Record of Decision

Granting of Easements for the LACMTA Westside Purple Line Extension Project within the Veterans Affairs West Los Angeles Campus

I. Introduction

This is the Record of Decision (ROD) for the U.S. Department of Veterans Affairs (VA) federal actions related to the construction and operation of Section 3 of the Los Angeles County Metropolitan Transportation Authority (LACMTA) Westside Purple Line Extension (WPLE) Project. The WPLE Project is an approximately 9-mile heavy rail transit subway that will operate as an extension of the LACMTA Purple Line from its current western terminus at the Wilshire/Western Station to a new western terminus near the Veterans Affairs West Los Angeles Campus (VA WLA Campus). Section 3 of the WPLE Project extends from Century City to Westwood/VA Hospital with two new stations: Westwood/UCLA and Westwood/VA Hospital. Within the VA WLA Campus, the WPLE Project includes the construction, maintenance, and operation of a surface level and subsurface level transit facility, a subsurface level transit tunnel, entrances and other appurtenances including but not limited to tunnels, supports, rails, air circulation systems, air pressure relief systems and equipment, blast relief shafts, safety and emergency systems, and electric transmission and communication lines (Transit Facilities) adjacent to the main hospital, Building 500, commonly known as the VA Greater Los Angeles Medical Center (Medical Center). In accordance with the National Environmental Policy Act (NEPA), the environmental impacts of the proposed WPLE Project were assessed in the March 2012 Westside Subway Extension Final Environmental Impact Statement (Final EIS) and November 2017 Final Supplemental Environmental Impact Statement (SEIS) prepared by the Federal Transit Administration (FTA) and LACMTA, with refinements to the project considered in the December 2018 Final 130(c) Environmental Technical Memorandum prepared by FTA and LACMTA per regulations included in 23 Code of Federal Regulations (CFR) § 771.129 and § 771.130 (collectively referred to as "Purple Line NEPA Documents"). The FTA is the federal lead agency for the WPLE Project. VA's actions include granting of both perpetual easements and temporary construction easements on the VA WLA Campus for construction and operation of the WPLE Project pursuant to the West Los Angeles Leasing Act of 2016 (Public Law 114-226, as amended by Public Law 115-251, the Department of Veterans Affairs Expiring Authorities Act of 2018).

VA has independently reviewed the Purple Line NEPA Documents, incorporated into this ROD in their entirety, and has determined that these documents adequately assess project effects on the VA WLA Campus and VA actions. Therefore, in accordance with 40 CFR 1506.3, VA's NEPA regulations, Environmental Effects of the Department of Veterans Affairs Actions (38 CFR Part 26); and VA's *NEPA Interim Guidance for Projects,* VA has decided to adopt the FTA's Purple Line NEPA Documents. VA published a notice in the Federal Register on June 21, 2019 (84 FR 29284), indicating VA's intent to adopt the FTA Purple Line NEPA Documents. The EPA published the notice indicating VA's adoption of the FTA Final EIS in the Federal Register on July 5, 2019 (84 FR 32168).

FTA's evaluation of the WPLE Project included an assessment of effects on historic properties in accordance with the National Historic Preservation Act (NHPA) Section 106. The area of potential effects

for the WPLE Project within the VA WLA Campus includes the West Los Angeles Veterans Affairs Historic District (WLA VA Historic District) and the Wadsworth Chapel (Building 20), which are listed in the National Register of Historic Places (NRHP). The California State Historic Preservation Officer (SHPO) concurred with FTA's finding of effect under Section 106 for the WPLE Project in December 2011. A Memorandum of Agreement (MOA) between FTA and the California SHPO regarding the Westside Subway Extension Project was executed on March 7, 2012. In December 2018, SHPO also concurred with FTA's finding of effect for the updated Section 106 consultation for refinements to Section 3 of the WPLE Project. In consultation with VA and other consulting parties, measures to avoid and minimize effects to the WLA VA Historic District are included in an amendment to the 2012 MOA, executed on November 25, 2019.

II. VA Federal Actions

The VA federal actions that are subject of this ROD include the following:

- Granting of perpetual easements of VA property for surface and subsurface use.
- Granting of temporary surface and sub-surface construction easements on VA property.

The granting of easements involving portions of VA property will be undertaken pursuant to an easement agreement, and in accordance with applicable federal law, including but not limited to, the authority granted under 40 United States Code (U.S.C.) 1314, Chapter 81 of Title 38 of the U.S. C., and the West Los Angeles Leasing Act (Public Law 114-226), as amended by Public Law 115-251, the Department of Veterans Affairs Expiring Authorities Act of 2018).

III. Purpose and Need

The purpose of the WPLE Project is to improve transit travel time and provide more reliable transit service to the 286,250 transit riders who travel through the highly congested study area today, as well as to future riders who will be attracted to the system. The study area for the WPLE Project is located in western Los Angeles County and includes portions of the Cities of Los Angeles, West Hollywood, Beverly Hills, and Santa Monica, as well as the VA WLA Campus and portions of unincorporated Los Angeles County. More specifically, the WPLE Project's purpose is as follows:

- Improve study area mobility and travel reliability;
- Improve transit services within the study area;
- Improve access to major activity and employment centers in the study area;
- Improve opportunities for transit-supportive land use policies and conditions;
- Improve transportation equity;
- Provide a fast, reliable, and environmentally sound transit alternative; and
- Meet regional transit objectives through the Southern California Association of Governments' (SCAG's) performance indicators of mobility, accessibility, reliability, and safety.

The need for the WPLE Project, as described in Chapter 1 of the FTA's Final EIS/EIR, is based on population and employment growth, the high number of major activity centers served by the WPLE Project, high existing transit usage, and severe traffic congestion. The study area has 12 large population and employment centers, including the VA WLA Campus, located along the corridor, which are served by extremely congested road networks that will deteriorate further with the projected increase in population and jobs. This anticipated growth will further affect transit travel speeds and reliability, even

with a dedicated lane for express bus service on Wilshire Boulevard that is currently operational. The WPLE Project will improve travel times and reliability and to provide a high-capacity, environmentally sound transit alternative.

IV. Project Information

FTA published the Notice of Intent to prepare an EIS for the WPLE Project in the Federal Register on March 24, 2009. The scoping process concluded on May 7, 2009. The Notice of Availability of the Westside Subway Extension Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS) was published in the Federal Register on September 3, 2010. The Draft EIS was made available to stakeholders, agencies, and the general public for review and comment for a 45-day period from September 3, 2010 through October 18, 2010.

Planning and screening efforts were conducted to lead up to the NEPA process and to identify which alternatives met the WPLE Project's purpose and need. In 2007, based on public input and an evaluation of purpose and need, an initial set of 17 conceptual build alternatives, as well as No Build and Transportation System Management (TSM) alternatives, were developed during the initial screening process and presented to the public at early scoping meetings. The initial screening recommended an underground alignment as it has fewer land use, right-of-way, traffic, visual, historical, and noise impacts than an elevated alignment. Following the detailed screening, the Westside Extension Transit Corridor Alterative Analysis Study (2009) recommended heavy rail transit as the preferred technology for further study because it provides the capacity to serve the anticipated ridership demand. After the public scoping meetings, five build alternatives, as well as the No Build and TSM Alternatives, were carried forward into the Draft EIS.

- Alternative 1 - Westwood/UCLA Extension: This alternative extends heavy rail transit, in subway, from the existing LACMTA Purple Line Wilshire/Western Station to a Westwood/UCLA Station. From the Wilshire/Western Station, it travels westerly beneath Wilshire Boulevard to the Wilshire/Rodeo Station, then southwesterly toward a Century City Station and terminates at a Westwood/UCLA Station. Alternative 1 is approximately 8.60 miles in length and includes seven stations.
- Alternative 2 - Westwood/VA Hospital Extension: This alternative is the same as Alternative 1 from the existing Wilshire/Western Station to a Westwood/UCLA Station. From this station, Alternative 2 then travels westerly under Veteran Avenue and continues west under the I-405 Freeway, terminating at a Westwood/VA Hospital Station. This alignment is 8.96 miles in length from the Wilshire/Western Station. This alternative includes eight stations.
- Alternative 3 - Santa Monica Extension: This alternative is the same as Alternative 2 from the existing Wilshire/Western Station to the Westwood/VA Hospital Station. From this station, Alternative 3 would then continue westerly under Wilshire Boulevard, terminating at the Wilshire/4th Street Station between 4th and 5th Streets. This alignment is 12.38 miles in length from the Wilshire/Western Station. This alternative includes 12 stations.
- Alternative 4 - Westwood/VA Hospital Extension plus West Hollywood Extension: Similar to Alternative 2, Alternative 4 extends from the existing Wilshire/Western Station to a Westwood/VA Hospital Station, but also adds a West Hollywood extension. The West Hollywood extension connects the LACMTA Red Line Hollywood/Highland Station to the proposed LACMTA Purple Line extension. From Hollywood/Highland, the West Hollywood extension runs south

under Highland Avenue, westerly under Santa Monica Boulevard, southerly on San Vicente Boulevard, then southwesterly toward Wilshire Boulevard to the track connection structure at Robertson and Wilshire Boulevards. This alignment is 14.06 miles in length and includes 13 stations.

- Alternative 5 - Santa Monica Extension plus West Hollywood Extension: Similar to Alternative 3, Alternative 5 extends from the existing LACMTA Purple Line Wilshire/Western Station to a Wilshire/4th Station, but adds a West Hollywood extension similar to the extension described in Alternative 4. This alignn1ent is 17.49 miles in length and includes 17 stations.

In October 2010, the LACMTA Board of Directors incorporated design options into Alternative 2 and identified it as the LPA. The Final EIS was issued in August 2012 identifying the WPLE Project as a roughly 9-mile subway alignment from the Wilshire/Western Station to the Westwood/VA Hospital Station with seven new stations and enhancements to the Division 20 Maintenance and Storage Facility. The FTA issued a ROD on the Project on August 9, 2012.

Subsequently, FTA and LACMTA have worked with U.S. Army and VA to refine the WPLE Project and construction approach in the vicinity of the U.S. Army Reserve and the VA WLA Campus, as documented in the December 2018 Final 130(c) Environmental Technical Memorandum. The U.S. Army Reserve site identified in the FTA's Final EIS is no longer available, and FTA and LACMTA have worked with VA to refine the option to stage construction at the VA WLA Campus to minimize construction-related impacts to the Medical Center and to be consistent with VA's implementation of the VA WLA Campus Draft Master Plan. This refinement includes adding construction staging west of Bonsall Avenue and construction of a replacement parking structure exclusively for use by VA WLA Campus patients, staff, and visitors.

The alignment and station entrance at the Westwood/VA Hospital Station that were identified in the Final EIS were shifted to meet Metro Rail Design Criteria, improve operating conditions, and to avoid situating tail tracks below a VA WLA Campus building that is a contributing element to the WLA VA Historic District. The alignment and station box have been shifted south by approximately 150 feet from Wilshire Boulevard and the station entrance would be located approximately 100 feet closer to the Medical Center. The Westwood/VA Hospital Station would also be served by a passenger drop-off/pick-up area adjacent to the station plaza and entrance.

V. Summary of Environmental Consequences

The FTA's Final EIS evaluated the potential direct, indirect, short-term, long-term, and cumulative impacts on the human and natural environment resulting from the WPLE Project. Efforts were made to avoid and minimize impacts, and FTA committed to mitigation for impacts that could not be avoided or minimized. Detailed analysis of environmental consequences and mitigation are presented in the FTA's Final EIS. The FTA's Final EIS identified no significant adverse impacts to: Land Use, Socioeconomics, Environmental Justice, Visual and Aesthetics, Climate Change, Energy, Hazardous Wastes and Materials, Ecosystems/Biological Resources, Water Resources, Safety and Security, Parklands and Community Facilities, or Growth.

The project refinements included in the Final 130(c) Environmental Technical Memorandum were reviewed using the same criteria and methodology and were found by FTA to not materially affect the conclusions of the FTA's Final EIS (i.e., the project refinements would not result in new adverse impacts or increase the severity of previously identified impacts during operation or construction). The analysis

found that some refinements, particularly those related to construction staging and methods at and adjacent to the VA WLA Campus, would decrease construction-related impacts compared to those identified in the FTA's Final EIS. Therefore, the FTA determined that neither a Supplemental EIS nor an Environmental Assessment is required in accordance with 23 CFR § 771.129 and 130.

The WPLE Project as described in the FEIS/EIR along with the project refinements at the VA WLA Campus evaluated in the 130(c) Technical Memorandum is the environmentally preferred alternative. While the WPLE Project would result in adverse impacts during construction, the WPLE Project is expected to result in beneficial effects to transportation and air quality in the long term for the general public. The WPLE Project offers an alternative mode of travel to automobiles and would contribute to reduced roadway congestion. New links between the WPLE Project and other transit lines, particularly LACMTA rail lines, will improve travel time and transit reliability for residents throughout Los Angeles County. The WPLE Project will also create a new, high quality transit service connection while enhancing regional transit options for the general public. The WPLE Project is expected to decrease regional miles traveled, which will reduce energy consumption and lower emissions of air pollutants, including greenhouse gas emissions and other pollutants that currently contribute to regional air quality problems. The design refinements, particularly those related to construction staging methods at and adjacent to the VA WLA Campus would decrease construction-related impacts compared to those identified in the Final EIS/EIR. In addition, the benefits associated with moving the tunnel staging area away from the Medical Center include a reduction in noise, improved air quality, and reduced truck trips near the VA Main Hospital.

The FTA's Purple Line NEPA Documents included environmental analysis and determinations or identified adverse impacts and mitigation measures in the vicinity of the VA WLA Campus for the resource areas described below. In addition to the mitigation measures identified in FTA's Final EIS, additional measures have been included as part of VA's determination to adopt LACMTA's Final EIS and 130(c) Environmental Technical Memorandum. These additional measures are described in part in the sections below and listed in full in Appendix A.

Transportation, Parking, Pedestrian, Bicycle, and Bus Networks

The Westwood/VA Hospital Station is proposed to be constructed in the current location of VA WLA Campus Parking Lot 42, which has 418 parking spaces used by patients, staff, and visitors; most of those spaces will be permanently lost once construction begins. To avoid impacts on parking availability, LACMTA's Proposed Action includes the replacement of parking spaces with a new parking structure on the southern portion of the VA WLA Campus (South Campus). LACMTA will convey ownership of the structure to the VA upon completion of construction and acceptance by VA. In addition, LACMTA has committed to refurbishing presently unused or otherwise underutilized surface parking areas on the VA WLA Campus to provide interim parking capacity until the replacement parking structure is completed, conveyed to VA and fully operational. For VA patients, visitors, and staff displaced by construction impacts to Parking Lot 42, LACMTA has committed to providing daily, regularly scheduled shuttles to and from the Medical Center to the interim surface parking areas.

An additional concern analyzed by LACMTA in the FTA's Purple Line NEPA Documents was the potential for neighborhood spillover parking impacts. The Final 130(c) Environmental Technical Memorandum concluded that when the WPLE Project commences operations, it is possible that transit riders wishing to park and ride the system would attempt to do so at the Westwood/VA Hospital Station or the VA WLA Campus. Although long –term parking at the Westwood/VA Hospital Station (more than 30-minutes) would be prohibited and enforced by LACMTA, VA anticipates that some transit riders will nonetheless seek available parking within walking distance of the Westwood/VA Hospital Station (i.e.

within one-half mile). The VA WLA Campus has several parking lots within walking distance of the Westwood/VA Hospital Station that are utilized exclusively by VA patients, staff, and visitors and are expressly restricted from use by transit riders. To avoid potential impacts relating to parking spillover at the VA WLA Campus as a result of the Westwood/VA Hospital Station, LACMTA in coordination with VA will implement strategies, including but not limited to, signage and access controls at parking lots within walking distance of the Westwood/VA Hospital Station.

