barriers, and impacts would be significant and unavoidable; however, these impacts too would be consistent with those identified in the PEIR. Impacts associated with dewatering and ventilation activities within Los Angeles, Torrance, and Carson would be less than significant after mitigation, which involves maintaining the setback distances depicted in Tables 21 and 23. If dewatering or ventilation activities occur within these setback distances, impacts would be significant.

The use of temporary noise barriers during nighttime dewatering, relining, and ventilation activities would reduce noise levels at nearby NSLUs within Lomita, Rolling Hills Estates, and Long Beach; however, because Lomita, Rolling Hills Estates, and Long Beach do not allow nighttime construction, noise impacts associated with construction between the hours of 6:00 p.m. and 7:00 a.m. on weekdays, before 9:00 a.m. and after 5:00 p.m. on Saturdays, Sundays, and Holidays in Lomita, between the hours of 5:00 p.m. and 7:00 a.m. on weekdays, before 9:00 a.m. and after 5:00 p.m. on Saturdays, or any time on Sundays in Rolling Hills Estates, or between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, before 9:00 a.m. and after 6:00 p.m. on Saturdays, or any time on Sundays in Long Beach would be significant and unavoidable. As noted in Section 1.3, however, impacts would be consistent with those identified in the PEIR.

4.5 ISSUE 5: AIRPORT NOISE EXPOSURE

Would the project expose people residing or working in the project area to excessive noise from a nearby public use airport or private airstrip?

The project proposes the relining of an underground pipeline, and no housing or permanent workers would result from the project. Additionally, construction workers would wear noise safety gear as required by the federal Occupational Safety and Health Administration that would also serve as protection from any airport noise exposure. No impacts from airport noise exposure would occur.

5.0 LIST OF PREPARERS

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6.0 REFERENCES

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Appendix A

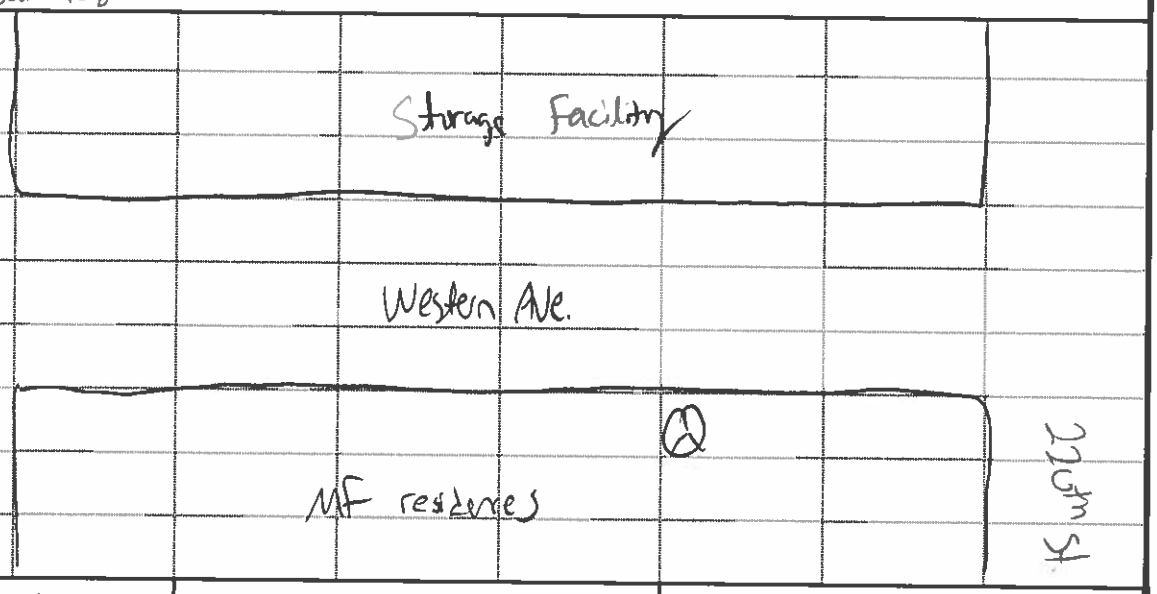
Site Survey Measurement Sheets

Site Survey

Job # MWD - 24.03	Project Name: PCCP Reach 3		
Date: 12/7/18	Site #: 1863	Engineer: HTG	
Address: along eastern edge of Western Ave between 221st and 220th			
Meter: LD LXT	Serial #: 1741	Calibrator: LD CAL150	Serial #: 1544

Notes: Clear
Traffic along Western Ave dominant noise source
Data: 108

Sketch:



Temp:	67° F	Wind Spd:	3 mph	Humidity:	48 %
Start of Measurement:	11:24 am	End of Measurement:	11:34 am	73.7	dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Site Survey

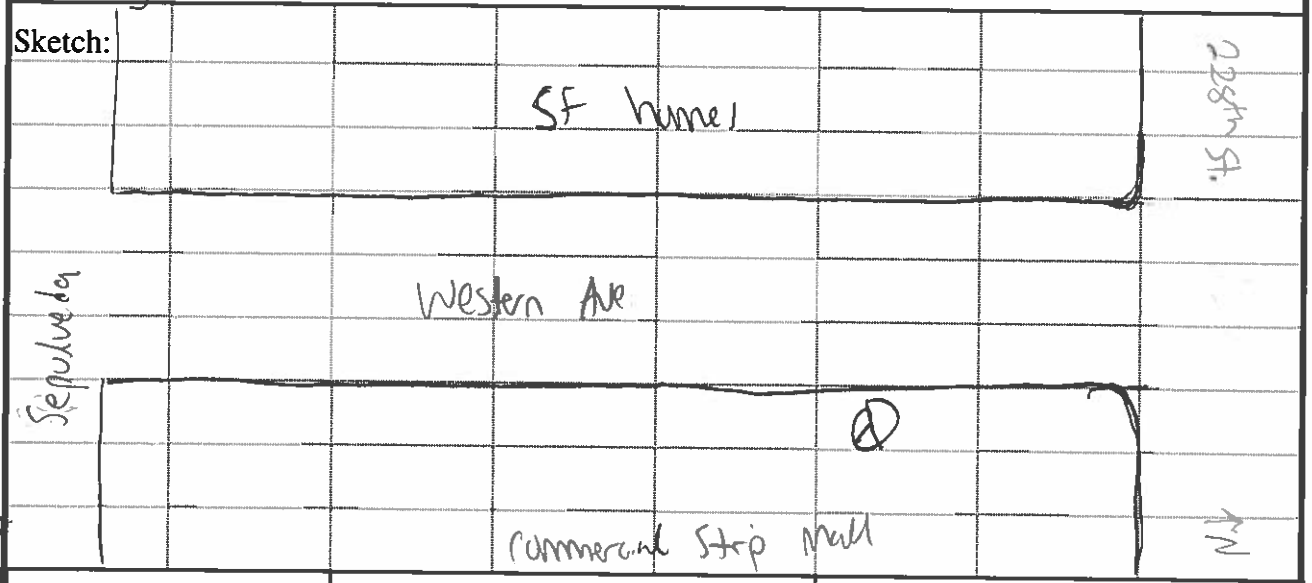
Job # MWD-24.03	Project Name: PCCP Reach 3		
Date: 12/7/18	Site #: 1897	Engineer: HTS	
Address: along eastern side of Western Ave, North of Sepulveda			
Meter: LD LxT	Serial #: 1741	Calibrator: LD CA250	Serial #: 1544

Notes: Clear

Traffic along Western dominant noise source

Date: 107

Sketch:



Temp: 64°F	Wind Spd: 3 mph	Humidity: 50 %
Start of Measurement: 11:05 am	End of Measurement: 11:15 am	76.1 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Site Survey