The FTA's Final EIS identified potential pedestrian hazards at the Westwood/VA Hospital Station. The subsequent design refinements, including a pedestrian bridge, have revised bus and pedestrian access to the Westwood/VA Hospital Station, avoiding this impact. A traffic signal would be installed at the following two locations on Bonsall Avenue: (1) at the intersection with the Wilshire Boulevard westbound on- and off-ramps and (2) at the intersection with the Wilshire Boulevard eastbound on- and off-ramps. Mitigation measure T-16—Study Bus-Rail Interface, includes coordination with bus service to confirm the coordinated transfer between modes. Additionally, Mitigation Measure T-8 Install High-Visibility Crosswalk, will be implemented at the intersections of Bonsall Avenue and the Wilshire Boulevard on- and off-ramps. Additional measures to improve pedestrian, bicycle, and bus connections include improving sidewalks to General Plan designations, and providing for bicycle parking in Mitigation Measure T-13 (Meet Metro Rail Design Criteria Minimums for Bicycle Parking), T-14 (Study Bicycle Parking Demand and Footprint Configuration), T-15 (Determine Alternative Sites for Bicycle Parking), and T-16 (Study Bus-Rail Interface).

Temporary Construction Traffic Impacts

Truck traffic volume will increase during construction of the WPLE Project along anticipated haul routes. Truck volumes will range between 60 and 160 trips for station construction and tunnel boring machine activity at the Western VA Construction Staging Area.

Traffic impacts associated with WPLE Project construction include reduced roadway traffic lanes in proximity to the VA WLA Campus that could result in traffic disruptions and bottlenecks. Emergency vehicle access (e.g., police, fire and rescue, and ambulance) in and around construction work sites may be affected by lane closures. Bus service will be affected by temporary lane, shoulder, or stop closures during construction and will require the temporary rerouting of bus lines or bus stop locations. Pedestrian access to the Medical Center will be maintained at all times through measures to be identified by the contractor in an Access Plan; this plan will be reviewed by VA. Measures to address access and transportation include: TCON-1—Traffic Control Plans, TCON-3—Emergency Vehicle Access, TCON-4—Transportation Management Plan, TCON-5—Coordination with Planned Roadway Improvements, TCON-6—Temporary Bus Stops and Route Diversions, TCON-7—Parking Management, TCON-8—Parking Monitoring and Community Outreach, TCON-9—Construction Worker Parking, TCON-10—Pedestrian Routes and Access, and TCON-11—Bicycle Paths and Access.

Air Quality

The WPLE Project is not expected to have adverse impacts to air quality. The WPLE Project will not exceed the National Ambient Air Quality Standards, the California Ambient Air Quality Standards, or the South Coast Air Quality Management District significance thresholds during operation of the WPLE Project. The WPLE Project is predicted to result in lower emissions of some criteria pollutants due to reductions in vehicle miles traveled (VMT). The WPLE Project was presented at the SCAG Transportation Conformity Working Group in June 2017, and it was unanimously determined that it is not a project of air quality concern.

Localized air quality impacts associated with construction activities are of concern to VA, particularly as patients of the Medical Center may be especially vulnerable to air pollution, and hospital equipment can be sensitive to changes in air quality. Prior to commencing construction, LACMTA has committed to identifying an operational baseline for the Medical Center heating, ventilation, and air conditioning (HVAC) system prior to WPLE construction, and to work with VA to install, operate, and maintain instrumentation to monitor changes to the Medical Center HVAC system during construction. Examples of mitigation measures would include, but not limited to, construction inspections, air monitoring, material sampling, and filter replacements as necessary.

Noise and Vibration

Components of the WPLE Project with the potential to generate noise that will be audible at the surface level are the ventilation system fans and the emergency ventilation system fans, which are subject to periodic testing, and will adhere to LACMTA design levels and not exceed FTA Noise Impact Criteria. Noise from rail operations, including the interaction of wheels on tracks, motive power, signaling and warning systems, and the traction power substations, will occur well below ground level. Ground-borne vibration during operations is not predicted to exceed FTA criteria at any of the vibration-sensitive receivers associated with the VA WLA Campus.

Noise and vibration analysis has identified that application of Final EIS mitigation measures CON-27—Noise Barrier Walls for Nighttime Construction, CON-31—Use of Fixed-Noise Producing Equipment for Compliance, CON-32—Use of Mobile or Fixed Noise-Producing Equipment, CON-33—Use of Electrically Powered Equipment, CON-34—Use of Temporary Noise Barriers and Sound-Control Curtains, and CON-37—Requirements on Project Equipment will address potential construction noise impacts within the VA WLA Campus.

Geologic Hazards

The greater Los Angeles area is susceptible to strong ground shaking generated during earthquakes on nearby faults. Construction and design will be performed in accordance with the latest Federal and State seismic and environmental requirements, as well as State and local building codes. By compliance with these regulations and requirements, potential seismic ground-shaking impacts will be minimized. Due to the presence of shallow groundwater and young surficial alluvial deposits, there may be potential liquefaction adjacent to the upper portions of some station walls at the Westwood/VA Hospital Station. Lateral spreading is not anticipated in the vicinity of the VA WLA Campus. Based on the magnitude of evaluated liquefaction, either structural design or ground-improvement techniques or deep foundations to minimize these hazards will be selected.

Utilities

Construction activities for the Westwood/VA Hospital Station in and adjacent to Parking Lot 42 are anticipated to impact an existing tunnel that carries steam from the VA Boiler Plant on the northern portion of the VA WLA Campus (North Campus) to the South Campus. LACMTA's Proposed Action includes construction of a new steam tunnel. Until the construction of the new steam tunnel is finalized and accepted by VA, LACMTA will maintain in operation and safeguard the existing steam service line and provide a temporary backup steam service line to ensure continuous and uninterrupted steam service to the VA property pursuant to VA specifications. LACMTA has also committed to designing and constructing temporary and permanent relocations for any other utilities displaced by the construction of the Transit Facilities.

Historic, Archaeological, and Paleontological Resources

Long-term and construction-related impacts to historic and archaeological resources were evaluated in Chapter 4, Sections 4.14.3 and 4.14.7, respectively, of the FTA's Final EIS. The FTA's Final EIS and subsequent evaluation of project refinements conclude that the Project, including refinements and the incorporation of avoidance and minimization measures, would have no adverse effect on archaeological resources or the following built historic properties: WLA VA Historic District, Wadsworth Chapel, and Los Angeles National Cemetery (which is part of the WLA VA Historic District).

Potential indirect effects to historic properties from construction activities include viewshed, noise, and vibration. Predicted groundborne vibration levels were determined to be below the threshold for damage; however, VA and FTA/LACMTA agreed to stringent vibration thresholds for the Wadsworth Chapel to be ensured through vibration monitoring. LACMTA will also implement Final EIS mitigation measure HR-4—Geotechnical Pre-Construction Survey and Historic Landscape Protection.

Based on analysis undertaken to support the Final 130(c) Environmental Technical Memorandum, subsurface historic deposits may be encountered in construction staging areas and the parking structure within the VA WLA Campus. No features or other intact archaeological deposits have been identified through surveys and record searches completed to date, therefore, the WPLE Project would have no adverse effect on known archaeological resources. Three shallow backfilled pits and a small number of metallic objects identified through remote sensing have very limited potential to address current data gaps or alternative theories to contribute new and important information. Therefore, in all construction staging areas at the VA WLA Campus, the overall possibility of encountering intact buried historic archaeological resources is moderate to low.

Application of Final EIS mitigation measures AR-1—Unanticipated Discoveries and Consultation with Native American Individuals, Tribes and Organizations and Treatment of Cultural Remains and Artifacts, PA-2—Early Fossil Recovery, PA-3—Retain the Services of a Qualified Principal Paleontologist, PA-4—Development of a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), PA-5—Required Activities for Recovered Fossils in the PRMMP, PA-6—Preparation of a Report on Paleontological Resources Recovered, and PA-7—Curation of Identified and Prepared Fossils will address potential impacts on subsurface historic deposits within the VA WLA Campus.

Cumulative Impacts

The WPLE Project will not have cumulative impacts with other anticipated activities and projects within the VA WLA Campus.

VI. Interagency Coordination

VA consulted with the FTA and LACMTA during development of the FTA's Final EIS and has been subsequently involved in project investigations and decisions related to the VA WLA Campus. Regular meetings and correspondence between representatives of the VA WLA Campus and LACMTA regarding the environmental reevaluation and property easements have been ongoing since May 2017 and are still ongoing. Coordination has focused on environmental clearance of the project refinements proposed on the VA WLA Campus and negotiation of a real property agreement for the perpetual and temporary easements needed to facilitate the WPLE Project.

Section 106 consultation was reinitiated by the FTA and LACMTA with the SHPO, the Advisory Council on Historic Preservation (ACHP), and the VA in summer 2017 to receive feedback on the proposed refinements. On July 11, 2017, VA participated in a web-based conference call hosted by FTA and

LACMTA, with SHPO and ACHP participation that included a presentation of project refinements located in proximity to the WLA VA Historic District, including the reasons for the refinements. The purpose of the meeting included discussion of potential effects to the WLA VA Historic District, the potential measures required, and the end product for Section 106 consultation.

LACMTA coordinated extensively with cultural resources staff from VA, including VA's Federal Preservation Officer, in support of compliance with Section 106. Consultation included a site visit by LACMTA on July 17, 2017, during which LACMTA discussed project elements within proximity to Section 106 resources on the VA WLA Campus, including the Los Angeles National Cemetery, a contributing resource to the WLA VA Historic District and a property individually eligible for listing in the NRHP. This site visit provided an opportunity for LACMTA to identify the location of project elements and to hear the VA's concerns from a Section 106 standpoint. Since that meeting, VA has participated in substantial ongoing consultation led by FTA with consulting parties who participated in earlier project phases, consulting parties identified by VA, the California SHPO, and the ACHP. On December 12, 2018, the SHPO concurred that no additional adverse effects to historic properties are anticipated as a result of the proposed project refinements within the VA WLA Campus.

FTA consulted with the California Native American Heritage Commission (NAHC) and identified the following Native America tribes, including the Gabrielino-Tongva Tribe, Gabrielino-Tongva Indians of California, Gabrielino/Tongva Nation, Gabrielino/Tongva San Gabriel Band of Mission Indians, Fernandeno Tataviam Band of Mission Indians, Tongva Ancestral Territorial Tribal Nation, Gabrielino Band of Mission Indians – Kizh Nation, and the San Fernando Band of Mission Indians, which may attach religious or cultural importance to affected properties pursuant to 36 CFR 800.2(c)(2)(ii) and have invited these tribes, who are consulting parties, to be concurring parties to this MOA and the Gabrielino Band of Mission Indians – Kizh Nation and Tongva Ancestral Territorial Tribal Nation requested to become concurring parties to the MOA. No federally recognized tribes (as identified in 36 CFR 800.16(m)) with an interest in the project area were identified. Based on information from the NAHC, the Federally recognized tribes identified in the region include the Soboba Band of Luiseno Indians and the Torres Martinez Cahuilla Indians. Their cultural area of interest was in Orange County (to the south) and Riverside (to the east). The Soboba Band of Luiseno Indians confirmed it has specific dual lineage in the project area, and while there is no cultural significance it recommends coordinating with the Gabrielino Band of Mission Indians – Kizh Nation. The Torres Martinez Desert Cahuilla Indians asked to have materials for the Amendment to the Memorandum of Agreement electronically transmitted to them.

Based on substantial consultation undertaken by FTA and LACMTA, in which VA participated, no further agency or public coordination is required by VA.

VII. Agency Findings

In accordance with the regulations set forth by the Council on Environmental Quality (40 CFR 1500-1508) for implementing the provisions of NEPA, as well as VA regulations for implementing NEPA (Environmental Effects of VA Actions [38 CFR Part 26]), VA has made the following findings, based on the WPLE Project NEPA documents and the supporting administrative record.

The WPLE Project NEPA documents prepared by FTA meet the requirements of NEPA and are inclusive of VA's federal actions on the WPLE Project. FTA and LACMTA distributed the Draft EIS/EIR for public and agency review and addressed the comments in the FTA's Final EIS. The FTA ROD includes the mitigation and monitoring requirements that LACMTA must implement for the project.

In consultation with VA and consulting parties, the FTA has executed an amendment to the 2012 MOA that includes measures to avoid and minimize effects to cultural resources in the VA WLA Historic District.

The WPLE Project satisfies the U.S. EPA's air quality conformity requirements under 40 CFR Part 93 as documented in the Final EIS.

There are currently no sensitive species or habitats located directly within the WPLE Project study area. Therefore, no effects pursuant to the Endangered Species Act would occur.

The FTA concluded, in accordance with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, that Environmental Justice communities would not be subject to disproportionately high and adverse human health or environmental effects as a result of the WPLE Project. During 2017 and 2018, the FTA and LACMTA conducted additional outreach to Veteran groups identified by VA. Considering the inclusion of the additional outreach, VA has reviewed and adopted the FTA's finding.

Based on the FTA's Final EIS/EIR and subsequent analysis, construction and operation of the WPLE Project within the VA WLA Campus will enhance regional transit options for the general public, providing connections to the West Los Angeles, Brentwood, and Santa Monica communities.

Recommendation and Decision

a. Recommendation

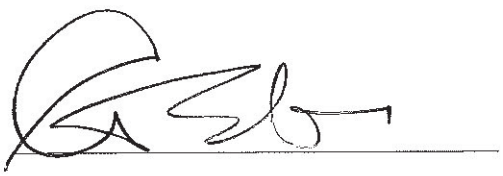
I certify that the Purple Line NEPA Documents and this ROD meet the technical standards regarding preparation of NEPA documentation as prescribed by 38 CFR Part 26, VA's *NEPA Interim Guidance for Projects*, and VA Directive 0067, *VA National Environmental Policy Act Implementation*.



Glenn Elliott
VA Environmental Program, Director
U.S. Department of Veterans Affairs

b. Decision

It is my decision to approve granting of perpetual easements and temporary surface and sub-surface construction easements on VA property for the construction and operation of the Los Angeles County Metropolitan Transportation Authority (LACMTA) Westside Purple Line Extension (WPLE) Project. The signing of this ROD does not constitute the granting of the easements. The ROD in its entirety including the commitments contained will be incorporated in the easement document. This decision is subject to the terms, conditions, stipulations and environmental protection measures reflected in this ROD. VA's decision is to grant LACMTA easements required for the WPLE in accordance with 40 U.S.C. 1314, Chapter 81 of Title 38 of the U.S.C., and the West Los Angeles Leasing Act (Public Law 114-226) as described in the ROD.



Anthony E. Costa
Deputy Director, Office of Construction and Facilities Management
U.S. Department of Veterans Affairs

APPENDIX A: ADDITIONAL LACMTA MITIGATION MEASURES

In addition to the mitigation measures included in the WPLE Project NEPA Documents, additional measures have been identified as part of VA's determination to adopt LACMTA's Final EIS and 130(c) Environmental Technical Memorandum. These mitigation measures are summarized in the table below. LACMTA will be solely responsible for all costs and the implementation of approvals and construction activities, subject to VA review and written approval. Upon completion of construction and acceptance by VA, ownership of the improvements will be conveyed to VA.

SAFETY AND SECURITY
1. LACMTA Community Relations team, LACMTA Security, and other LACMTA personnel and contractors will attend an annual training exercise with VA WLA Campus staff to help monitor, mitigate, and minimize the potential construction-related impacts experienced by Veterans suffering from PTSD or other mental illnesses. 2. LACMTA and VA law enforcement personnel will meet when appropriate to start the preparation of a Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA) between the agencies describing the roles and responsibilities in ensuring the public safety of veterans, VA WLA Campus patients, staff, and visitors as well as the surrounding community. The LACMTA and VA law enforcement personnel will jointly collaborate on the required security systems that will be appropriate to enhance security on the VA WLA Campus and the Westwood/VA Hospital Station. The MOU/MOA will identify appropriate security systems to manage impacts created by increased pedestrian traffic and parking issues and will insure that the current security technology is compatible between the systems of the two agencies. The MOU/MOA will also identify appropriate tracking documentation protocols to ensure LACMTA personnel participate in annual training exercises. 3. LACMTA will design, acquire, and install at the Westwood/VA Hospital Station and the VA WLA Campus measures to enhance security, such as Closed-Circuit Television (CCTVs). LACMTA will provide VA with access to the camera's electronic data from the station entrance and other at-grade areas.
HISTORIC, ARCHEOLOGICAL, AND PALEONTOLOGICAL RESOURCES
1. LACMTA will implement the measures to avoid and minimize effects to historic and/or cultural resource properties on the VA WLA Campus in accordance with the *Memorandum of Agreement between the Federal Transit Administration and the California State Historic Preservation Officer regarding the Los Angeles Westside Subway Extension Project, Los Angeles, California* (March 2012) (MOA) and any subsequent amendments. 2. LACMTA will complete archaeological surveys on the VA WLA Campus in accordance with the MOA and subsequent amendments. 3. Construction noise barrier graphics will include Veteran centric graphics that may include existing art murals and/or historical photos. LACMTA will coordinate with VA on graphic selection.
NOISE AND VIBRATION
1. At VA's request, LACMTA will establish baseline pre-assessments and monitor vibration levels for the buildings referenced in the MOA to include the Wadsworth Chapel. In the event vibration

levels due to construction on the north side of Wilshire Boulevard exceed the maximum PPV's as indicated in the in the FTA Noise and Vibration Impact Assessment Manual (2018) where damage may occur to the building, LACMTA will notify FTA and VA. Then FTA and VA will consult with consulting parties as outlined in the MOA, as amended, on measures to resolve potential adverse effects to the Wadsworth Chapel or any other VA buildings.
AIR QUALITY
1. Prior to commencing construction, LACMTA will identify an operational baseline for the Medical Center HVAC system. LACMTA shall work with VA to install, operate, and maintain instrumentation to monitor changes to the Medical Center HVAC System during the construction of the Transit Facilities. LACMTA shall coordinate with VA for measures to maintain the operational baseline for the Medical Center HVAC system.
TRANSPORTATION
1. LACMTA will develop and implement a patient, resident, staff, and visitor access plan to ensure continuous and efficient access to the Medical Center and all other facilities on the VA WLA Campus throughout all hours of the day during the construction period for the WPLE Project. 2. LACMTA will provide static wayfinding signage and electronic changeable message signs/changeable message boards on the North Campus during the construction period for the WPLE Project to provide a consistent and regular message to patients, residents, staff, and visitors, both vehicular and pedestrian, to be part of a Traffic Management Plan (TMP). The Traffic Management Plan will be developed in coordination with VA. 3. LACMTA will provide no less than four CMS/CMBs and the number and location of the CMS/CMBs will be described in more detail by the TMP and subject to VA approval. 4. LACMTA to provide transportation for patients, residents, staff, visitors, and the Veteran community at large to all VA WLA Campus buildings and areas including small van or shuttle circulator vehicles with wheelchair accessibility to either be on demand or regularly circulate, the northern portion of the VA WLA Campus (North Campus) (including VA's Domiciliary, Community Living Center, Transitional Housing, and Permanent Supportive Housing facilities North of Wilshire Boulevard) and provide access to the southern portion of the VA WLA Campus (South Campus) until the replacement parking structure has been accepted by VA and is fully operational. In coordination with VA, LACMTA Construction Relations will maintain daily updates on the WPLE Project website, social media pages, and via e-blast. All information will be available on the LACMTA mobile application. 5. LACMTA will undertake refurbishments for the interim surface parking areas to be utilized upon the closure of Parking Lot 42 for construction activities until the replacement parking structure is accepted by VA. Refurbishment is anticipated to include mostly surface overlay, paving, and restriping, but will possibly also include accessibility improvements, surface resealing, lighting refurbishments, and curb cuts. 6. LACMTA will design and construct a multi-story replacement parking structure containing a minimum of 809 vehicle parking spaces. The replacement parking structure location will be determined by VA and utilized only by VA patients, staff, and visitors. Use by transit riders is strictly prohibited. LACMTA will provide daily, regularly scheduled shuttle(s) for patients, visitors, and staff displaced by construction impacts to Parking Lot 42 to and from the Medical Center to the interim surface parking areas. Operations shall commence no later than the Parking Lot 42

decommissioning date and will be in operation until the replacement parking structure has been accepted by VA and is fully operational.

7. LACMTA will design and construct, within the VA WLA Campus, vehicle circulation and access control measures to mitigate the impacts of the LACMTA construction and operations. Access control tools will be subject to VA approval and may include, but are not limited to, development and implementation of a parking validation card system, access controls at parking lots within walking distance of the Westwood/VA Hospital Station, roundabouts, additional traffic signals, and additional gates (to potentially include the Constitution Avenue and Ohio/Sawtelle entrances to the VA WLA Campus).
8. LACMTA will repave VA WLA Campus roads, streets, and sidewalks affected by LACMTA construction, primarily Bonsall Avenue and Hadley Lane or where construction impacts have occurred.
9. LACMTA will design and construct, within the VA WLA Campus, improvements and/or restoration of roadways, bicycle lanes, and sidewalks, including on Bonsall Avenue, required as a result of construction for the Transit Facilities. LACMTA will coordinate with VA for the design review of the Westwood/VA Hospital Station, pedestrian circulation, roadway, and passenger drop-off area.

CONSTRUCTION (UTILITIES)

1. LACMTA will design and construct temporary and permanent utility relocations for the utilities impacted by the construction, operation, and maintenance of the Transit Facilities. LACMTA will be responsible for the functional equivalent replacement of the impacted utility lines unless current codes or specifications require increased sizing and/or increased capacity.
2. LACMTA will maintain an updated project schedule of major design and construction activities which will indicate design submissions, review periods, major construction activities and scheduled utility outages. LACMTA will coordinate all design and construction activities with VA operations. LACMTA will provide detailed construction drawings and a reasonable time frame for VA review and concurrence.
3. LACMTA will assist VA during meetings with Southern California Edison (SCE) for the existing Ohio Power sub-station, including assisting VA with adding an electrical stub to provide a new power connection to serve the southern portion of the VA WLA Campus (South Campus) to manage impacts to electrical power supply and capacity available for future VA construction projects.
4. LACMTA will design and construct the new replacement steam tunnel for the impacted portions of the existing steam tunnel in, around, below, and adjacent to Parking Lot 42. Until the construction of the New Steam Tunnel is finalized and accepted by VA, LACMTA will maintain in operation and safeguard the existing steam service line, and provide a secondary steam line, to ensure continuous and uninterrupted steam service to the VA WLA Campus.
5. LACMTA will remove the Parking Lot 42 solar power system and related structural improvements and footings. LACMTA will design and construct new solar generation equipment sized to provide for no less than the existing solar energy production capabilities and to be located on the roof of the replacement parking structure. Based upon the production capacity of the Parking Lot 42 solar power system and the potential cost savings when compared to acquiring power from the electric utility provider, VA will determine the economic value of the forsaken solar energy production for the time period between the deconstruction of the Parking Lot 42 solar power system up until the replacement parking structure is completed and accepted by VA. LACMTA will make VA "whole"

and incorporate the economic value of the forsaken solar energy production into other capital projects as determined by VA in its sole discretion for: (a) additional capacity for the replacement parking structure, (b) additional solar energy projects at the VA WLA Campus, or (c) a combination of additional capacity for the replacement parking structure and additional solar energy projects at the VA WLA Campus.

6. In accordance with LACMTA's Utility Emergency Protocol Plan, LACMTA will provide stipulations for incidental spills into the storm water piping by construction vehicles including spill countermeasures in place in the event of such an accident.
7. LACMTA will provide a 3D graphical mapping of all utilities serving VA WLA Campus interfacing with the LACMTA construction, utilizing a state-of-the-art geographic information system, survey, or other appropriate methods so that VA can clearly understand utility risks during the current construction as well as for future reference with the anticipation of future LACMTA facility expansion, renovation, and repairs.

SOCIOECONOMIC CHARACTERISTICS

Consistent with current and future LACMTA policies and procedures, and in recognition of VA's commitment to use the VA WLA Campus to principally benefit Veterans and their families, LACMTA will develop, incorporate, and manage programs comprised of the following initiatives, in accordance with any applicable laws:

1. LACMTA will implement a Veteran hiring program specific to the Project, with respect to employees hired for the design, construction, operation, and maintenance of the Purple Line work, with the objective of exceeding LACMTA's system-wide objective of placing Veterans and their spouses as no less than Six Percent (6%) of the LACMTA workforce (which is comprised of LACMTA employees only) that are employed for the design, construction, operation, and maintenance of the Purple Line work.
2. To the extent practicable, LACMTA will make best efforts to hire Veterans on a priority basis for the LACMTA workforce (which is comprised of LACMTA employees only) that are employed for the design, construction, operation, and maintenance of the Purple Line work.
3. Subject to VA review and approval, LACMTA will make best efforts to place advertisements for (a) the promotion of Veteran employment at LACMTA, and (b) Veteran construction employment opportunities on LACMTA construction projects. Such advertisements will be placed on LACMTA buses/trains and at LACMTA transit facilities.
4. LACMTA will conduct outreach to the Veteran community regarding Project related contracting opportunities, and involve Veterans in the planning, design, restoration, and refurbishment of the Project adjacent murals located within the Wilshire Boulevard right of way corridor celebrating contributions of Veterans.
5. LACMTA's Project Labor Agreement / Construction Careers Policy (PLA/CCP) is applicable to the Project and the Purple Line work and contains a ten (10) percent Disadvantaged Worker requirement that LACMTA contractors must meet or exceed. The Disadvantaged Worker requirement expressly recognizes Veterans who have served in Iraq and Afghanistan as qualifying, but all other Veterans also qualify. LACMTA will ensure the prime contractor makes meaningful outreach efforts to employ the Veterans population defined within the PLA/CCP. Each annual

report will provide VA with the PLA attainment performance results for the Disadvantaged Worker requirement, with Veteran workers specifically identified.

6. LACMTA will provide to VA written reports on an annual basis by no later than August 31st of each year that provides a detailed description of the accomplishments for each component of the Veteran Economic Development Objectives.

APPENDIX B: PURPLE LINE NEPA DOCUMENT MITIGATION MONITORING AND REPORTING PLAN

SECTION 01 35 44

ATTACHMENT A – MITIGATION MONTIORING AND REPORTING PLAN

NOTE: The attached mitigation monitoring and reporting plan has been modified from the original version as indicated in the Final EIS/EIR, to include only the mitigation measures that relate to Section 3 of the Westside Subway Extension. The Party Responsible for Implementing Mitigation column has also been updated to reflect the Contractor and Metro responsibilities accordingly for the C1152 – Stations and Systems contract. Modifications for C1152 are indicated.

Mitigation Monitoring and Reporting Plan – Westside Purple Line Extension – Section 3

Mitigation Monitoring and Reporting Plan

The purpose of the mitigation monitoring effort is to ensure that the Mitigation Measures identified in the EIS/EIR to mitigate the potentially significant environmental effects of the project are, in fact, properly carried out. In its findings concerning the environmental effects of a project for which an EIS/EIR was prepared, a Lead Agency must also include a finding that a mitigation monitoring or reporting program has been prepared and provides a satisfactory program that will ensure avoidance or sufficient reduction of the significant effects of the project. The following mitigation monitoring plan contains a brief statement of all Mitigation Measures; identifies the monitoring action; indicates the party responsible for implementing the mitigation; and identifies the enforcement agency, monitoring agency and the monitoring phase or timing. The Los Angeles County Metropolitan Transportation Authority (Metro) shall be responsible for assuring full compliance with the provisions of this program. The Chief Executive Officer (CEO) of Metro may delegate duties and responsibilities to Metro staff, applicants, and consultants as necessary. The CEO shall also ensure that monitoring reports are filed on a timely basis and, when identified, that plan violations are corrected. Progress toward completion of the required mitigation plan, or violations thereof, shall be reported at prescribed intervals to the CEO. The reports shall be prepared using approved forms or an acceptable format. These reports will be available for public review at any time.

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Transportation			
Mitigation: T-1—Coordination with Property Owners Metro will coordinate with the appropriate property owners and other relevant parties regarding permanent parking losses. All property owners will be compensated under the Uniform Relocation Assistance and Real Property Acquisition Act as described in mitigation measure CN-1 and will receive compensation for easements as described in mitigation measure CN-3.	Verify coordination	Metro	– Metro – Metro – Final Design and Construction
T-2—Parking Monitoring and Community Outreach In the one-half mile area surrounding each station where unrestricted parking is located, a program will be established to monitor on-street parking activity in the area prior to the opening of service and monitor the availability of parking monthly for six months following the opening of service. Based on the available supply in each station area before the opening of service, Metro will set a performance standard that would identify a demand exceeding 100 percent of supply after opening as an impact due to the parking activity of LPA patrons. If the performance standard is met, LPA. Metro will work with the appropriate local jurisdiction (City of Los Angeles and City of Beverly Hills) and affected communities to assess the need for specific elements of a residential permit parking (RPP) program for the affected neighborhoods. For station areas at high risk of spillover Metro will conduct outreach meetings for the affected communities to gauge the interest of residents participating in an RPP program (prior to the opening of the subway), regardless of whether parking shortages have been identified. For the Westwood/VA Hospital Station, the majority of station-area parking supply is for the exclusive use of VA patients, visitors, doctors, and staff. Development of an RPP program for the VA is not applicable. At this station, Metro will monitor spillover parking at VA lots controlled only by decals and/or signage (i.e., no gates or other controlled access). Once the subway has opened, an assessment of the spillover parking magnitude will be made, and if the spillover parking is determined to be unmanageable by VA security, a parking management plan for the VA campus will be developed and implemented.	Report conditions and verify plan.	Metro	– Metro – Metro – Operations

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
T-3—Residential Permit Parking Program In general, RPP districts are created to ensure that neighborhood residents have access to on-street parking. These programs are in effect across the United States, including Los Angeles County. They are commonly used to address spillover parking concerns, such as those that arise when residential neighborhoods are in close proximity to commercial districts that do not provide sufficient parking. Patrons of the commercial districts, who are non-residents, tend to spill over into adjacent residential neighborhoods to find parking. The impact that spillover parking causes is adverse, and restricting parking to residents only, or limiting the time non-residents can park, is one way to mitigate these adverse impacts. If the need for an RPP district has been determined through Mitigation Measure T-2, RPP programs will be implemented according to guidelines established by each local jurisdiction. Metro will reimburse local jurisdictions for costs associated with developing both the RPP programs and installing parking restriction signs in neighborhoods within a one-half mile walking distance of each affected station. Metro will not be responsible for the costs of permits for residents desiring to park on streets in RPP districts. For locations where spillover parking cannot be addressed through a RPP program, alternative mitigation options will include the implementation of parking time restrictions for non-residents. Metro will work with local jurisdictions to determine which option(s) will be preferable.	Verify funding.	Metro	– Metro – Metro – Operations
T-4—Consideration of Shared Parking Program Metro will consider developing a shared parking program with operators of off-street parking facilities to accommodate the LPA's parking demand, thereby allowing subway riders to use excess capacity in these facilities. The revised off-street parking analysis conducted for the Final EIS/EIR determined that more than 100,000 off-street parking spaces serve commercial land uses within a one-half mile walking distance of the seven LPA station locations. As part of the analysis, a sampling of parking facility operators for each station location was contacted to determine availability of public parking in their facility on weekdays and weekends, daily parking rate, facility occupancy, and interest in partnering with Metro to make parking available to riders of the Westside Subway Extension. Based on a sample of operators at each station area, some shared parking potential for subway riders exists. However, this potential may be limited at individual facilities because many are near their capacity during weekdays. For six months following the opening of service, Metro will monitor off-street	Report conditions and verify plan.	Metro	– Metro – Metro – Operations

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
parking activity in station areas through communication with parking operators by quantitatively assessing through surveys the effects on parking demand as a result of the LPA and revisit their interest in participating in a shared parking program. It is anticipated that the LPA will reduce parking demand in station areas, as some employees will use the subway to commute to work rather than driving. Because the development of a shared parking program will be contingent on the willingness of parking facility operators to participate, as well as the availability of parking supply at their facilities, it may be infeasible to implement this measure at some or all station areas where spillover parking impacts have been identified.			
~~T-5—Install Crossing Deterrents~~ ~~Install appropriate signage and deterrents to prohibit crossing Wilshire Boulevard at Orange Grove Avenue. This mitigation measure would be implemented for the Wilshire/Fairfax Station South Entrance Option.~~	~~Review and verify plans.~~	~~Metro~~	~~– Metro~~ ~~– Metro~~ ~~– Final Design and Construction~~
~~T-6—Install High-Visibility Crosswalk/Crossing Deterrents~~ ~~Stripe a high-visibility crosswalk on the east leg of the intersection of El Camino Drive and Wilshire Boulevard. If a crosswalk is not feasible, install appropriate signage and deterrents to prohibit crossing Wilshire Boulevard on the east side of El Camino Drive. This mitigation measure would be implemented for the Wilshire/Rodeo Station Union Bank Entrance Option.~~	~~Review and verify plans.~~	~~Metro~~	~~– Metro~~ ~~– Metro~~ ~~– Final Design and Construction~~
~~T-7—Install High-Visibility Crosswalk~~ ~~Stripe a high-visibility crosswalk treatment appropriate for unsignalized intersections on the south leg of the intersection of Reeves Drive and Wilshire Boulevard. This mitigation measure would be implemented for Wilshire/Rodeo Station Ace Gallery Entrance Option.~~	~~Review and verify plans.~~	~~Metro~~	~~– Metro~~ ~~– Metro~~ ~~– Final Design and Construction~~
T-8—Install High-Visibility Crosswalk Stripe a high-visibility crosswalk treatment appropriate for unsignalized intersections on all four legs of Bonsall Avenue where it intersects with both the eastbound and westbound Wilshire Boulevard access ramps. Curb ramps fully compliant with ADA should be installed on all four corners. This mitigation measure would be implemented for the Westwood/VA Hospital Station South Entrance Option or the Westwood/VA Hospital Station North Entrance Option.	Review and verify plans.	Metro	– Metro – Metro – Final Design and Construction
T-9—Provide consistency with General Plan Designation Sidewalk Width Adjacent to Metro- Controlled Parcels The LPA will be designed to ensure a minimum sidewalk/parkway width is provided on the portions of streets fronting parcels controlled by Metro, as required by General Plan street classification designation for each jurisdiction where an LPA station is located. For example, the Street Designations and Standards of the Transportation Element of the City of Los Angeles General Plan require a 12-foot-wide sidewalk/parkway on a Major Highway Class II, and a 10-	Review and verify consistency	Contractor	– Metro – Metro – Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
foot-wide sidewalk/parkway on a Secondary. Thus, sidewalks on the portions of streets designated as Major Highway Class II that front parcels controlled by Metro will need a 12-foot-wide sidewalk/parkway.			
T-10—Provide consistency with General Plan Designation Sidewalk Width Coordination with Jurisdictions Metro will coordinate with local jurisdictions to identify sidewalks in station areas that do not meet this minimum and will encourage local agencies to widen them. Sidewalks adjacent to parcels not controlled by Metro may be less than the required minimum per general plan designation. Because sidewalks are the responsibility of local jurisdictions, Metro does not have the authority to widen them directly, but will encourage local jurisdictions to do so.	Verify coordination	Metro	– Metro – Metro – Prior to Construction
T-11—Provide High Visibility Crosswalk Treatments Metro will provide highly visible crosswalk treatments at intersections affected by LPA construction, following the Metro Rail Design Criteria.	Review and verify plans	Contractor	– Metro – Metro – Final Design and Construction
T-12—Meet Federal, State, Local Standards for Crossing Metro will coordinate with local jurisdictions to identify crossings that do not meet current ADA, CA MUTCD, and other relevant Federal, State, and Local standards and will encourage local jurisdictions to upgrade them accordingly. Beyond those directly affected by LPA construction activities, which Metro is responsible for upgrading on restoration of all streets and crossings affected by LPA construction activities, crossings that do not meet standards are the responsibility of local jurisdictions. Metro does not have the authority to upgrade them directly, but will encourage local jurisdictions to do so.	Verify identification and coordination	Metro	– Metro – Metro – Prior to Construction
T-13—Meet Metro Rail Design Criteria Minimums for Bicycle Parking The LPA will provide bicycle parking to meet the minimum required number of bicycle parking spaces per the Metro Rail Design Criteria. This mitigation measure would be implemented at all LPA station entrance options where it is feasible to implement, which is expected to be at the following stations: • Wilshire/La Brea (all entrance options) • Wilshire/Fairfax (all entrance options except the LACMA entrance option) • Wilshire/La Cienega • Wilshire/Rodeo (Ace Gallery Entrance Option) • Westwood/UCLA Off-Street • Westwood/UCLA On-Street (Lot 36 Entrance) • Westwood/VA Hospital South • Westwood/VA Hospital North	Review and verify plans	Contractor	– Metro – Metro – Final Design
T-14—Study Bicycle Parking Demand & Footprint Configuration	Monitor bicycle	Metro	– Metro

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Metro will continue to assess bicycle parking demand as the project progresses through the design and construction process and size the bicycle facilities at each station accordingly. Bicycle parking demand can vary station-to-station, and the footprint required to meet that demand will vary. For example, bicycle lockers are more space intensive, while secured bicycle rooms can accommodate bicycle parking in a more compact footprint. The appropriate configuration and ultimate footprint reserved for bicycle parking at each station will vary by demand levels and space constraints. The Westside Subway Extension Station Circulation Report (Metro 2011am) details footprint ranges for each station area based on configuration of bicycle parking.	parking demand around stations.		– Metro – Operations
T-15— Determine Alternative Sites for Bicycle Parking At LPA station entrance options that are physically constrained, Metro shall look for space for bicycle parking at an alternative site, which could include provision of secured bicycle parking in an adjacent storefront or other development, install signage to direct subway riders to bicycle parking already provided at buildings or on streets near station entrances, or provide enhanced bicycle parking facilities at an adjacent station on the LPA to meet any unsatisfied demand from this station. This mitigation measure would be implemented for the following LPA station entrance options: • Wilshire/Fairfax Station–LACMA Entrance Option • Wilshire/Rodeo Station–Union Bank Entrance Option • Wilshire/Rodeo Station–Bank of America Entrance Option • Century City Constellation Station • Century City Santa Monica Boulevard Station • Westwood/UCLA On-Street Station (north and south entrances at Wilshire/Westwood Boulevards)	Review and verify plans	Metro	– Metro – Metro – Final Design
T-16—Study Bus-Rail Interface Metro will continue to assess bus-rail interface. As a result of further study Metro, working with affected jurisdictions, will relocate bus stops at some LPA stations to minimize the number of streets riders must cross to transfer between the LPA and interfacing bus lines.	Verify study completion	Metro	– Metro – Metro – Construction
TCON-1—Traffic Control Plans Site-specific traffic-control plans will be developed to minimize construction impacts for each work zone location. These locations will include, but not be limited to, utility relocations, stations, crossovers, laydown areas, TBM launch and removal locations, emergency exit shafts, station entrances, drop pipes, and grout injection. Traffic-control plans will follow State and local jurisdiction guidelines and standards. Traffic-control plans will be developed for Wilshire, Santa Monica, and Constellation Boulevards and north-south streets, including, but not limited to, La	Review and verify plans.	Contractor	– Metro – Metro – Final Design and

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Brea Avenue, Fairfax Avenue, La Cienega Boulevard, Rodeo Drive, Beverly Drive, Canon Drive, Century Park East, Avenue of the Stars, Westwood Boulevard, Veteran Avenue, Sepulveda Boulevard, I-405 ramps to/from eastbound Wilshire Boulevard, and Bonsall Avenue. Traffic control plans will encompass the following: • Minimum lane widths • Number of available travel lanes (two lanes minimum in each direction during peak periods) • Number, length, and location of temporary right and left-turn lanes • Temporary street closures and detour routes • Traffic-control devices (signing and striping) • Temporary traffic signals and street lighting • Temporary pedestrian access and routes • Temporary bicycle routes • Temporary driveway access • Temporary business access • Construction site phasing To facilitate traffic flow and mitigate major disruption and bottlenecks due to construction, advanced traffic control will extend beyond one arterial street on each side of each station construction location. This will help disperse peak-hour traffic flows onto the adjacent arterial street network. Business owners will be interviewed to identify the type of business, delivery and shipping schedules, and critical days/times of years for the business. Traffic-control plans will incorporate this information. Specific street closures will be developed in close coordination with the local jurisdictions during the Final Design phase.			
TCON-2—Designated Haul Routes Designated truck haul routes using arterial streets are intended to minimize noise, vibration, and other possible impacts to adjacent businesses, schools, major commercial developments, and residential neighborhoods. Metro will incorporate the following objectives into its truck haul route plans: • Establish nighttime truck haul operations times/days for each route. Truck haul operations will not be allowed in the AM and PM peak hours, in residential neighborhoods (where feasible), during noise restriction hours and special events, holiday season restrictions, and as restricted by State and local jurisdictional mandates. • Establish truck haul headways to avoid platoons of trucks upon local arterial streets and freeways. Establish a vehicle dispatching system at construction	Review and verify plans.	Contractor	– Metro – Metro – Final Design and Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
laydown areas and off-site locations to monitor and address truck headway issues as they arise. • Develop truck haul routes for each site in coordination with and approved by State and local jurisdictions. • Incorporate comments and issues from State and local jurisdictions into the final approved truck haul routes and truck haul operation schedules.			
TCON-3—Emergency Vehicle Access Emergency vehicle access will be maintained at all times to the construction work site, adjacent businesses, and residential neighborhoods. In addition, emergency vehicle access will be maintained at all times to and from fire stations, hospitals, and medical facilities near the construction sites and along the haul routes. LPA construction activities and haul route operations will be coordinated with local law enforcement representatives and fire department officials during the Final Design phase.	Review and verify plans.	Contractor	– Metro – Metro – Final Design and Construction
TCON-4—Transportation Management Plan Once subway construction sequencing/phasing and the truck haul routes have been concurred upon by Metro and reviewed by local jurisdictions and Caltrans, an overall LPA Transportation Management Plan (TMP) will be developed with and approved by Metro and other appropriate agencies. The TMP will include the following: • Public information (e.g., media alerts, website) • Traveler information (e.g., traffic advisory radio, changeable message signs (CMS)) • Incident management (e.g., TMP coordination, tow truck services) • Construction (e.g., detour routes, haul routes, mitigation, construction times) • Demand management (e.g., carpooling, express bus service, variable work hours, parking management) • Coordination with concurrent LPAs The TMP will also address individual and overlapping haul route impacts and will impacts resulting from concurrent and overlapping station(s) and tunnel excavation work.	Review and verify plans.	Contractor	– Metro – Metro – Final Design and Construction
TCON-5—Coordination with Planned Roadway Improvements Construction of the subway and new station locations will be coordinated with local jurisdictions for future programmed projects, such as the Wilshire Bus Rapid Transit Project.	Review and verify plans.	Contractor	– Metro – Metro – Planning, Final Design and Construction
TCON-6—Temporary Bus Stops and Route Diversions Construction impacts to local and regional transit operations (e.g., Metro Bus,	Review and verify plans.	Contractor	– Metro – Metro

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Santa Monica Big Blue Bus, Culver City Bus, LAX Flyaway, DASH, and UCLA Campus Shuttle) will be mitigated to minimize impacts to the degree possible at each station construction location. Impacts to local and regional transit will be mitigated through, but not be limited to, the use of temporary relocated bus stops and temporary route diversions. Impacts to local and regional transit operations will be coordinated with each transit agency and/or provider. In addition, the Final Design-level mitigation proposals will be approved by the transit agency and/or provider and the local jurisdictions and incorporated into the TMP.			– Final Design and Construction
TCON-7—Parking Management A parking management program will be developed to minimize impacts due to temporary removal of on- and off-street parking within the construction work zone. The program will incorporate appropriate parking control measures, replacement parking within a reasonable distance from the affected parking locations, if available, or other transportation demand management (TDM) strategies. Development of the parking management program will be coordinated with the appropriate local jurisdictions and affected communities or property owners and be incorporated into the TMP.	Review and verify plans.	Contractor	– Metro – Metro – Final Design and Construction
TCON-8—Parking Monitoring and Community Outreach In addition, a parking monitoring and community outreach program will be established during the construction phase of the LPA to monitor on-street parking activity. If a parking shortage is identified during construction, Metro will work with the appropriate local jurisdiction and affected communities or property owners to assess the shortage level and implement mitigation as part of the parking management program.	Report conditions and verify plan.	Metro	– Metro – Metro – Final Design and Construction
TCON-9—Construction Worker Parking Metro will require that all construction contractors identify adequate off-street parking for construction workers at Metro-approved locations. This will occur for each construction site to minimize additional loss of parking. Metro will work with construction contractors on implementation of adequate off-street parking for construction workers.	Review and verify plans.	Contractor	– Metro – Metro – Final Design and Construction
TCON-10—Pedestrian Routes and Access Safe pedestrian routes and access will be provided through and/or adjacent to construction work areas. Pedestrian routes and access, including temporary pedestrian facilities, will comply with the requirements of the ADA and must be properly signed and lighted. Special facilities, such as handrails, fences, and walkways, will be provided for pedestrian safety. Temporary pedestrian routes and access concerns will be addressed with, but not limited to, local residents, the VA Hospital, schools, and businesses and approved by the local jurisdiction. Pedestrian routes and access will be monitored and	Review and verify plans.	Contractor	– Metro – Metro – Final Design and Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
maintained throughout construction.			
TCON-11—Bicycle Paths and Access Bicycle traffic (e.g., paths, lanes, and routes) will be maintained safely through and adjacent to construction work areas. If bicycle traffic cannot be maintained, then alternative temporary bicycle routes will be identified, signed, and lighted. These alternative routes should be on adjacent streets that can safely accommodate bicycle traffic. Development of these routes will be coordinated with bicycle groups and local jurisdictions. Temporary routes will require approval by the local jurisdiction. Bicycle access will be monitored and maintained throughout construction.	Review and verify plans.	Contractor	– Metro – Metro – Final Design and Construction
Land Use			
No significant impacts will result from the LPA. The LPA will not conflict with applicable land use plans and policies; therefore, no mitigation will be required.	N/A	N/A	N/A
Socioeconomic Characteristics			
Mitigation: The following measures will be implemented to ensure impacts related to displacements and acquisitions are avoided or further minimized. CN-1—Relocation Assistance and Compensation Metro will provide relocation assistance and compensation for all displaced businesses and residences, as required by both the Uniform Relocation Assistance and Real Property Acquisition Act and the California Relocation Assistance Act. All real property acquired by Metro will be appraised to determine its fair market value. Just compensation, which will not be less than the approved appraisal, will be made to each displaced property owner. Each business and residence displaced as a result of the LPA will be given advance written notice and will be informed of their eligibility for relocation assistance and payments under the Uniform Relocation Assistance and Property Acquisition Act. It is anticipated that most businesses will relocate and, as such, most jobs will be relocated and will not be permanently displaced. However, there are permanent job losses anticipated. Metro shall coordinate with the appropriate jurisdictions regarding business relocations.	Verify compliance	Metro	– Metro – Metro – Before Final Design
CN-2—Propose Joint-use Agreements While employment loss as a result of property acquisitions will not result in an adverse effect, Metro will propose where feasible joint-use agreements for the land it will take for station entrances and construction staging to induce job creation in areas to further reduce the affect any job loss.	Verify coordination with owners	Metro	– Metro – Metro – Before Final Design
CN-3—Compensation for Easements For easements, Metro will appraise each property to determine the fair market value	Verify coordination	Metro	– Metro – Metro

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
of the portion that will be used either temporarily during construction or permanently above and below ground. Just compensation, which will not be less than the approved appraisal, will be made to each displaced property owner.			– Before Final Design
Environmental Justice			
No disproportionately high and adverse impact to minorities and low-income communities will occur during operation of the Project. Therefore, no additional mitigation measures are required.	N/A	N/A	N/A
Visual Quality			
Mitigation: While there are no significant impacts, the mitigation measures, as listed below, are incorporated into the LPA and will ensure that impacts related to conflicts between scale and visual character, building removal and right-of-way acquisition, removal of mature vegetation, location of ancillary facilities, and introduction of new sources of light and glare are avoided or minimized. VIS-1—Minimize Visual Clutter To minimize visual clutter, system components should be integrated and the potential for conflicts reduced between the transit system and adjacent communities; design of the system stations and components will follow the recommendations and guidance developed in the urban design analysis conducted for the LPA (Metro 2009d). These guidelines include the following: (1) preserve and enhance the unique cultural identity of each station area and its surrounding community by implementing art and landscaping; and (2) promote a sense of place, safety, and walkability by providing street trees, walkways or sidewalks, lighting, awnings, public art, and/or street furniture.	Review and integrate guidance in system design	Contractor	– Metro – Metro – Before Final Design
VIS-2—Replacement for Tree Removal Where mature trees are removed, replacement with landscape amenities of equal value will be incorporated into final designs, where feasible, to enhance visual integrity of the station area.	Have arborist prepare tree removal plan	Contractor	– Metro – Metro – Before Construction
VIS-3—Source Shielding in Exterior Lighting Source shielding in exterior lighting at the maintenance and storage facility will be used to limit spillover light and glare.	Review and verify Final Design plans	Metro	– Metro – Metro – Final Design
VIS-4—Integrate Station Designs with Area Redevelopment Plans Station designs will be integrated with area redevelopment plans. The objective is to create a unified visual setting where the station components such as entrances, complement redevelopment plans.	Verify coordination with surrounding communities	Contractor	– Metro – Metro – Before Final Design
Air Quality			
The LPA will not exceed the National Ambient Air Quality Standards, the California	N/A	N/A	N/A

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Ambient Air Quality Standards, or SCAQMD significance thresholds during operation of the LPA. The LPA is predicted to result in lower emissions of some criteria pollutants; therefore, no mitigation will be required.			
Climate Change			
Mitigation: No mitigation is required. However, Metro recognizes that climate change is a serious issue. The following measures will be implemented to further ensure beneficial impacts: CC-1—Implement Pedestrian and Transit-Oriented Development at Stations Metro will continue to promote and support implementation of pedestrian-oriented and transit-oriented development at stations.	Review and integrate where possible into Final Design	Metro	– Metro – Metro – Before Final Design
CC-2—Energy Conservation Energy conservation will be implemented throughout design and construction.	Review and verify implementation	Contractor	– Metro – Metro – Before and during Final Design
CC-3—Promote Transit Ridership Metro will continue to promote transit ridership through marketing and educational programs.	Verify implementation of Public Outreach Campaign	Metro	– Metro – Metro – Before, during and after Final Design, Construction, and project implementation
CC-4—Green Power Metro will use green power when/where available and priced competitively with other energy sources.	Verify compliance	Contractor	– Metro – Metro – Final Design
Noise and Vibration			
~~Mitigation: To mitigate the potential for ground-borne noise impacts to theatre and residential uses above the subway tunnel due to train operation along tangent track and crossover track the following mitigation measures will be included in the final design of the LPA:~~ ~~VIB-1—Use of High Compliance Direct Fixation Resilient Rail Fasteners~~ ~~A high compliance direct fixation resilient rail fasteners will be incorporated into the design of the trackwork at the location listed below, which will reduce ground-borne noise by 5 to 7 dBA:~~ ~~• Wilshire Ebell Theatre at Site V8 (Figure 4-38)~~ ~~• Saban Theatre at Site V25(Figure 4-38)~~	~~Review and verify plans.~~	~~Metro~~	~~– Metro~~ ~~– Metro~~ ~~– Final Design~~
~~VIB-2—Use of a Low Impact Crossover~~ ~~A low impact crossover, such as a moveable point frog or a spring-loaded frog, will~~	~~Review and verify plans.~~	~~Metro~~	~~– Metro~~ ~~– Metro~~

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
~~be used in the design of the following crossover, which will reduce ground-borne noise by 5 to 6 dBA:~~ ~~• Wilshire/La Brea No. 10 Double Crossover for the apartments at Site V16 (Figure 4-38)~~			~~– Final Design~~
Energy			
No significant impacts. LPA conditions decreases system-wide vehicle miles traveled (VMT), which results in less energy consumption as compared to the existing conditions, therefore, no mitigation will be required.	N/A	N/A	N/A
Geologic Hazards			
Mitigation: Construction and design will be performed in accordance with the latest Federal and State seismic and environmental requirements as well as State and local building codes. By compliance with these regulations and requirements, potential impacts from geologic hazards will be minimized. The following measures are also included to further avoid and minimize impacts. GEO-1—Seismic Ground Shaking Metro design criteria require probabilistic seismic hazard analyses (PSHA) to estimate earthquake loads on structures. These analyses take into account the combined effects of all nearby faults to estimate ground shaking. A site-specific PSHA will be used as the basis for evaluating the ground motion levels along the LPA. The structural elements of the LPA will be designed and constructed to resist or accommodate appropriate site-specific estimates of ground loads and distortions imposed by the design earthquakes and conform to Metro's Design Standards for the Operating and Maximum Design Earthquakes. The concrete structures are designed according to the Building Code Requirements for Structural Concrete by the American Concrete Institute (ACI 318).	Review and verify plans	Contractor	– Metro – Metro – Final Design
GEO-2—Fault Crossing Tunnel, Fault Rupture, Tunnel Crossing LPA—Century City Constellation option Design will allow for the tunnels to cross the faults nearly perpendicular to limit the area of potential damage and will use Metro's two level approach to assess fault offsets and the associated structural design required to accommodate the offset. During Final Design, fault crossings will be designed for the ground conditions at the crossing location and incorporate the methods used to excavate and support the tunnel. Metro design criteria require use of a probabilistic approach to determine the Maximum Design Earthquake and Operating Design Earthquake. Design must include the following:	Verify completion of studies and incorporation of the recommended design measure into Final Design.	Metro	– Metro – Metro – Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
• Prevent collapse of the tunnel to ensure tunnel safety • Maintaining structural continuity of tunnel ring • Preventing flow of water and soil • Establishing the tunnel size to maintain tunnel clearances and provide a guideway for derailed trains to decelerate without impact Several preliminary design approaches or combinations have been considered and will be further developed in Final Design: • Steel tunnel rings with compressible material between the ring and soil to accommodate movement of the fault • Flexible steel linings • Articulated joints between tunnel segments for added flexibility • Oversized tunnel to allow additional movement and to some extent, more rapid repair after a seismic event. This could also be accomplished using cut and cover methods.			
GEO-3—Operational Procedures during Earthquake In addition to design measures, As Metro has implemented on the existing Red line, it will implement Standard Operating Procedures in seismic areas to detect earthquakes and will provide back-up power, lighting, and ventilation systems to increase safety during tunnel or station evacuations in the event of loss of power due to an earthquake. For example, seismographs are located in 11 of the existing Metro Red/Purple Line stations to detect ground motions and trigger Standard Operating Procedures (SOP #8 – Earthquake) by the train operators and controllers. Operating procedures are dependent on the level of earthquake and include stopping or holding trains, gas monitoring, informing passengers, communications with Metro's Central Control, and inspecting for damage.	Verify safety measures are implemented	Contractor	– Metro – Metro – Operations
GEO-4—Liquefaction and Seismic Settlement At liquefaction or seismic settlement prone areas, evaluations by geotechnical engineers will be performed to provide estimates of the magnitude of the anticipated liquefaction or settlement. Based on the magnitude of evaluated liquefaction, a suitable mitigation will be selected, either structural design, or ground improvement (such as deep soil mixing) or deep foundations to non liquefiable soil (such as drilled piles). Site specific design will be selected based upon the State of California Guidelines design criteria set forth in the Metro Seismic Design Criteria.	Review and verify plans	Contractor	– Metro – Metro – Final Design
GEO-5— Hazardous Subsurface Gas Operations As with the existing Metro Red and Purple Lines and the Metro Gold Line Eastside Extension, Metro will install gas monitoring and detection systems with alarms, as	Review and verify plans	Contractor	– Metro – Metro – Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
well as ventilation equipment to dissipate gas to safe levels according to Metro's current Design Criteria and Cal/OSHA standards for a safe work environment. Measures will include, but are not limited to, the following for both tunnel and station operation: • High volume ventilation systems with back-up power sources • Gas detection systems with alarms • Emergency ventilation triggered by the gas detection systems • Automatic equipment shut-off • Maintenance and operations personnel training. • Gas detection instrumentation is set to send alarms to activate ventilation systems and evacuate the structures as follows: Methane gas—Minor alarm at 10 percent of LEL (activate ventilation) and major alarms at 20 percent of LEL (evacuation of area) • Hydrogen sulfide—Minor alarm at 8 ppm and major alarm at 10 ppm.			
GEO-6—Hazardous Subsurface Gas Structural Design Tunnels and stations will be designed to provide a redundant protection system against gas intrusion hazard. The primary protection from hazardous gases during operations is provided by the physical barriers (tunnel and station liner membranes) that keep gas out of tunnels and stations. As with the existing Metro Red and Purple Lines and the Metro Gold Line Eastside Extension, tunnels and stations will be designed to exclude gas to below alarm levels (GEO-5) and include gas monitoring and detection systems with alarms, as well as ventilation equipment to dissipate gas. • At stations in elevated gassy ground (e.g., Wilshire/Fairfax, construction will be accomplished using slurry walls—or similar methods such as continuous drilled piles—to provide a reduction of gas inflow both during and after construction than would occur with conventional soldier piles and lagging. • Other station design concepts to reduce gas and water leakage will use additional barriers, compartmentalized barriers to facilitate leak sealing, and use of flexible sealants, such as poly-rubber gels, along with the high-density polyethylene-type materials that are used on Metro's underground stations. • Consideration of secondary station walls to provide additional barriers or an active system (low or high pressure barrier) will also be studied further to determine if they will be incorporated into the LPA. • The evaluations will include laboratory testing programs such as those conducted for the Metro Gold Line Eastside Extension during development of the double gasket system and material testing for long term exposure to the	Review and verify plans	Contractor	– Metro – Metro – Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
ground conditions for materials such as rubber gaskets used for tunnel segment linings. Testing programs will examine: o Segment leakage—gasket seal under pressure before, during, and after seismic movements. This will include various gasket materials and profiles (height and width). o Gasket material properties—effective life and resistance to deterioration when subjected to man-made and natural contaminants, including methane, asphaltic materials, and hydrogen sulfide. o Alternative products to High Density Polyethylene products such as poly- rubber gels, now in use in ground containing methane in other cities. o Methods for field testing high-density polyethylene joints. These are now being used for landfill liners and water tunnels under internal water pressure.			
GEO-7—Tunnel Advisory Panel Design Review The Metro Tunnel Advisory Panel (TAP) will review designs with respect to geologic hazards in areas of identified higher risk. These include the Century City area (seismic risk) and the Fairfax area (gassy ground risk). The TAP will be supplemented, as necessary, by qualified experts in seismic design, gas intrusion and ground contaminant effects on underground structures.	Verify compliance	Contractor	– Metro – Metro – Construction
Hazardous Materials			
Mitigation:In addition to the mitigation measures outlined for geologic hazards, measures to further ensure that any impacts are avoided or minimized for the LPA include the following: HAZ-1—Disposal of Groundwater Disposal of groundwater from underground structures will comply with the City of Los Angeles Industrial Wastewater Permit if there is any contaminated groundwater leakage into final structure.	Verify compliance	Contractor	– Metro – Metro – Construction –
HAZ-2—Emergency Response Procedure In the unlikely event of a major hazardous materials release close to or in the vicinity of the LPA, Metro will develop emergency response procedures in conformance with Federal, State, and local regulations.	Verify compliance	Contractor	– Metro – Metro – Operations
Ecosystems/Biological Resources			
No significant impacts will result from the LPA; therefore no mitigation will be required.	N/A	N/A	N/A
Water Quality			
Mitigation: In addition to the standard Best Management Practices (BMPs) and other measures required for compliance with Federal, State, and local requirements, the following measures will be implemented to further ensure that there will be no adverse	Verify completion of drainage plan	Contractor	– California State Water Resources Control Board

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
water quality or hydrology impacts. WQ-1—Drainage Control Plan A drainage control plan will be developed to properly convey drainage from the Study Area and to avoid ponding on adjacent properties. The plan will be developed to assure that the flood capacity of existing drainage or water conveyance features will not be reduced in a way that will cause ponding or flooding during storms.			(SWRCB) – Metro – Construction
WQ-2—Runoff Treatment During operation runoff will be treated using the most appropriate BMP as listed below to further ensure compliance Title III and Title IV of the Clean Water Act and NPDES standards as overseen by the local jurisdictions: • BMP1: Infiltration basins/trenches—Infiltration basins are surface ponds that capture first-flush stormwater and treat it by allowing it to percolate into the ground and through permeable soils. Infiltration trenches are excavated trenches that have been lined with filter fabric and backfilled with stone to form an underground basin that allows runoff to infiltrate into the soil. As the water percolates through the ground, physical, chemical, and biological processes occur to remove sediments and soluble pollutants. Pollutants are trapped in the upper soil layers and the water is released to groundwater. Infiltration basins are generally dry except immediately following storms, but a low-flow channel may be necessary if a constant base flow is present. • BMP2: Porous pavement— Porous pavement can be either asphalt-based pavement or pre-casted permeable concrete pavers. The permeable concrete paver is a preferred feature of the City of Los Angeles' Green Street Policy. Both concrete pavers and asphalt-based paving material allows stormwater to quickly infiltrate the surface pavement layer to enter into a high-void aggregate sub-base layer. The captured runoff is stored in this "reservoir" layer until it either infiltrates into the underlying soil strata or is routed through an under drain system to a conventional stormwater conveyance system. Porous pavement is typically applicable only in low-traffic areas. • BMP3: Vegetated Filter Planters—These are newly adopted bio-parkway or flow-through planters engineered in accordance to the City of Los Angeles' Green Street Policy. They are planters with selected vegetations and engineered soils to treat and filter storm-water from street and / or roof runoff. The design storm	Verify compliance and implementation in final design plans	Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
First-Flush polluted storm-water will be treated and filtered. At large storm events, clean storm-water will be by-passed to normal drainage facilities. These devices are most suitable to urban environment such as the current LPA corridor.			
Safety and Security			
Mitigation: These measures further describe those Metro currently uses or will implement to further ensure that there are no adverse impacts. SS-1—Passenger Safety I Implement public safety awareness and employee training program.	Verify coordination and Public Outreach	Metro	– Metro – Metro – Prior operations
SS-2—Passenger Safety II Develop and implement a project-specific safety certification plan that will result in safety certification of all certifiable project elements	Verify compliance and implementation in Final Design Plans	Metro	– City of Los Angeles – Metro – Final Design/Project Implementation
SS-3—Construction Safety Implement a Construction Safety and Security Plan which includes safety rules, procedures, and policies to protect workers and work sites during construction such as warning and/or notification signs, detours, and barriers and includes compliance with OSHA standards	Verify compliance	Contractor	– Metro – Metro – Construction
SS-4—Fire Protection and Safety Design in accordance with Metro fire/life safety criteria, CBC, and other applicable Federal, State, and local rules and regulations.	Verify compliance	Contractor	– Metro – Metro – Final Design
SS-5—Methane and Hydrogen Sulfide Gas Leak Protection Design in accordance with Metro Fire/Life safety criteria, Metro ventilation criteria, and according to the findings in the Westside Subway Extension Geotechnical and Hazardous Materials Technical Report (Metro 2010i) and with special design, construction and operational attention to the gassy ground tunnels and stations.	Verify compliance	Contractor	– Metro – Metro – Final Design
SS-6—Security Preventing Criminal Activity Incorporate security features, including lighting, communication devices (e.g., passenger telephones), closed circuit television, signs and other design features, and law enforcement officers to reduce criminal activities.	Verify compliance	Contractor	– Metro – Metro – Final Design
SS-7—Security Preventing Terrorist Attacks Implementation of security features, including security education and employee training specific to terrorism awareness, lighting, communication devices (e.g., passenger telephones), closed circuit television, signs and other design features to reduce terrorism activities.	Verify compliance	Contractor	– Metro – Metro – Final Design and Project Implementation
SS-8—Emergency Response Development and implementation of a comprehensive emergency preparedness plan, employee and emergency responders training, and system design features.	Verify compliance	Metro/ Contractor	– Metro – Metro – Final Design and

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
			Project Implementation
Parklands and Community Facilities			
Mitigation: The following measure will incorporated into the LPA to ensure impacts related to displacements and acquisitions are avoided or further minimized. CN-1—Relocation Assistance and Compensation Metro will provide relocation assistance and compensation for all displaced businesses and residences, as required by both the Uniform Relocation Assistance and Real Property Acquisition Act and the California Relocation Assistance Act. All real property acquired by Metro will be appraised to determine its fair market value. Just compensation, which will not be less than the approved appraisal, will be made to each displaced property owner. Each business and residence displaced as a result of the LPA will be given advance written notice and will be informed of their eligibility for relocation assistance and payments under the Uniform Relocation Assistance and Property Acquisition Act. It is anticipated that most businesses will relocate and, as such, most jobs will be relocated and will not be permanently displaced. However, there are permanent job losses anticipated. Metro shall coordinate with the appropriate jurisdictions regarding business relocations.	Verify Compliance	Metro	– Metro – Metro Before Final Design
Historic, Archeological, and Paleontological Resources			
Mitigation: For the properties that have a determination of No Adverse Effect, implementation of mitigation measure HR-1 will further ensure avoidance of adverse effects to the historic properties. In addition, implementation of mitigation measure HR-4 will ensure that inadvertent direct construction-related impacts to built historic properties within the APE do not alter the materials, features, or finishes that are important to the integrity of the property. Implementation of mitigation measure (AR-1) will reduce construction impacts to undocumented archaeological resources, including human remains. Implementation of the mitigation measures (PA-1) will substantially reduce the impacts to paleontological resources. During construction, implementation of mitigation measures (PA-2 through PA-7) would further reduce impacts to undocumented paleontological resources. HR-1—Treatment to Avoid Adverse Effects Design Phase Planning. The project would be designed in adherence to the	Verify compliance	Metro	– California Department of Parks and Recreation Office of Historic Preservation – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Rehabilitating Historic Buildings and the Guidelines for the Treatment of Cultural Landscapes at the following four historic properties that will be altered by either construction staging activities or station entrances to ensure there is no adverse effect to these properties: • LACMA West May Company – WSE 24 (6067 Wilshire Boulevard) • Union Bank Building—WSE 14 (9460 Wilshire Boulevard) • Linde (Westwood) Medical Plaza - WSE 10 (10921 Wilshire Boulevard) • VA Medical Center Historic District—WSE 41 (11301 Wilshire Boulevard) including the Wadsworth Theater and Contributing Landscape Elements Designs will ensure the preservation of the character-defining features of the historic properties, and would avoid damaging or destroying materials, features, or finishes that are important to the property, while also considering economic and technical feasibility. Metro will ensure that the SHPO has opportunity to review the design by the architectural historian. Design Review and Monitoring. Metro will retain the services of a qualified historic preservation consultant with experience in architectural preservation to review structural designs and construction activities, and will require onsite periodic construction monitoring by a historic preservation consultant to ensure protection of historic fabric and compliance with approved designs and the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties.			
~~HR-2—Treatment to Resolve Adverse Effect~~ ~~HABS/HAER Documentation—The adverse effects of the Undertaking on the Ace Gallery will be resolved by FTA by requiring Metro to implement and complete National Park Service Historic American Building Survey (HABS) or Historic American Engineering Record (HAER) documentation, pursuant to Section 110(b) of the National Historic Preservation Act for the adversely affected property. Prior to any action, the photo-recordation and documentation consistent with the standards of the National Park Service HABS or HAER will be prepared by a Secretary of Interior qualified professional architectural historian or historic architect. Whenever possible, HABS/HAER documentation Level 2 would be employed whenever measured drawings for a property are available. If measured drawings are not available, HABS/HAER documentation Level 1 would be employed.~~ ~~The HABS/HAER documentation will be forwarded by the Metro to the FTA and SHPO for review. The FTA, in consultation with Metro and SHPO, will approve~~	~~Verify Compliance~~	~~Metro~~	~~– California Department of Parks and Recreation Office of Historic Preservation~~ ~~– Metro~~ ~~– Construction~~

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
~~the materials and permit Metro to proceed with demolition of the adversely-affected property.~~ ~~Following approval of the HABS/HAER documentation, Metro will ensure that the materials are placed on file with Metro and Responsible Agencies, historical societies and preservation groups, local university and community libraries, and other appropriate national and local repositories and archives, as identified by Metro.~~ ~~Public Website Development—In connection with HABS/HAER documentation, Metro will develop a public website linked to Metro's website concerning the history of the Ace Gallery. The website would be based on the photographs produced as part of the HABS/HAER documentation, and historic archival research previously prepared as part of the Undertaking and historic documentation. A public website, which provides historic and documentary information regarding historic properties that would be substantially altered or demolished as a result of the Undertaking, will be prepared and maintained for a ten-year period.~~			
HR-3—Construction Starting Beyond 2019 For those portions of the APE in which construction would start beyond 2019, Metro would retain the services of a Secretary of Interior professional qualified architectural historian to complete an updated historic property survey and evaluation to ensure that construction of the LPA would have no effect on eligible historic properties built after 1968 not previously inventoried during preparation of the Draft EIS/EIR or the Final EIS/EIR for the LPA. A draft and final report on the results of the survey and evaluation would be submitted to Metro, FTA, SHPO, and other signatories to the Memorandum of Agreement for review and approval prior to initiation of any beyond-2019 ground-disturbing activities within the APE for the LPA. The final report would be placed on file with Metro and Responsible Agencies, the South Central Coastal Information Center, and other appropriate local repositories identified by Metro within three months after the work has been completed. If any of the newly inventoried built resources are determined to be eligible historic resources and may be adversely affected by the LPA, the FTA, with the assistance of Metro, shall review and approve appropriate mitigation measures, which shall be devised by Metro in concert with a qualified architectural historian. To the extent feasible, treatment to avoid and minimize adverse	Verify compliance	Metro	– California Department of Parks and Recreation Office of Historic Preservation – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
effects shall follow Mitigation Measure HR-1. In the event activities associated with the LPA cannot be implemented in a manner which meets adherence to Secretary of the Interior's Standards under HR-1, then the treatment described in Mitigation Measures HR-2 or other treatment appropriate to the specific resource(s) would be implemented.			
~~PA-1—Memorandum of Understanding~~ ~~Metro will implement the Memorandum of Understanding with the George C. Page Museum of La Brea Discoveries regarding treatment of paleontological resources from asphaltic deposits.~~	~~Verify compliance~~	~~Metro~~	~~– California Department of Parks and Recreation Office of Historic Preservation~~ ~~– Metro~~ ~~– Final Design~~
Construction (Archaeological, Historic and Paleontological Resources)			
Mitigation: The Memorandum of Agreement (MOA) sets forth measures to be implemented to reduce potential construction impacts within the APE to known archaeological historic properties and to undocumented archaeological resources, including human remains. For additional details refer to the MOA found in Appendix D. Implementation of the following measures will reduce impacts to archeological resources: For the property that has a determination of No Adverse Effect, implementation of mitigation measure HR-1 will further ensure avoidance of adverse effects to the historic properties. In addition, implementation of mitigation measure HR-4 will ensure that inadvertent direct construction-related impacts to built historic properties within the APE do not alter the materials, features, or finishes that are important to the integrity of the property. ~~Even with implementation of this mitigation measure, construction of the LPA will result in an unavoidable and significant impact to a historic resource at the Wilshire/Rodeo Station to accommodate construction staging activities.~~ AR-1—Unanticipated Discoveries and Consultation with Native American Individuals, Tribes and Organizations and Treatment of Cultural Remains and Artifacts If previous unidentified cultural resources, including human remains, are encountered during construction or earth-disturbing activities, all activities at that location shall be halted until a qualified archaeologist can examine the resources and assess their significance. If the resources are determined to be significant, Metro will notify FTA and SHPO within 48 hours of the discovery to determine the appropriate course of action.	Verify compliance with mitigation monitoring plan	Metro	– California Department of Parks and Recreation Office of Historic Preservation – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
For resources determined eligible or assumed to be eligible for the NRHP by FTA, Metro will notify the FTA, ACHP, and SHPO of those actions that it proposes to avoid, minimize, or mitigate adverse effects. Consulting parties will have 48 hours to provide their views on the proposed actions. The FTA will ensure that timely-filed recommendations of consulting parties are taken into account prior to granting approval of the measures that the Metro will implement to resolve adverse effects. Metro will carry out the approved measures prior to resuming construction activities in the location of the discovery. Metro will ensure that the expressed wishes of Native American individuals, tribes, and organizations are taken into consideration when decisions are made regarding the disposition of other Native American archaeological materials and records relating to Indian tribes. Should Indian burials and related items be discovered during construction of the project, Metro will consult with the affected Native American individuals, tribes and organization regarding the treatment of cultural remains and artifacts. These will be treated in accordance with the requirements of the California Health and Safety Code. If the county coroner/medical examiner determines that the human remains are or may be of Native American origin, then the discovery shall be treated in accordance with the provisions of §§ 5097.98 (a) - (d) of the California Public Resources Code which provides for the notification of discovery of Native American human remains, descendants; disposition of human remains and associated grave goods.			
HR-4—Geotechnical Pre-Construction Survey and Historic Land-scape Protection Geotechnical Investigations. For historic properties, further geotechnical investigations will be undertaken to evaluate soil, groundwater, seismic, and environmental conditions along the alignment. This analysis will assist in the development of appropriate support mechanisms and measures for cut and fill construction areas. The subsurface investigation will also identify areas that could cause differential settlement as a result of using a tunnel boring machine (TBM) in close proximity to historic properties. An architectural historian or historical architect who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) will provide input and review of final design documents prior to implementation of the mechanisms and measures. The review will evaluate whether the geotechnical investigations and support	Hire a qualified historic preservation consultant	Metro/Contractor	– California Department of Parks and Recreation Office of Historic Preservation – Metro

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
measures for cut and fill, and measures to prevent differential settlement meet the Secretary of the Interior's Standards for the Treatment of Historic Properties. The evaluation of measures will be forwarded by Metro to the FTA and SHPO for review. Then FTA, in consultation with SHPO, upon the SHPO's concurrence, shall approve the evaluation and permit Metro to proceed with construction. Historic District Contributing Historic Landscape Element Pre-Construction Survey. Metro will develop a survey of the contributing landscape elements of the VA Medical Center Historic District located within 20 feet of the Westwood/VA Hospital North and South Station portal-related cut-and-cover and construction staging areas during Final Design. The survey will be prepared by a qualified architectural historian and historic landscape architect and/or qualified arborist with the assistance of a technician/surveyor using high-resolution GPS equipment. The survey will establish an inventory of each mature historic tree species and the precise location of each individual tree in the survey area. The inventory survey will also assess the feasibility of temporarily removing and then replanting the extant trees in their original location, including how the trees should be moved and temporarily stored. A report on the results of the inventory will be submitted to FTA, Metro, and SHPO for review and will be placed on file with Metro. Historic District Contributing Historic Landscape Element Landscape Protection Measures. The results of the pre-construction survey will be used for marking trees to be avoided during construction, for implementation of relocation recommendations as necessary if avoidance of any of the trees is infeasible, and for onsite use during construction activities to ensure the historic trees remaining in place are protected. Should any trees that are temporarily removed not survive a reasonable period after they are replanted, as determined by a qualified arborist, Metro will obtain and plant adult-aged replacement trees of the same species to rehabilitate the historic landscape. Historic District Contributing Historic Landscape Element Construction Monitoring. Metro will retain the services of a qualified historic preservation consultant with experience in the preservation of historic landscapes. The consultant will review the existing landscape designs and proposed construction activities, and develop a plan for onsite periodic construction			

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
monitoring to ensure protection of historic fabric and compliance with the Guidelines for the Treatment of Cultural Landscapes.			
PA-2—Early Fossil Recovery Metro will seek early approval to begin fossil recovery in advance of construction if feasible.	Seek early approval from California Department of Parks and Recreation Office of Historic Preservation	Metro	– California Department of Parks and Recreation Office of Historic Preservation – Metro – Prior to construction
PA-3—Retain the Services of a Qualified Principal Paleontologist Metro will retain the services of a qualified principal paleontologist (minimum of graduate degree, 10 years of experience as a principal investigator and specialty in vertebrate paleontology) to oversee execution of mitigation measures.	Verify compliance and completion of monitoring report	Metro	– California Department of Parks and Recreation Office of Historic Preservation – Metro – Construction
PA-4—Development of a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) Metro's qualified principal paleontologist will develop a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) acceptable to the collections manager of the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County and the collection manager of the Page Museum of La Brea Discoveries. Metro will implement the PRMMP during construction. The plan will clearly demarcate the areas to be monitored and specify criteria. At the completion of paleontological monitoring for the LPA, a paleontological resources monitoring report will be prepared and submitted to the Page Museum of La Brea Discoveries and the Natural History Museum of Los Angeles County to document the results of the monitoring activities and summarize the results of any paleontological resources encountered.	Verify completion of PRMMP and compliance with PRMMP	Metro	– California Department of Parks and Recreation Office of Historic Preservation – Metro – Construction
PA=5—Required Activities for Recovered Fossils in the PRMMP The PRMMP will include specifications for processing, stabilizing, identifying, and cataloging any fossils recovered on the LPA. For any tar pit deposits encountered, this will include chemical removal of asphalt from matrix and specimens. Cleaned matrix will require microscopic examination for small fossils, including invertebrates and plants, by a qualified paleontologist.	Verify compliance with PRMMP	Metro	– California Department of Parks and Recreation Office of Historic Preservation – Metro – Construction
PA-6—Preparation of a Report on Paleontological Resources Recovered	Verify report has	Metro	– California

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Metro's qualified principal paleontologist will prepare a report detailing the paleontological resources recovered, their significance, and arrangements made for their curation at the conclusion of the monitoring effort.	been prepared		Department of Parks and Recreation Office of Historic Preservation – Metro – Construction
PA-7—Curation of Identified and Prepared Fossils Metro will provide the resources necessary to curate the identified and prepared fossils as specified in the Memorandum of Understanding between Metro, FTA, and the George C. Page Museum of Rancho La Brea Discoveries. Those fossils recovered from asphaltic deposits will be curated at the George C. Page Museum. All other fossils will be curated at the Natural History Museum of Los Angeles County.	Verify compliance	Metro	– California Department of Parks and Recreation Office of Historic Preservation – Metro – Construction
Growth Inducing			
No significant impacts, therefore, no mitigation will be required.	N/A	N/A	N/A
Cumulative Impacts			
Mitigation: The implementation of mitigation measures T-1, T-2, T-3, and T-4 will help reduce the magnitude of parking impacts.	Verify compliance	Metro	– Metro – Metro Final Design and Prior to Construction
Construction (Land Use)			
Mitigation: Implementation of mitigation measures TCON-1, TCON-10 and TCON-11 will further ensure that traffic and pedestrian circulation and access will be maintained throughout construction.	Review and verify plans.	Contractor	– Metro – Metro Final Design and Construction
Construction (Community and Neighborhoods)			
CON-1—Signage Signage to indicate accessibility to businesses will be used in the vicinity of construction activity. In addition, implementation of mitigation measures TCON-1, TCON-2, TCON-3, T-CON-4, TCON-7, TCON-8, TCON-10 and TCON-11 will reduce construction impacts to communities and neighborhoods.	Verify compliance	Contractor	– Metro – Metro – Construction
Construction (Environmental Justice)			
Construction will not result in disproportionate adverse impacts to environmental justice communities. No additional measures will be required	N/A	N/A	N/A
Construction(Visual and Aesthetics)			
Mitigation: To ensure impacts related to construction activities are minimized, the following	Verify compliance	Contractor	– Metro

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
mitigation measures will be implemented: CON-2—Timely Removal of Erosion-Control Devices Visually obtrusive erosion-control devices, such as silt fences, plastic ground cover, and straw bales, will be removed as soon as the area is stabilized.			– Metro – Construction
CON-3—Location of Construction Materials Stockpile areas will be located in less visibly sensitive areas and, whenever possible, not be visible from the road or to residents and businesses. Limits on heights of excavated materials will be developed during design based on the specific area available for storage of material and visual impact.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-4—Construction Lighting Lighting will be directed toward the interior of the construction staging area and be shielded so that it will not spill over into adjacent residential areas. In addition, temporary sound walls of Metro approved design will be installed at station and work areas. These will block direct light and views of the construction areas from residences.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-5—Screening of Construction Staging Areas Construction staging areas will be screened where possible, to reduce visual effects on adjacent viewers	Verify compliance	Contractor	– Metro – Metro – Construction
Construction(Air Quality)			
Mitigation: These mitigation measures will help to reduce air quality particulate matter impacts, but it is unlikely—given the current construction plan—that these levels, especially NO, will be below the SCAQMD threshold during construction. Therefore, adverse effects will remain after mitigation. CON-6—Meet Mine Safety (MSHA) Standards Tunnel locomotives (hauling spoils and other equipment to the tunnel heading) will be approved by Metro to meet mine safety (MSHA) standards.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-7—Meet SCAQMD Standards Metro and its contractors will set and maintain work equipment and standards to meet SCAQMD standards, including NOx.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-8—Monitoring and Recording of Air Quality at Worksites Monitoring and recording of air quality at the worksites will be conducted. In areas of gassy soil conditions (Wilshire/La Brea and Wilshire/Fairfax work sites), air quality will be continuously monitored and recorded. Construction will be altered as required to maintain a safe working atmosphere. The working environment will	Verify compliance	Contractor	– Metro – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
be kept in compliance with Federal, State, and local regulations, including SCAQMD and Cal/OSHA standards.			
CON-9—No Idling of Heavy Equipment Metro specifications will require that contractors not unnecessarily idle heavy equipment.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-10—Maintenance of Construction Equipment Metro will require its contractors to maintain and tune engines per manufacturer's specifications to perform at EPA certification levels, where applicable, and to perform at verified standards applicable to retrofit technologies. Metro will also require periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.	Verify compliance	Metro/ Contractor	– Metro – Metro – Construction
CON-11—Prohibit Tampering of Equipment Metro will prohibit its contractors from tampering with engines and require continuing adherence to manufacturer's recommendations.	Verify compliance	Metro/ Contractor	– Metro – Metro – Construction
CON-12—Use of Best Available Emissions Control Technologies Metro will encourage its contractors to lease new, clean equipment meeting the most stringent of applicable Federal or State standards (e.g., Tier 3 or greater engine standards) or best available emissions control technologies on all equipment.	Verify compliance	Metro/ Contractor	– Metro – Metro – Construction
CON-13—Placement of Construction Equipment Construction equipment and staging zones will be located away from sensitive receptors and fresh air intakes to buildings and air conditioners.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-14—Measures to Reduce the Predicted PM_{10} Levels Mitigation measures such as watering, the use of soil stabilizers, etc. will be applied to reduce the predicted PM_{10} levels to below the SCAQMD daily construction threshold levels. A watering schedule will be established to prevent soil stockpiles from drying out.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-15—Reduce Street Debris At truck exit areas, wheel washing equipment will be installed to prevent soil from being tracked onto city streets, and followed by street sweeping as required to clean streets.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-16—Dust Control During Transport Trucks will be covered to control dust during transport of spoils.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-17—Fugitive Dust Control To control fugitive dust, wind fencing and phase grading operations, where appropriate, will be implemented along with the use of water trucks for	Verify compliance	Contractor	– Metro – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
stabilization of surfaces under windy conditions.			
CON-18—Street Watering Surrounding streets at construction sites will be watered by trucks as needed to eliminate air-borne dust. In keeping with Metro's prior policy on the Eastside Gold Line, the contractor will water streets in the station area impacted by dust not less than once a day and more often if needed.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-19—Spillage Prevention for Non-Earthmoving Equipment Provisions will be made to prevent spillage when hauling materials and operating non-earthmoving equipment. Additionally, speed will be limited to 15 mph for these activities at construction sites.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-20—Spillage Prevention for Earthmoving Equipment Provisions will be made to prevent spillage when hauling materials and operating earth-moving equipment. Additionally, speed will be limited to 10 mph for these activities at construction sites.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-21—Additional Controls to Reduce Emissions EPA-registered particulate traps and other appropriate controls will be used where suitable to reduce emissions of particulate matter and other pollutants at the construction site.	Verify compliance	Contractor	– Metro – Metro – Construction
Construction (Climate Change)			
Mitigation: Implementation of air quality mitigation measures CON-6 through CON-13 will further reduce climate change impacts due to construction.	Verify compliance	Metro/Contractor	– Metro – Metro Construction
Construction (Noise and Vibration)			
Mitigation: Noise impacts from construction of the LPA will require mitigation to meet the Los Angeles CEQA noise thresholds, the Metro specified limits, and the noise ordinances for Los Angeles County and the cities of Los Angeles and Beverly Hills. The final determination of construction noise impacts will depend on the equipment and activities used by the contractor to construct the LPA. Since this information on means and methods of construction is not available now, noise mitigation is presented as typical noise-control measures that have been used on other similar construction projects. Metro Baseline Specifications Section 01565, Construction Noise and Vibration Control, require that the contractor shall, among other provisions: CON-22—Hire or Retain the Services of an Acoustical Engineer Hire or retain the services of an Acoustical Engineer to be responsible for preparing and overseeing the implementation of the Noise Control and Monitoring Plans. Noise Control and Monitoring Plan will ensure that noise levels are at or	Verify compliance	Metro/Contractor	– Metro – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
below criteria levels in Metro Baseline Specifications Section 01565, Construction Noise and Vibration Control.			
CON-23—Prepare a Noise Control Plan Prepare a Noise Control Plan that includes an inventory of construction equipment used during daytime and nighttime hours, an estimate of projected construction noise levels, and locations and types of noise abatement measures that may be required to meet the noise limits specified in the Noise Control and Monitoring Plan.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-24—Comply with the Provisions of the Nighttime Noise Variance In the case of nighttime construction, the contractor will comply with the provisions of the nighttime noise variance issued by local jurisdictions. The variance processes for the Cities of Los Angeles and Beverly Hills and the County of Los Angeles require the applicant to provide a noise mitigation plan and to hold additional public meetings before granting the variance to allow work that would be performed outside of the permitted working hours.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-25—Noise Monitoring Conduct periodic noise measurement in accordance with an approved Noise Monitoring Plan, specifying monitoring locations, equipment, procedures, and schedule of measurements and reporting methods to be used.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-26—Use of Specific Construction Equipment At night, use only construction equipment operating at the surface of the construction site under full load, are certified to meet specified lower noise level limits set in the Noise Control Plan, and specified in the noise variance application.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-27—Noise Barrier Walls for Nighttime Construction Where nighttime construction activities are expected to occur, erect Metro-designed noise barrier walls at each construction site prior to the start of construction activities. Barriers should be designed to reduce construction site noise levels by at least 5 dBA.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-28—Comply with Local Noise Ordnances The LPA will comply as applicable with the City of Los Angeles, City of Beverly Hills, and County of Los Angeles noise ordinances during construction hours. Compliance with City of Los Angeles, City of Beverly Hills, and County of Los Angeles standards for short-term operation of mobile equipment and long-term construction operations of stationary equipment, including noise levels and hours of operation, also will occur. Hours of construction activity will be varied to meet special circumstances and restrictions. Municipal and building codes of each city in the Study Area include restrictions on construction hours. The City of Los Angeles limits construction activity to 8 a.m. to 6 p.m. on Monday through Friday	Verify compliance	Contractor	– City of Los Angeles City of Beverly Hills City of Santa Monica City of West Hollywood, and County of Los Angeles – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
and 9 a.m. to 5 p.m. on Saturdays, with no construction on Sundays and Federal holidays. The City of Beverly Hills identifies general construction hours of 8:00 a.m. to 6:00 p.m. from Monday through Saturday. For all the cities in the Study Area, construction is prohibited on Sundays and city holidays. Construction outside of these working periods will require a variance from the applicable city. The variance processes for the Cities of Los Angeles and Beverly Hills and the County of Los Angeles require the applicant to provide a noise mitigation plan and hold additional public meeting,			
CON-29—Signage Readily visible signs indicating "Noise Control Zone" will be prepared and posted on or near construction equipment operating close to sensitive noise sites.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-30—Use of Noise Control Devices Noise-control devices that meet original specifications and performance will be used.	Verify compliance	Contractor	– Metro – Metro – Project implementation
CON-31—Use of Fixed Noise-Producing Equipment for Compliance Fixed noise-producing equipment will be used to comply with regulations in the course of LPA-related construction activity.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-32—Use of Mobile or Fixed Noise-Producing Equipment Mobile or fixed noise-producing construction equipment that are equipped to operate within noise levels will be used to the extent practical.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-33—Use of Electrically Powered Equipment Electrically powered equipment will be used to the extent practical.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-34—Use of Temporary Noise Barriers and Sound-Control Curtains Temporary noise barriers and sound-control curtains will be erected where LPA-related construction activity is unavoidably close to noise-sensitive receivers.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-35—Distance from Noise-Sensitive Receivers Within each construction area, earth-moving equipment, fixed noise-generating equipment, stockpiles, staging areas, and other noise-producing operations will be located as far as practicable from noise-sensitive receivers.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-36—Limited Use of Horns, Whistles, Alarms, and Bells Use of horns, whistles, alarms, and bells will be limited for use as warning devices, as required for safety.	Verify compliance	Contractor	– Metro – Metro – Construction/Project Implementation
CON-37—Requirements on Project Equipment All noise-producing project equipment, including vehicles that use internal	Verify compliance	Contractor	– Metro – Metro

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
combustion engines, will be required to be equipped with mufflers and air-inlet silencers, where appropriate, and kept in good operating condition that meets or exceeds original factory specifications. Mobile or fixed "package" equipment (e.g., arc- welders, air compressors) will be equipped with shrouds and noise-control features that are readily available for that type of equipment.			– Construction
CON-38—Limited Audibility of Project Related Public Addresses or Music Any LPA-related public address or music system will not be audible at any adjacent sensitive receiver.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-39—Use of Haul Routes with the Least Overall Noise Impact To the extent practical, based on traffic flow, designated haul routes for construction-related traffic will be used based on the least overall noise impact. For example, heavily loaded trucks will be routed away from residential streets if possible. Where no alternatives are available, haul routes will take into consideration streets with the fewest noise-sensitive receivers.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-40—Designated Parking Areas for Construction-Related Traffic Non-noise-sensitive designated parking areas for LPA-related traffic will be used.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-41—Enclosures for Fixed Equipment Enclosures for fixed equipment, such as TBM slurry processing plants, will be required to reduce noise.	Verify compliance	Contractor	– Metro – Metro – Construction
Mitigation: To ensure that noise and vibration impacts associated with construction are below threshold levels, Metro's plans, specifications, and estimates ("bid") documents will include the following measures:	Verify compliance	Contractor	– Metro – Metro – Construction
CON-42—Phasing Ground Impacting Operations Demolition, earth moving, and ground impacting operations will be phased so as not to occur in the same time period.			
CON-43—Alternatives to Impact Pile Driving Impact pile driving will be avoided. Drill piles or sonic or vibratory drivers will be used where the geological conditions permit their use and where ground vibration damage risk criteria are satisfied.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-44—Alternative Demolition Methods Demolition methods will be selected to minimize noise and vibration impact where possible.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-45—Restriction on Use of Vibratory Rollers and Packers Use of vibratory rollers and packers will be avoided near vibration sensitive areas.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-46—Metro Ground-Born Noise and Ground-Born Vibration Limits If the Metro ground-borne noise limits or ground-borne vibration limits are exceeded, the contractor will be required to take action to reduce vibrations to	Verify compliance	Contractor	– Metro – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
acceptable levels. Such action could include reducing the muck train speed, additional rail and tie isolation, and more frequent rail and wheel maintenance.			
Construction (Energy)			
No mitigation required. However, to further ensure there is no a wasteful, inefficient, or unnecessary energy usage, Metro will require the construction contractor to implement energy conserving BMPs in accordance with Metro's Energy and Sustainability Policy	Verify Compliance	Metro/ Contractor	– Metro – Metro – Construction
Construction (Geologic Hazards)			
Mitigation: The following measures will be implemented to reduce impacts related to subsidence and settlement due to tunneling.	Verify compliance	Contractor	– Metro – Metro – Construction
~~CON-47—Use of Pressurized-Face TBMs for Tunnel Construction~~ ~~To optimize control of the ground overlying and surrounding the tunnels and limit ground settlement to acceptable levels, pressurized face TBMs will be used for tunnel construction, which will allow the tunnel lining to be installed and grout to be injected into the annulus between the lining and the ground immediately behind the TBM concurrently and without having to lower groundwater levels by dewatering.~~		~~Contractor~~	
CON-48—Preconstruction Survey, Instrumentation, and Monitoring Preconstruction Survey, Instrumentation, and Monitoring: As added protection to detect tunneling-induced settlement and settlement induced by other excavation activities, pre-construction surveys will be performed to document the existing conditions of buildings along the alignment before tunneling begins, and instrumentation will be installed to monitor structures. During construction, instrumentation (e.g., ground surface and building monitoring programs) will be in place to measure movements and provide information to the resident engineer and contractor on tunneling performance, as well as to document that the settlement specifications are met. If measurements indicate settlement limits could be exceeded, the contractor will be required to change or add methods and/or procedures to comply with those limits. Construction work will be reassessed if settlements exceed action (warning) levels.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-49—Additional Geotechnical Exploration During the design phases, additional geotechnical exploration and analysis will be undertaken to confirm areas where dewatering will be required and if it will cause significant subsidence. If these conditions are found, methods to prevent lowering of the groundwater outside of the excavation will be employed. These methods could include use of slurry walls, secant pile walls, or other methods for the construction of the station walls to reduce the settlement impacts due to groundwater lowering.	Verify completion of research	Metro	– Metro – Metro – Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
CON-50—Additional Methods to Reduce Settlement Where conditions warrant (for example, more shallow tunnels directly below sensitive structures or at cross-passages), additional methods to reduce settlement will be specified. Such methods could include the following: • Permeation grouting to improve the ground prior to tunneling • Compaction grouting to consolidate the ground above the tunnel • Compensation grouting as the tunnel is excavated • Underpinning the structure's foundation	Verify compliance	Metro/ Contractor	– Metro – Metro – Construction
CON-51—Techniques to Lower the Risk of Exposure to Hydrogen Sulfide In areas where hydrogen sulfide is encountered, several techniques could be used to lower the risk of exposure. The primary measures to prevent exposure to hydrogen sulfide gas are separation of materials from the tunnel environment, and increased ventilation capacity to dilute gases to safe levels as defined by Cal/OSHA. Secondary measures could include pre-treatment of groundwater containing hydrogen sulfide by displacing and oxidation of the hydrogen sulfide by injecting water (possibly containing dilute hydrogen peroxide) into the ground and groundwater in advance of the tunnel excavation. This "in-situ oxidation" method reduces hydrogen sulfide levels even before the ground is excavated. This pre- treatment method is unlikely to be necessary where a slurry-face TBM is used, but may be implemented at tunnel-to-station connections or at cross-passage excavation areas and where open excavation and limited dewatering may be conducted such as emergency exit shafts and low-point sump excavations. When needed to reduce hydrogen sulfide to safe levels for slurry treatment; additives could be mixed with the bentonite (clay) slurry during the tunneling and/or prior to discharge into the slurry separation plant. For example, zinc oxide could be added to the slurry as a "scavenger" to precipitate dissolved hydrogen sulfide when slurry hydrogen sulfide levels get too high. Gas levels will be maintained in accordance with Cal/OSHA requirements for safe working environments.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-52—Measures to Reduce Gas Inflows For the stations in elevated gas zones, the use of relatively impermeable lagging, use of diaphragm or slurry walls or equivalent will be implemented to reduce of gas inflows both during and after construction. The slurry wall provides a thick (typically 3 to 4 feet) concrete barrier against water and gas intrusion, and significantly reduces the need for dewatering the station during construction. Grout tubes can be pre-placed within slurry wall panels to be used in the event leakage occurs. Slurry walls present a challenge in accommodating existing utilities, and typically more	Verify compliance	Contractor	– Metro – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
utility relocation is required for slurry wall systems. Additional ventilation, continuous monitoring, and worker training for exposure to hazardous gases will also be required during station construction. In extreme cases, some work may require temporary use of personal protective equipment, such as fitted breathing apparatus.			
CON-53—Further Research on Oil Well Locations Prior to construction, more detailed research on oil well locations will be conducted. Detection of oil wells will include use of magnetic devices to sense oil well casings within the tunnel alignment. Where the tunnel alignment cannot be adjusted to avoid well casings, the California Department of Conservation (Department of Oil, Gas and Geothermal Resources) will be contacted to determine the appropriate method to re-abandon the well. Oil Well abandonment must proceed in accordance with California Laws for Conservation of Petroleum and Gas (1997), Division 3. Oil and gas, Chapter 1. Oil and Gas Conservation, Article 4, Sections 3228, 3229, 3230, and 3232. The requirements include written notification of the State Department of Oil, Gas and Geothermal Resources (DOGGR), protection of adjacent property, and before commencing any work to abandon any well, obtaining approval by the DOGGR. Abandonment work including sealing off oil/gas bearing units, pressure grouting etc, must be performed by a state-licensed contractor under the regulatory oversight and approval of DOGGR. Similarly, during construction if an unknown well is encountered, the contractor will notify Metro, Cal/OSHA, and the Gas and Geothermal Resources for well abandonment, and proceed in accordance with state requirements.	Verify completion of research on oil locations	Metro/Contractor	– Metro – Metro – Prior to Construction
CON-54—Worker Safety for Gassy Tunnels Although not specifically required for gassy tunnels, workers will be supplied with oxygen-supply-type self-rescuers (breathing apparatus required for safety during evacuation during fires).	Verify compliance	Contractor	– Metro – Metro – Construction
Construction (Hazardous Waste and Materials)			
Mitigation: In addition to the measures implemented as required by applicable regulations the following mitigation measures will be implemented so there will be no impact associated with hazardous waste and materials due to construction activities. CON-55—Site Assessments As detailed design-level plans are prepared, and precise LPA excavation limits defined, a more detailed Environmental Site Assessment (Phase II) will be conducted prior to construction in areas of impacted soil. A base line soil sampling protocol will be established with special attention to those areas of environmental concern. The soil will be assessed for constituents likely to be	Verify completion of ESA and sampling	Metro	– Metro – Metro – Prior to Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
present in the subsurface including, but not limited to, total petroleum hydrocarbons, volatile and semi-volatile organic compounds, polychlorinated biphenyls, polynuclear aromatic hydrocarbons, pesticides, lead arsenates, and Title 22 metals. The depth of the sampling will be based on the depth of excavation or type of construction activities. In addition, in areas where groundwater will be encountered, samples will also be analyzed for suspected contaminants prior to dewatering to ensure that National Pollutant Discharge Elimination System discharge requirements are satisfied.			
CON-56—Soil Reuse As detailed design-level plans are prepared, and precise LPA excavation dimensions defined, a soil mitigation plan will be prepared showing the extent of soil excavation during construction. The soil mitigation plan will use Metro's Standard Specifications for soil reuse criteria, which include a sampling plan for stockpiled materials, and the disposition of materials that do not satisfy the reuse criteria. It will specify guidelines for imported materials. The plan will include provisions for soil screening for contamination during grading or excavation activities.	Verify compliance	Metro	– Metro – Metro – Prior to Construction
CON-57—Sampling During Construction Metro will sample soil suspected of contamination and analyze the excavated soil for the purpose of classifying material and determining disposal requirements. If excavated soil is suspected or known to be contaminated, the contractor to perform the following operations: • Segregate and stockpile the material in a way that will facilitate measurement of the stockpile volume. • Spray the stockpile with water or an SCAQMD-approved vapor suppressant and cover the stockpile with a heavy-duty plastic (e.g., Visqueen) to prevent soil volatilization to the atmosphere or exposure to nearby workers.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-58—Soil Testing Soil samples that are suspected of contamination will be analyzed for suspected chemicals by a California certified laboratory. If contaminated soil is found, it will be removed, transported to an approved disposal location and remediated or disposed according to state and federal laws. Where contaminated levels can be diluted to acceptable levels soils may be re-used on-site.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-59—Personal Protection The contractor will provide qualified and trained personnel and personal protective equipment (PPE) to perform operations that require the disturbance of contaminated substances including excavation of stations, slurry/tunnel material processing, segregation, stockpiling, loading and hauling.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-60—Contaminated Groundwater	Verify completion	Metro/Contractor	– Metro