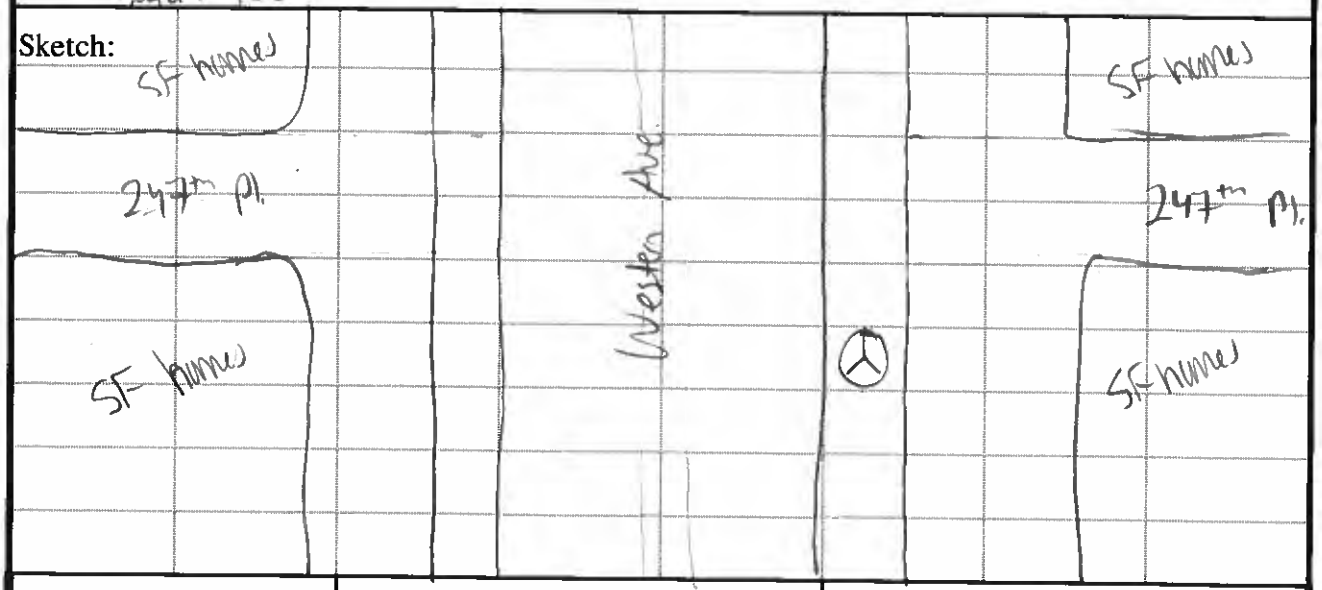
Job # MWD-24.03	Project Name: PCCP Reach 3		
Date: 12/7/18	Site #: 1964	Engineer: HTS	
Address: Along eastern side of Western Ave, just south of 247th Place			
Meter: LD LXT	Serial #: 1741	Calibrator: LD CA250	Serial #: 1544

Notes: Clear

Traffic on Western Ave main noise source

Data: 106

Sketch:



Temp: 64°F	Wind Spd: 3 mph	Humidity: 54 %
Start of Measurement: 10:42 am	End of Measurement: 10:52 am	72.3 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Site Survey

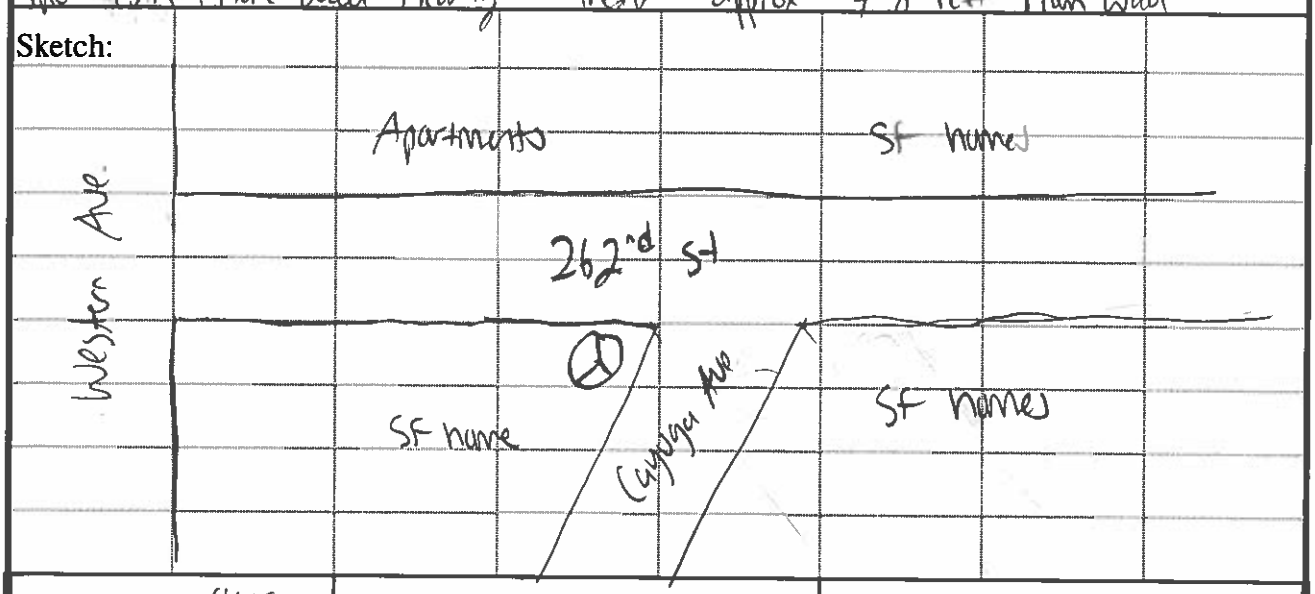
Job # MWD-24.03	Project Name: PCCP Reach 3		
Date: 12/7/18	Site #: 2022	Engineer: HTS	
Address: Intersection of 262nd St and Cayuga Avenue			
Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL50	Serial #: 1544