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Groundwater contamination encountered during subsurface construction activities may be treated on-site to acceptable local and state criteria and then discharged into the sanitary sewer. If on-site treatment is not feasible due to the type and severity of the contamination identified, the contaminated ground water may need to be disposed of by recycling in a permitted facility. If unanticipated contaminated groundwater (not included in the health and safety plan) is encountered during construction, the contractor will stop work in the vicinity, cordon off the area, and contact Metro and the appropriate hazardous waste coordinator and maintenance hazardous spill coordinator at Metro and will immediately notify the Certified Unified Program Agencies (City of Los Angeles Fire Department, County of Los Angeles Fire Department, and Los Angeles Regional Water Quality Control Board [LARWQCB]) responsible for hazardous materials and wastes. In coordination with the LARWQCB, an investigation and remediation plan will be developed in order to protect public health and the environment. Any hazardous or toxic materials will be disposed according to local, state, and federal regulations.	of testing of suspect contaminated groundwater		– Metro – Construction
CON-61—Health and Safety Plan A health and safety plan will be required by LPA specifications. The plan will include response to exposure of personnel to constituents of concern identified in the Phase II Environmental Site Assessment.	Verify completion of health and safety plan and compliance	Contractor	– Metro – Metro – Construction
CON-62—Storage of Contaminated Materials Hazardous or contaminated materials will be properly stored to prevent contact with precipitation and runoff.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-63—Monitoring the Environment An effective monitoring and cleanup program will be developed and implemented for spills and leaks of hazardous materials	Verify compliance	Contractor	– Metro – Metro – Construction
CON-64—Equipment Repair and Maintenance Equipment to be repaired or maintained will be placed in covered areas on a pad of absorbent material to contain leaks, spills, or small discharges	Verify compliance	Contractor	– Metro – Metro – Construction
CON-65—Removal of Chemical Residue Any significant chemical residue on the construction sites will be removed.	Verify compliance	Contractor	– Metro – Metro – construction
Construction (Ecosystems/ Biological Resources)			
Mitigation: Mitigation measures will be required for compliance with the Migratory Bird Treaty Act and State migratory bird protection and to avoid and minimize impacts to bird species that may utilize trees that could be removed or disturbed during construction of the LPA.	Verify completion of biological surveys	Metro	– Metro – Metro – Construction
CON-66—Biological Survey Two biological surveys will be conducted, one 15 days prior and a second 72 hours			

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
prior to construction that will remove or disturb suitable nesting habitat. The surveys will be performed by a biologist with experience conducting breeding bird surveys. The biologist will prepare survey reports documenting the presence or absence of any protected native bird in the habitat to be removed and any other such habitat within 300 feet of the construction work area (within 500 feet for raptors). If a protected native bird is found, surveys will be continued in order to locate any nests. If an active nest is located, construction within 300 feet of the nest (500 feet for raptor nests) will be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting.			
CON-67—Compliance with City Regulations If construction or operation of the LPA requires removal or pruning of a protected tree, a removal permit will be required in accordance with applicable municipal codes and ordinances of the city in which the affected tree is located. Within the City of Los Angeles, compliance with the Native Tree Protection Ordinance will require a tree removal permit from the Los Angeles Board of Public Works. Similarly, within the City of Beverly Hills, applicable tree protection requirements, such as tree removal permits, will be followed. Tree removal permits may require replanting of protected trees within the Study Area or at another location to mitigate for the removal of these trees.	Verify compliance	Metro/Contractor	– Metro – Metro – Construction
CON-68—Tree Pruning If construction or operation will entail pruning of any protected tree, the pruning will be performed in a manner that does not cause permanent damage or adversely affect the health of the trees.	Verify compliance	Metro/Contractor	– Metro – Metro – Construction
CON-69—Avoidance of Migratory Bird Nesting Season Construction activities that involve tree removal or trimming will be timed to occur outside the migratory bird nesting season, which occurs generally from March 1st through August 31st and as early as February 1st for raptors.	Verify compliance	Metro/Contractor	– Metro – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
Construction (Hydrology and Water Resources)			
Mitigation: In addition to the measures identified for geologic hazards and hazardous wastes and materials, the following measures are recommended to avoid and minimize impacts to water resources and water quality as they relate to groundwater. CON-70—Methods to Control Contaminated Groundwater In the event contaminated groundwater is encountered in test borings and it is determined that contamination is likely to spread, this concern will be mitigated during design and engineering. For example, perched contaminated groundwater in upper levels of the excavation could be allowed to contaminate groundwater in lower levels of an excavation. Methods to control this could include isolation of dewatering systems or/and use of groundwater barriers.	Verify mitigation is completed during project design and engineering.	Metro	– California State Water Resources Control Board (SWRCB) – Metro – Final Design
CON-71—Plan if Contaminated Groundwater is Encountered If contaminated groundwater is encountered during construction, the contractor will stop work in the vicinity, cordon off the area, and contact the appropriate hazardous waste coordinator and maintenance hazardous spill coordinator at Metro and immediately notify the Certified Unified Program Agencies (City of Los Angeles Fire Department, County of Los Angeles Fire Department, and Los Angeles RWQCB) responsible for hazardous materials and wastes. Through coordination with the Los Angeles RWQCB, an investigation and remediation plan will be developed to protect public health and the environment. The contractor will treat or dispose of any hazardous or toxic materials according to local, State, and Federal regulations.	Verify compliance	Metro/Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction
Mitigation: In addition to the measures identified for geologic hazards and hazardous wastes and materials, the following measures are recommended to avoid and minimize impacts to water resources and water quality as they relate to drainage: CON-72—Erosion and Sediment Control Plan An erosion and sediment control plan will be established prior to construction. The plan will include the following BMPs as appropriate: • Use of natural drainage, detention ponds, sediment ponds, or infiltration pits to allow runoff to collect and to reduce or prevent erosion • Use of barriers to direct and slow the rate of runoff and to filter out large-sized sediments • Use of down drains or chutes to carry runoff from the top of a slope to the bottom; • Control of the use of water for irrigation so as to avoid off-site runoff	Monitor compliance	Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
CON-73—Landscape and Construction Debris Landscape and construction debris will be periodically and consistently removed.	Monitor compliance	Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Final Design
CON-74—Use of Non-Toxic Herbicides or Fertilizers Non-toxic alternatives will be employed for any necessary applications of herbicides or fertilizers.	Monitor compliance	Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction
CON-75—Use of Temporary Detention Basins Temporary detention basins will be installed to remove suspended solids by settlement.	Verify compliance	Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction
CON-76—Water Quality Monitoring Water quality of runoff will be periodically monitored before discharge from the site and into the storm drainage system	Verify compliance	Metro/Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction
Mitigation: BMPs for tunnel construction activities will include, but are not limited to, the following measures. CON-77—Use of Stormwater Runoff BMPs Construction sites will have BMPs to divert stormwater runoff from entering the construction area. Containment around the site will include use of temporary measures such as fiber rolls to surround the construction areas to prevent any spills of slurry discharge or spoils recovered during the separation process. Downstream drainage inlets will also be temporarily covered to prevent discharge from entering the storm drain system.	Verify compliance	Metro/Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction
CON-78—Measures to Reduce the Tracking of Sediment and Debris Construction entrances/exits will be properly set up so as to reduce or eliminate the tracking of sediment and debris offsite. Appropriate measures will include measures such as grading to prevent runoff from leaving the site, and establishing "rumble racks" or wheel water points at the exit to remove sediment from construction	Verify compliance	Metro/Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
vehicles.			
CON-79—Cleaning of Equipment Onsite rinsing or cleaning of any equipment will be performed in contained areas and rinse water will be collected for appropriate disposal.	Verify compliance	Metro/Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction
CON-80—Construction Site Water Collection A tank will be required on work sites to collect the water for periodic offsite disposal. Since the slurry production is a closed-loop system in which the water separated from the discharge slurry is continually recycled, minimal and infrequent water discharges are anticipated. These discharges could be accommodated in a tank onsite to collect the water and disposed of periodically.	Verify compliance	Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction
CON-81—Soil and Building Material Storage Soil and other building materials (e.g., gravel) stored onsite must be contained and covered to prevent contact with stormwater and offsite discharge.	Verify compliance	Contractor	– California State Water Resources Control Board (SWRCB) – Metro – Construction
Construction (Parks and Community Facilities)			
Mitigation: In addition to the measures for communities and neighborhoods, the following measures will avoid and minimize impacts to parks and community facilities. CON-82—Communication with Schools School districts and private school institutions along the alignment will be informed of changes to Metro bus routes, school bus routes, and pedestrian crossings prior to construction.	Verify coordination	Metro	– Metro – Metro – Prior to construction
CON-83—Work with Transportation, Police, Public Works, and Community Service Departments Metro will work with transportation, police, public works, and community services departments of jurisdictions along the alignment to implement mutually agreed upon measures, such as posting of clearly marked signs, pavement markings, lighting as well as implementing safety instructional programs, to enhance the safety of pedestrians, particularly in the vicinity of schools and access routes to hospitals. The measures will be developed to conform to Metro Rail Transit Design Criteria and Standards, Fire/Life Safety Criteria, Volume IX.	Verify coordination and compliance	Metro	– Metro – Metro – Prior to Construction
CON-84—Instructional Rail Safety Programs for Schools Metro will provide at no charge to school districts an instructional rail safety program with materials to all affected elementary middle and high schools.	Verify coordination and implementation of	Metro	– City of Los Angeles – Metro – Prior to Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	– Enforcement Agency – Monitoring Agency – Timeframe
	Public Outreach Program		and project implementation
CON-85—Informational Program to Enhance Safety Metro will provide an on-going informational program to nearby medical facilities, senior centers, and parks if requested by these facilities, to enhance safety. The program will be similar to that described for the schools except the information and materials provided will be geared toward senior citizens.	Verify coordination and implementation of Public Outreach Program	Metro	– Metro – Metro – Construction
CON-86—Traffic Control Contractors will be required to control traffic during construction by following the City of Los Angeles Work Area Traffic Control Manual; City of Los Angeles Bureau of Engineering Standard Plan S-610-12 (Notice to Contractors-Comprehensive); and the Bureau of Engineering Standard Specifications for Public Works Construction. Comparable standards will be enforced for work conducted in the other jurisdictions along the alignment.	Verify compliance	Contractor	– Metro – Metro – Construction
CON-87—Designation of Safe Emergency Vehicle Routes Safe emergency vehicle routes will be designated around construction sites. The identification of the routes will be coordinated with other agencies.	Verify coordination	Metro	– Metro – Metro – Prior to Construction
Construction (Economic and Fiscal)			
CON-88—Minimize Disruption of Access to Businesses Both standard and site-specific mitigation measures will be developed to minimize disruption of pedestrian access to businesses and disruption of general vehicular traffic flow or access to specific businesses. Implementation of mitigation measures CON-1, TCON-1, T-CON-4, TCON-7, TCON-8, TCON-10, and TCON-11 will further reduce construction impacts to businesses.	Verify inclusion into project design and implementation	Metro	– Metro – Metro – Construction