Notes: Clear – Data: 105

Traffic noise along western and 262nd St ; distant landscaping equipment

Short (3ft) stone wall nearby – meter approx 7-8 feet from wall

Sketch:



Temp: 64°F	Wind Spd: 0 mph	Humidity: 56 %
Start of Measurement: 10:18 am	End of Measurement: 10:28 am	62.3 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

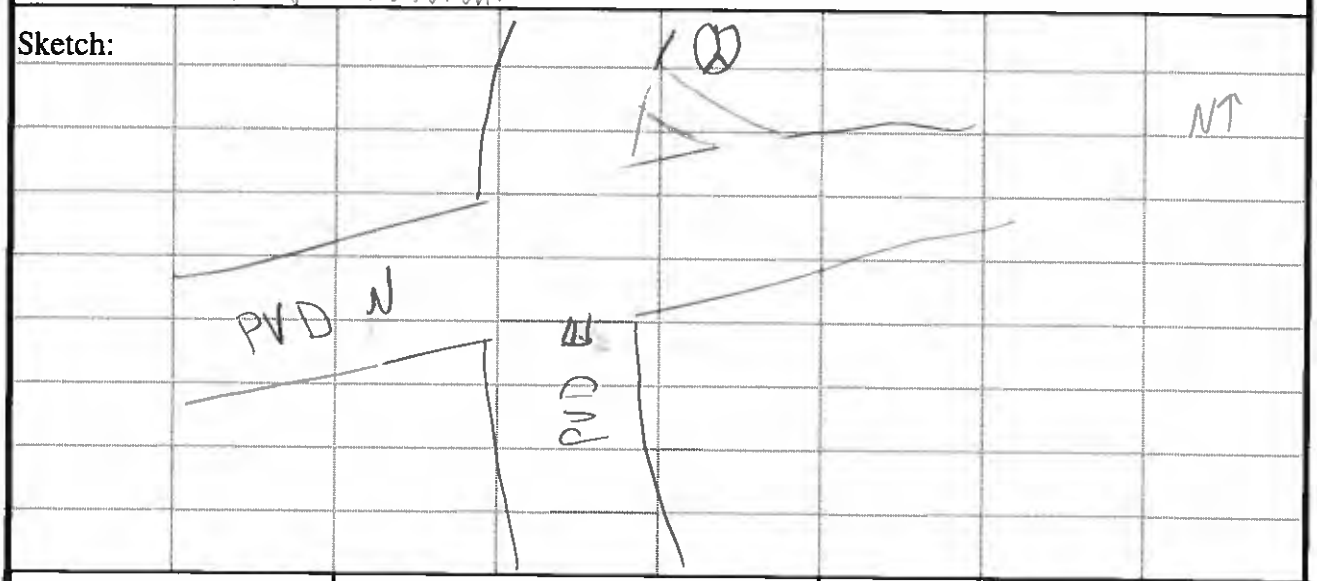
Site Survey

Job # MMD-2403	Project Name: PCCP Reach 3		
Date: 12/7/18	Site #: 2098	Engineer: HTS	
Address: Northeastern corner of Palos Verdes Dr. N and Palos Verdes Dr. E			
Meter: LD LXT	Serial #: 1741	Calibrator: LD CA250	Serial #: 1544

Notes: Clear — Data: 104

Traffic dominant noise source; distant tree trimming noise last 2 minutes of Measurement.

Sketch:



Temp: 61°F	Wind Spd: 5	mph	Humidity: 61	%	
Start of Measurement: 9:51 am	End of Measurement: 10:01 am		68.0	dBA L_{EQ}	

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Site Survey

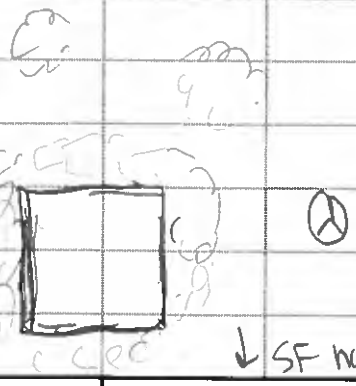
Job # MWD-24.03	Project Name: PCCP Reach 3		
Date: 12/7/18	Site #: 2111	Engineer: HTS	
Address: —			
Meter: LD LxT	Serial #: 1741	Calibrator: LD CAL250	Serial #: 1544

Notes: Clear

Dominant noise source: traffic on Palos Verdes Drive East

Data: 103

Sketch:



Temp: 53° F	Wind Spd: 4 mph	Humidity: 77 %
Start of Measurement: 7:36 am	End of Measurement: 7:46 am	57.3 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided