

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
WESTSIDE PURPLE LINE EXTENSION PROJECT, SECTION 3
ADVANCED PRELIMINARY ENGINEERING

Contract No. PS-4350-2000



Final 130(c) Environmental Technical Memorandum

Prepared for:



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Table of Contents

EXECUTIVE SUMMARY	1
1.0 INTRODUCTION AND PURPOSE OF TECHNICAL MEMORANDUM	1-1
1.1 Regulatory Framework	1-1
1.2 Summary of Findings	1-1
1.3 Purpose and Organization of Technical Memorandum.....	1-2
1.4 Project Background	1-2
2.0 PROJECT REFINEMENTS	2-1
2.1 Construction Staging Areas.....	2-2
2.1.1 Western VA Construction Staging Area	2-5
2.1.2 Lot 42 Construction Staging Area	2-7
2.1.3 Construction Staging and Work Areas in Caltrans Infiltration Basins.....	2-7
2.1.4 Construction Staging Area Located West of Bonsall Avenue	2-7
2.1.5 Replacement Parking Structure	2-7
2.2 Alignment at the VA Medical Center and Westwood/VA Hospital Station Entrance	2-8
2.3 Westwood/VA Hospital Station Access	2-12
2.4 Murals.....	2-15
2.5 Construction Method for Westwood/VA Hospital Station West Crossover.....	2-18
2.6 Westwood/UCLA Station Entrances.....	2-20
2.7 Tunnel Size	2-23
2.8 Grouting.....	2-23
2.9 Underground Conduits	2-25
3.0 EVALUATION OF THE PROJECT REFINEMENTS.....	3-1
3.1 Public Transit.....	3-3
3.1.1 Long-Term Operational Evaluation.....	3-3
3.1.2 Construction Phase Evaluation.....	3-4
3.2 Streets and Highways	3-5
3.2.1 Long-Term Operational Evaluation.....	3-6
3.2.2 Construction Phase Evaluation.....	3-10
3.3 Parking.....	3-21
3.3.1 Long-Term Operational Evaluation.....	3-21
3.3.2 Construction Phase Evaluation.....	3-23
3.4 Pedestrian, Bicycle, and Bus Transit	3-25
3.4.1 Long-Term Operational Evaluation.....	3-25
3.4.2 Construction Phase Evaluation.....	3-28
3.5 Land Use	3-28
3.5.1 Long-Term Operational Evaluation.....	3-29
3.5.2 Construction Phase Evaluation.....	3-33
3.6 Communities and Neighborhoods	3-36

3.6.1	Long-Term Operational Evaluation.....	3-38
3.6.2	Construction Phase Evaluation.....	3-41
3.7	Acquisitions and Displacement of Existing Uses.....	3-43
3.7.1	Permanent Easements.....	3-43
3.7.2	Temporary Easements.....	3-45
3.8	Visual Quality.....	3-48
3.8.1	Long-Term Operational Evaluation.....	3-48
3.8.2	Construction Phase Evaluation.....	3-52
3.9	Air Quality.....	3-59
3.9.1	Long-Term Operational Evaluation.....	3-59
3.9.2	Construction Phase Evaluation.....	3-60
3.10	Greenhouse Gases.....	3-68
3.10.1	Long-Term Operational Evaluation.....	3-68
3.10.2	Construction Phase Evaluation.....	3-69
3.11	Noise and Vibration.....	3-69
3.11.1	Long-Term Operational Evaluation.....	3-70
3.11.2	Construction Phase Evaluation.....	3-72
3.12	Energy.....	3-87
3.12.1	Long-Term Operational Evaluation.....	3-87
3.12.2	Construction Phase Evaluation.....	3-87
3.13	Geologic Hazards.....	3-88
3.13.1	Long-Term Operational Evaluation.....	3-88
3.13.2	Construction Phase Evaluation.....	3-90
3.14	Hazardous Waste and Materials.....	3-91
3.14.1	Long-Term Operational Evaluation.....	3-91
3.14.2	Construction Phase Evaluation.....	3-92
3.15	Ecosystems/Biological Resources.....	3-92
3.15.1	Long-Term Operational Evaluation.....	3-93
3.15.2	Construction Phase Evaluation.....	3-93
3.16	Water Resources.....	3-94
3.16.1	Long-Term Operational Evaluation.....	3-94
3.16.2	Construction Phase Evaluation.....	3-94
3.17	Safety and Security.....	3-95
3.17.1	Long-Term Operational Evaluation.....	3-95
3.17.2	Construction Phase Evaluation.....	3-96
3.18	Parklands and Community Services and Facilities.....	3-97
3.18.1	Long-Term Operational Evaluation.....	3-99
3.18.2	Construction Phase Evaluation.....	3-100
3.19	Historic and Archaeological Resources.....	3-103
3.19.1	Revised Area of Potential Effects.....	3-104
3.19.2	Historic Resources.....	3-109
3.19.3	Archaeological Resources.....	3-135
3.19.4	SHPO Concurrence.....	3-150

3.19.5	Memorandum of Agreement	3-150
3.20	Growth Inducing Impacts.....	3-150
3.21	Cumulative Impacts.....	3-151
3.21.1	Proposed Projects.....	3-151
3.21.2	Long-Term Operational Evaluation.....	3-159
3.21.3	Construction Phase Evaluation.....	3-169
3.22	Section 4(f) Evaluation.....	3-182
3.22.1	Description of Section 4(f) Properties.....	3-182
3.22.2	Evaluation of Use of Section 4(f) Properties	3-183
3.22.3	Coordination and Consultation	3-189
3.23	Environmental Justice.....	3-189
3.23.1	Long-Term Operational Evaluation.....	3-190
3.23.2	Construction Phase Evaluation.....	3-193
4.0	AGENCY AND STAKEHOLDER COORDINATION	4-1
4.1	Federal Agencies	4-1
4.1.1	U.S. Department of Veterans Affairs	4-1
4.1.2	U.S. Department of Army.....	4-6
4.1.3	General Services Administration	4-6
4.2	State Agencies.....	4-7
4.2.1	California Department of Transportation	4-7
4.2.2	University of California, Los Angeles.....	4-7
4.3	Regional and Local Agencies.....	4-8
4.3.1	Los Angeles County and City of Los Angeles	4-8
4.4	Utility Companies	4-9
4.5	Section 106 Consultation.....	4-10
4.5.1	Consultation with Consulting Parties.....	4-10
4.5.2	Tribal Consultation.....	4-16
4.6	Other Outreach	4-17
4.6.1	Linde (Westwood) Medical Plaza.....	4-17
4.6.2	10900 Wilshire Boulevard	4-17
4.6.3	Outreach for Murals.....	4-18
5.0	PUBLIC OUTREACH	5-1
5.1	Outreach Prior to Start of Construction	5-1
5.2	Outreach during Construction	5-5
6.0	REFERENCES	6-1

List of Appendices

APPENDIX A	WESTSIDE SUBWAY EXTENSION MITIGATION MONITORING AND REPORTING PLAN	A-1
APPENDIX B	TECHNICAL STUDIES	B-1
APPENDIX C	SAMPLE PUBLIC OUTREACH PRESENTATIONS	C-1
APPENDIX D	PUBLIC OUTREACH PLAN	D-1
APPENDIX E	CUMULATIVE IMPACTS ASSESSMENT	E-1
APPENDIX F	COORDINATION	F-2

List of Figures

Figure 1-1:	Westside Purple Line Extension	1-3
Figure 2-1:	Construction Schedule for Section 3	2-1
Figure 2-2:	Construction Staging Areas – Final EIS/EIR and Proposed	2-3
Figure 2-3:	Tower Crane and Vertical Conveyor Belt Storage Towers (Example)	2-6
Figure 2-4:	Tunnel and Crossover Alignment at VA Medical Center – Final EIS/EIR and Proposed	2-9
Figure 2-5:	Westwood/VA Hospital Station Entrance and Pedestrian Circulation Features – Final EIS/EIR and Proposed	2-11
Figure 2-6:	Bus and Passenger Drop-off Areas – Final EIS/EIR	2-13
Figure 2-7:	Bus and Passenger Drop-off Areas – Proposed	2-14
Figure 2-8:	Murals	2-16
Figure 2-9:	Northeast Mural Wall	2-17
Figure 2-10:	Construction Method for Westwood/VA Hospital Station West Crossover	2-19
Figure 2-11:	Westwood/UCLA Station Entrances – Final EIS/EIR	2-21
Figure 2-12:	Westwood/UCLA Station Entrances – Proposed	2-22
Figure 2-13:	Tunnel Size – Final EIS/EIR and Proposed	2-23
Figure 2-14:	Ground Improvement Grouting for WPLE Section 3 at Westfield Mall	2-24
Figure 2-15:	Ground Improvement Grouting at Sepulveda Boulevard	2-25
Figure 2-16:	Temporary and Permanent Power	2-26
Figure 3-1:	Traffic Study Area	3-8
Figure 3-2:	Truck Haul Routes – Final EIS/EIR	3-12
Figure 3-3:	Truck Haul Routes – Proposed	3-13
Figure 3-4:	Construction Truck Trips and Routes	3-19
Figure 3-5:	Communities in the Vicinity of Section 3 of the Westside Purple Line Extension	3-37
Figure 3-6:	Simulated View 01 of Western VA Construction Staging Area from Los Angeles National Veterans Park (facing south)	3-54

Figure 3-7:	Simulated View 02 of Western VA Construction Staging Area from Los Angeles National Veterans Park (facing south).....	3-55
Figure 3-8:	Simulated View 01 of Western VA Construction Staging Area from WLA VA Historic District (facing west)	3-56
Figure 3-9:	Simulated View 02 of Western VA Construction Staging Area from WLA VA Historic District (facing west)	3-57
Figure 3-10:	Grid and Sensitive Receptor Locations (VA WLA Campus)	3-64
Figure 3-11:	Noise- and Vibration-Sensitive Receivers	3-74
Figure 3-12:	Revised APE.....	3-107
Figure 3-13:	Revised APE and Contributing Elements at the WLA VA Historic District in Proximity to the WPLE Project:	Detailed Map 1 of 2..... 3-111
Figure 3-14:	Tree Removal Plan near Bonsall Avenue	3-118
Figure 3-15:	Proposed Tree Removal at Western VA Construction Staging Area	3-124
Figure 3-16:	Visual Simulation of Permanent Project Features in the Vicinity of the Palm-Tree Grid, view to the west	3-125
Figure 3-17:	Sensitivity Factors for Buried Sites (Onken et al. 2018) with 200-Meter Buffer Around Cultural Resources Identified by Chairman Dorame.....	3-141
Figure 3-18:	Locations of GPR Surveys.....	3-143
Figure 3-19:	GPR Anomalies.....	3-147
Figure 3-20:	Proposed Projects within One Mile of Station Areas	3-153
Figure 3-21:	UCLA Capital Program Projects	3-154
Figure 3-22:	VA WLA Campus Zones.....	3-156

List of Tables

Table 3-1:	Evaluation of Project Refinements.....	3-2
Table 3-2:	Opening Year (2025) No Build/Build Conditions Peak Hour Intersection Level of Service	3-9
Table 3-3:	Horizon Year (2045) No Build / Build Conditions Peak Hour Intersection Level of Service	3-10
Table 3-4:	Estimated Daily Haul Truck Trips – Final EIS/EIR and Proposed.....	3-15
Table 3-5:	Permanent Surface Easements – Final EIS/EIR and Proposed (in square feet)	3-44
Table 3-6:	Permanent Subsurface Easements – Final EIS/EIR and Proposed (in square feet)	3-45
Table 3-7:	Construction Area Footprint ¹ – Final EIS/EIR and Proposed (in square feet) (excludes subsurface easements)	3-46
Table 3-8:	Temporary Subsurface Easements – Final EIS/EIR and Proposed (in square feet)	3-48
Table 3-9:	Estimated Maximum Daily Construction Emissions for Section 3 (lbs/day)	3-61
Table 3-10:	Estimated Maximum Localized Pollutant Levels (VA WLA Campus).....	3-65
Table 3-11:	Excess Cancer Risk Assessment (VA WLA Campus).....	3-66
Table 3-12:	Acute and Chronic Non-Carcinogenic Risk Assessment (VA WLA Campus)	3-67

Table 3-13:	Groundborne Vibration and Groundborne Noise Levels near Alignment at VA Medical Center and Westwood/VA Hospital Station—Predicted Train Passby.....	3-71
Table 3-14:	Predicted Train Passby Groundborne Vibration and Noise Levels near Westwood/UCLA Station (Site R)	3-72
Table 3-15:	Construction Noise Limits	3-73
Table 3-16:	Noise- and Vibration-Sensitive Receivers	3-75
Table 3-17:	Maximum Predicted Construction Noise Levels—All Construction Activities	3-77
Table 3-18:	Predicted Construction Noise at VA Main Hospital (Building 500)	3-78
Table 3-19:	Predicted Construction Noise – UCLA Lot 36, Leq (dBA)	3-79
Table 3-20:	Predicted Vibration from UCLA Lot 36 Construction Staging Area	3-80
Table 3-21:	Predicted Maximum Vibration Levels from Western VA Construction Staging Area Construction Activities – PPV in/sec	3-81
Table 3-22:	Predicted Maximum Vibration Levels from Westwood/VA Hospital Station and Lot 43 Parking Structure Construction Activities – PPV in/sec	3-81
Table 3-23:	Predicted Maximum Vibration Levels from Haul Vehicles on Wilshire Boulevard – PPV in/sec	3-82
Table 3-24:	Construction Noise at Receivers along Underground Conduit Route	3-83
Table 3-25:	Predicted Construction Noise Levels at (Westwood) Federal Building (Site 18)	3-85
Table 3-26:	Predicted Construction Noise at Linde (Westwood) Medical Plaza (Site 17)	3-86
Table 3-27:	Proposed Projects within One Mile of Station Areas	3-152

Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
AEA	Access and Easement Agreement
AERMOD	USEPA Atmospheric Dispersion Model
APE	Area of Potential Effects
BMP	Best Management Practice
Btu	British thermal unit
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resource Board
CFR	Code of Federal Regulations
CO	carbon monoxide
CO _{2e}	carbon dioxide equivalent
CVEB	Community Veterans Engagement Board
dBA	A-weighted decibels
EIS/EIR	environmental impact statement/environmental impact report
EJ	Environmental Justice
EMFAC	model for on-road vehicle emissions
FHWA	Federal Highway Administration
FPO	Federal Preservation Officer
FTA	Federal Transit Administration
GBN	groundborne noise
GBV	groundborne vibration
GLA DMP	<i>Greater Los Angeles Campus Draft Master Plan</i>
GPR	ground-penetrating radar
GSA	General Services Administration
HARP2	Hotspots Analysis and Reporting Program Version 2
I-405	Interstate 405
LABOE	Los Angeles Bureau of Engineering
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LPA	Locally Preferred Alternative
Metro	Los Angeles County Metropolitan Transportation Authority
MOA	Memorandum of Agreement

MOU	Memorandum of Understanding
MRI	magnetic resonance imaging
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NB	northbound
NEPA	National Environmental Policy Act
NHDVS	National Home for Disabled Volunteer Soldiers
NHPA	National Historic Preservation Act of 1966, as amended
NO _x	nitrogen oxides
NO ₂	nitrogen dioxide
NRHP	National Register of Historic Places
OFFROAD	model for off-road vehicle and equipment emissions
PM ₁₀	particulate matter smaller than or equal to 10 microns in size
PM _{2.5}	particulate matter smaller than or equal to 2.5 microns in size
PPV	peak particle velocity
Project	Westside Purple Line Extension
PSR/PR	Project Study Report/Project Report
RAST	Risk Assessment Standalone Tool
ROD	Record of Decision
RTP/SCS	<i>2016-2040 Regional Transportation Plan/Sustainable Communities Strategy</i>
SB	southbound
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SHPO	State Historic Preservation Officer
TBM	tunnel boring machine
UC Financial Plan	<i>University of California 2015-25 Capital Financial Plan</i>
UCLA	University of California, Los Angeles
USEPA	U.S. Environmental Protection Agency
VA	U.S. Department of Veterans Affairs
VA WLA Campus	Veterans Affairs West Los Angeles Campus
VdB	vibration decibels
VMT	vehicle miles traveled

WLA VA Historic District West Los Angeles Veterans Affairs Historic District
WPLE Westside Purple Line Extension

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EXECUTIVE SUMMARY

Since certification of the *Westside Subway Extension Final Environmental Impact Statement/ Environmental Impact Report* (Final EIS/EIR) in May 2012 (Los Angeles County Metropolitan Transportation Authority [Metro] 2012a) and issuance of the Record of Decision (ROD) by the Federal Transit Administration (FTA) in August 2012, Metro has advanced efforts in support of Advanced Preliminary Engineering and stakeholder coordination within Section 3 of the Westside Purple Line Extension (WPLE) Project.¹ The WPLE Project is an approximately 9-mile heavy rail transit subway that will operate as an extension of the Metro 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. Section 3 is a 2.56-mile portion of the total extension and represents the section from Century City to Westwood/VA Hospital with two new stations: Westwood/UCLA and Westwood/VA Hospital. These efforts have resulted in a limited number of refinements to project features and construction methods that are necessary to improve long-term operational efficiency, minimize previously identified impacts, and/or decrease the construction schedule and construction costs.

This technical memorandum presents the results of the environmental evaluation of the project refinements proposed in Section 3 of the WPLE Project, including the process and methodology used to assess these refinements. This technical memorandum additionally addresses whether the project refinements will require any additional coordination with agencies with jurisdiction over the Project or affect permitting requirements. Per requirements of the ROD and FTA regulations included in 23 Code of Federal Regulations (CFR) § 771.130, such refinements may not be incorporated into the project until FTA has determined what, if any, supplemental environmental analysis is necessary and that said analysis is complete.

This technical memorandum documents the following proposed refinements; these refinements were evaluated consistent with 23 CFR 771.130(c):

- Construction Staging Areas
- Alignment at the VA Medical Center and Westwood/VA Hospital Station Entrances
- Westwood/VA Hospital Station Access
- Murals
- Construction Method for Westwood/VA Hospital Station West Crossover
- Westwood/UCLA Station Entrances
- Tunnel Size
- Grouting
- Underground Conduits

The findings of the Final EIS/EIR and ROD have been reviewed topic-by-topic, including application of mitigation measures committed to in the ROD, to determine if the refinements would cause any new adverse impacts or increase the severity of adverse impacts identified in the Final EIS/EIR. The review

¹ In addition to the 2012 ROD, in November 2017, FTA issued a Supplemental ROD, which pertains to Section 2 of the WPLE.

includes consideration of potential long-term (operational), short-term (construction), and cumulative impacts. This technical memorandum also considers whether refinements to the mitigation measures included in the ROD require modifications in order to apply to the refinements. The potential effects of each proposed refinement were considered for each of the following environmental topic areas:

- Transportation, including public transit, streets and highways, parking, and pedestrian and bicycle facilities
- Land Use
- Communities and Neighborhoods
- Acquisitions and Displacements
- Visual Quality
- Air Quality, including Health Risk and Climate Change
- Noise and Vibration
- Energy
- Geologic Hazards
- Hazardous Waste and Materials
- Ecosystems/Biological Resources
- Water Resources
- Safety and Security
- Parklands and Community Services and Facilities
- Historic and Archaeological Resources (Section 106)
- Growth Inducing Impacts
- Cumulative Impacts
- Section 4(f)
- Environmental Justice

To support the supplemental analysis of the proposed project refinements, FTA and Metro are coordinating with agencies and other stakeholders. The coordination has included meetings and correspondence with the U.S. Department of Veterans Affairs (VA); the U.S. Army; the General Services Administration; the California Department of Transportation; the University of California, Los Angeles; Linde (Westwood) Medical Plaza; and representatives of 10900 Wilshire Boulevard because these entities own or control property that would be affected by the project refinements. Additionally, Metro holds regular coordination meetings with Los Angeles County and the City of Los Angeles, which have included discussions of the project refinements. Coordination has been ongoing with representatives of the Los Angeles Department of Water and Power and Southern California Edison regarding utility requirements, including those related to project refinements.

In compliance with Section 106 of the National Historic Preservation Act of 1966, FTA and Metro are consulting with individual consulting parties comprised of the State Historic Preservation Officer, the Advisory Council on Historic Preservation, the VA, tribes, and specific interested individuals or organizations. FTA also sent letters to representatives of the following tribes: Fernandeno Tataviam Band of Mission Indians, Gabrielino-Tongva Tribe, Gabrielino Tongva Indians of California Tribal Council, Gabrielino/Tongva Nation, Gabrieleno Tongva San Gabriel Band of Mission Indians, San Fernando Band of Mission Indians, and Gabrieleno Band of Mission Indians – Kizh Nation. FTA and Metro sent letters to consulting parties who participated in earlier project phases as well as consulting parties identified by the VA. A Section 106 meeting with the consulting parties was held on May 22, 2018. The Area of Potential Effects was provided to consulting parties on June 22, 2018, and to the State Historic Preservation Officer for concurrence on September 18, 2018. The *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) was provided to consulting parties on July 5, 2018.

Other stakeholders that are participating in coordination related to project refinements include representatives of the National Veterans Foundation, the Los Angeles County Arts Commission, and Los Angeles County Public Works. Presentations have also been given to various community groups, including the Westwood Village Improvement Association, the Brentwood Community Council, the South Brentwood Residents Association, the Westwood Neighborhood Council, the Westwood Community Council, and the Westwood Hills Property Owners Association. Outreach has also focused on the veteran community, with presentations provided at a Veterans Advocacy Town Hall and to the Community Veterans Engagement Board.

In conclusion, the project refinements evaluated in this technical memorandum would not result in new adverse impacts or increase the severity of previously identified adverse impacts. The WPLE Project remains compliant with current federal, state, local, and departmental regulations and directives with regard to the National Environmental Policy Act, Section 4(f), and Section 106. This technical memorandum, along with supporting information, demonstrates that there would be no new adverse impacts resulting from these refinements and the impact conclusions in the Final EIS/EIR remain unchanged.

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1.0 INTRODUCTION AND PURPOSE OF TECHNICAL MEMORANDUM

Since certification of the *Westside Subway Extension Final Environmental Impact Statement/ Environmental Impact Report* (Final EIS/EIR) in May 2012 (Los Angeles County Metropolitan Transportation Authority [Metro] 2012a) and issuance of the Record of Decision (ROD) by the Federal Transit Administration (FTA) in August 2012, efforts in support of Advanced Preliminary Engineering and stakeholder coordination have occurred within Section 3 of the Westside Purple Line Extension (WPLE) Project. Section 3 is a 2.56-mile section of the overall Project from Century City to Westwood/VA Hospital with two new stations: Westwood/UCLA and Westwood/VA Hospital. As a result of these efforts, Metro has identified a limited number of refinements to project features and construction methods. Implementation of the project refinements, which are described in Section 2.0, provides benefits to the Project, specifically improving long-term operational efficiency, minimizing previously identified impacts, and/or decreasing the construction schedule and construction costs.

This technical memorandum presents the results of the environmental evaluation of the project refinements in Section 3, including the process and methodology used to assess these refinements. This technical memorandum additionally addresses whether the project refinements will require any additional coordination with agencies with jurisdiction over the Project or affect permitting requirements.

1.1 Regulatory Framework

The ROD issued for the Project states that Metro must notify the FTA of any changes to the Project and refrain from taking action on those changes until FTA has determined what, if any, additional environmental analysis is necessary and that the analysis has been completed and approved by FTA. The ROD additionally states that FTA will review changes in accordance with its environmental procedures (23 Code of Federal Regulations (CFR) § 771.130) on supplemental documentation.

23 CFR § 771.129 requires consultation with the FTA to establish whether the approved environmental document remains valid. Additionally, 40 CFR § 1502.9(c) and 23 CFR § 771.130 both state that an EIS must be supplemented whenever it is determined that “[c]hanges to the proposed action” or “[n]ew information or circumstances relevant to environmental concerns and bearing on the proposed action or its impacts” would result in significant impacts that were not evaluated in the EIS. 23 CFR § 771.130(b) states that a supplemental EIS is not required when the changes in the proposed action or new information or circumstances result in a lessening of adverse environmental impacts evaluated in the Final EIS without resulting in other environmental impacts that are significant and were not evaluated in the Final EIS.

1.2 Summary of Findings

Metro therefore evaluated the project refinements in accordance with 40 CFR § 1502.9 and 23 CFR § 771.129 and 130. Based on the results of this review, Metro has determined that the refinements would not materially affect the conclusions in the Final EIS/EIR. Overall, there would be negligible changes in impacts compared to the Project as presented in the Final EIS/EIR. Instead, the analysis found that some refinements, particularly those related to construction staging and methods at and adjacent to the Department of Veterans Affairs West Los Angeles Campus (VA WLA Campus), would decrease construction-related impacts compared to those identified in the Final EIS/EIR. Therefore, the project refinements would not result in new adverse impacts or increase the severity of previously identified

impacts during operation or construction. The project refinements would not require new mitigation measures from those identified in the Final EIS/EIR; however, due to the more detailed analysis presented in this memorandum compared to the Final EIS/EIR, the details of several mitigation measures have been further defined (e.g., specifying the locations where noise barrier walls are required per Mitigation Measure CON-27). Therefore, subject to FTA concurrence, neither a Supplemental EIS nor an Environmental Assessment is required in accordance with 23 CFR § 771.129 and 130.

1.3 Purpose and Organization of Technical Memorandum

This memorandum is organized into the following sections:

- Introduction and Purpose of Technical Memorandum
- Project Refinements
- Evaluation of the Project Refinements
- Agency and Stakeholder Coordination
- Public Outreach
- References

The study area of this technical memorandum is generally Section 3 of the WPLE Project, unless specified otherwise under the subsections in Section 3.0. In comparison, “Project Area” refers to the entire 9-mile alignment of the WPLE Project (i.e., all 3 sections).

1.4 Project Background

The Project is an approximately 9-mile heavy rail transit subway that will operate as an extension of the Metro Purple Line from its current western terminus at the Wilshire/Western Station to a new western terminus near the VA WLA Campus (Figure 1-1). The Project will improve mobility and provide a fast, reliable, high-capacity, and environmentally sound transportation alternative for the Westside of Los Angeles. This improvement in public transit service will significantly increase east–west capacity and improve mobility by reducing transit travel times. On a county-wide level, the Project will strengthen regional access by connecting Metro bus, Metro rail, and Metrolink networks to a high-capacity transit solution serving the Project Area.

The overall Project Area is located in western Los Angeles County and encompasses approximately 38 square miles. The Project Area is east/west oriented and includes portions of the Cities of Los Angeles, West Hollywood, Beverly Hills, and Santa Monica, as well as unincorporated areas of Los Angeles County. The Project Area boundaries generally extend north to the base of the Santa Monica Mountains along Hollywood, Sunset, and San Vicente Boulevards; east to the Metro Rail stations at Hollywood/Highland and Wilshire/Western Boulevards; south to Pico Boulevard; and west to the Pacific Ocean.

Figure 1-1: Westside Purple Line Extension



The Project was planned to be constructed in three phases:

- Section 1: 3.92-mile section from the existing Wilshire/Western Station to Wilshire/La Cienega with three new stations: Wilshire/La Brea, Wilshire/Fairfax, and Wilshire/La Cienega
- Section 2: 2.59-mile section from Wilshire/La Cienega to Century City with two new stations: Wilshire/Rodeo and Century City Constellation
- Section 3: 2.56-mile section from Century City to Westwood/VA Hospital with two new stations: Westwood/UCLA and Westwood/VA Hospital

The FTA and Metro completed the Final EIS/EIR for the Project in March 2012 (Metro 2012a).

In April and again in May 2012, the Metro Board of Directors (Board) certified the Final EIS/EIR and adopted the Findings of Fact, Statement of Overriding Considerations and a Mitigation Monitoring and Reporting Program and approved the first phase of the Project. In May 2012, the Metro Board approved the second and third phases of the Project. The ROD was issued by FTA for all three phases of the Project in August 2012 (note, in the Final EIS/EIR the “sections” of the Project were referred to as “phases”).² The ROD issued by the FTA and the certification of the Final EIS/EIR by the Metro Board completed the National Environmental Policy Act and California Environmental Quality Act review of the Project, respectively.

The Final EIS/EIR included two construction scenarios—concurrent and phased. The concurrent construction scenario assumed construction would begin in 2013 and the entire Project would be operational in 2022. The phased construction scenario assumed construction of Section 3 would begin in 2029 with operation beginning in 2036. The November 2016 Los Angeles County voter approval of Measure M, the one-half-cent sales tax, enables construction of Section 3 to occur sooner than originally planned. Construction of Section 3 would be largely concurrent with construction of Sections 1 and 2 of the Project, construction of which are already underway.

Metro has advanced the design of Section 3 of the Project and has had further coordination with stakeholders, including the University of California Los Angeles and the VA, resulting in refinements to the design of the Project. The description of the refinements is summarized in Section 2.0 of this technical memorandum.

² In November 2017, the FTA issued a Supplemental ROD addressing Section 2 of the WPLE. Because the Supplemental ROD pertained to Section 2 only, it is not further discussed in this technical memorandum. None of the project refinements alter the conclusions of the Supplemental ROD.

2.0 PROJECT REFINEMENTS

The following sections describe the project refinements identified during Advanced Preliminary Engineering and through stakeholder coordination. The evaluation of the project refinements is included in Section 3.0 of this memorandum, while Sections 4.0 and 5.0 describe the agency/stakeholder and public outreach conducted in support of these refinements, respectively.

Final design and construction of Section 3 of the Westside Purple Line Extension (WPLE) Project will be procured by the Los Angeles County Metropolitan Transportation Authority (Metro) primarily through two main design-build contracts, one for tunnel construction and the other for stations and systems construction. The descriptions of the project refinements, including construction means and methods, provided in this section and evaluated in Section 3.0 are based on the Section 3 Construction Approach Plan dated March 2018. This plan updated the construction plan evaluated in the *Westside Subway Extension Project Final Environmental Impact Statement/Environmental Impact Report (Final EIS/EIR)* issued in 2012 (Metro 2012a). The plan describes how it is anticipated that the contractors, once they are selected, will complete the work; however, the final means and methods may differ from what is included in this analysis. Experience from previous phases of the WPLE Project indicate that similar sequencing and methods would largely be adopted by the Section 3 contractors. The design-build contractors will be required to comply with the criteria included in this analysis. It is anticipated that the ultimate design of the project refinements will be in substantial conformance with the descriptions provided in this section. A third contract for advance utility relocations will be procured for the Westwood/University of California Los Angeles (UCLA) Station to relocate utilities ahead of construction in the street. It should be noted that utility relocations would also occur under the tunnel and stations and systems contracts described above.

The construction schedule for Section 3 is presented in Figure 2-1. This schedule is largely consistent with the construction sequencing and timeline presented in the Final EIS/EIR; however, Metro proposes advancing the construction schedule of Section 3 in order to have the system in operation by the 2028 Olympic Games that will be held in Los Angeles. To accomplish this goal, Metro must advance contracts concurrently and, therefore, anticipates that the tunnel and station contracts would overlap. In comparison, the Final EIS/EIR did not assume that there would be separate contracts which would overlap.

Figure 2-1: Construction Schedule for Section 3

Summary Activity	Construction Year									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
TBM Launch Box Piling / Excavation at Western VA Staging Area	■	■								
Tunneling		■	■	■	■					
Cross Passages				■	■					
Tunnel Invert and Walkway					■	■	■	■		
Station Construction			■	■	■	■	■	■	■	
Systems Installation and Facilities								■	■	■
Station Backfill and Street Restoration								■	■	■

Source: WSP 2018

Note: TBM = tunnel boring machine

Major construction activities begin with mobilization at the tail track exit shaft on the Western VA construction staging area (the tail track exit shaft is defined in Section 2.1.1) for the tunnel contract, which is anticipated to begin in June 2019. In advance of tunneling, surface piling for the station end walls (excavation support walls at both ends of the station box), modifications to the California Department of Transportation (Caltrans) basin, surface instrumentation, and grouting at Sepulveda Boulevard and at Westfield Mall (see Section 2.8) are required as part of the work for the tunneling contractor. The tunneling operation, utilizing tunnel boring machines (TBMs), would progress from west to east, to the end of the tunnel reach (at Century City). Cross-passage construction commences below ground on completion of tunneling.

For the Westwood/VA Hospital Station, the piling of the side walls and appendages of the station box and partial, temporary decking of Bonsall Avenue and the I-405 ramp at the Westwood/ Veterans Affairs (VA) Hospital Station would be undertaken by the station contractor and are largely unchanged from the concepts described in the Final EIS/EIR. Other activities such as utility relocations, installation of dewatering and instrumentation wells, and removal of street pavement and subgrade would be undertaken to facilitate the excavation of the station. Areas of the station box that are off-street would not need to be decked. Following the installation of the piling and street decking, the station box can be excavated. This sequence is unchanged from the Final EIS/EIR. Following excavation and invert construction, the station walls, floors, and roof would be constructed, followed by architectural finishes along with mechanical, electrical, plumbing, and rail systems installation. The station entrance and other site facilities would be constructed concurrently, or just following the station box construction.

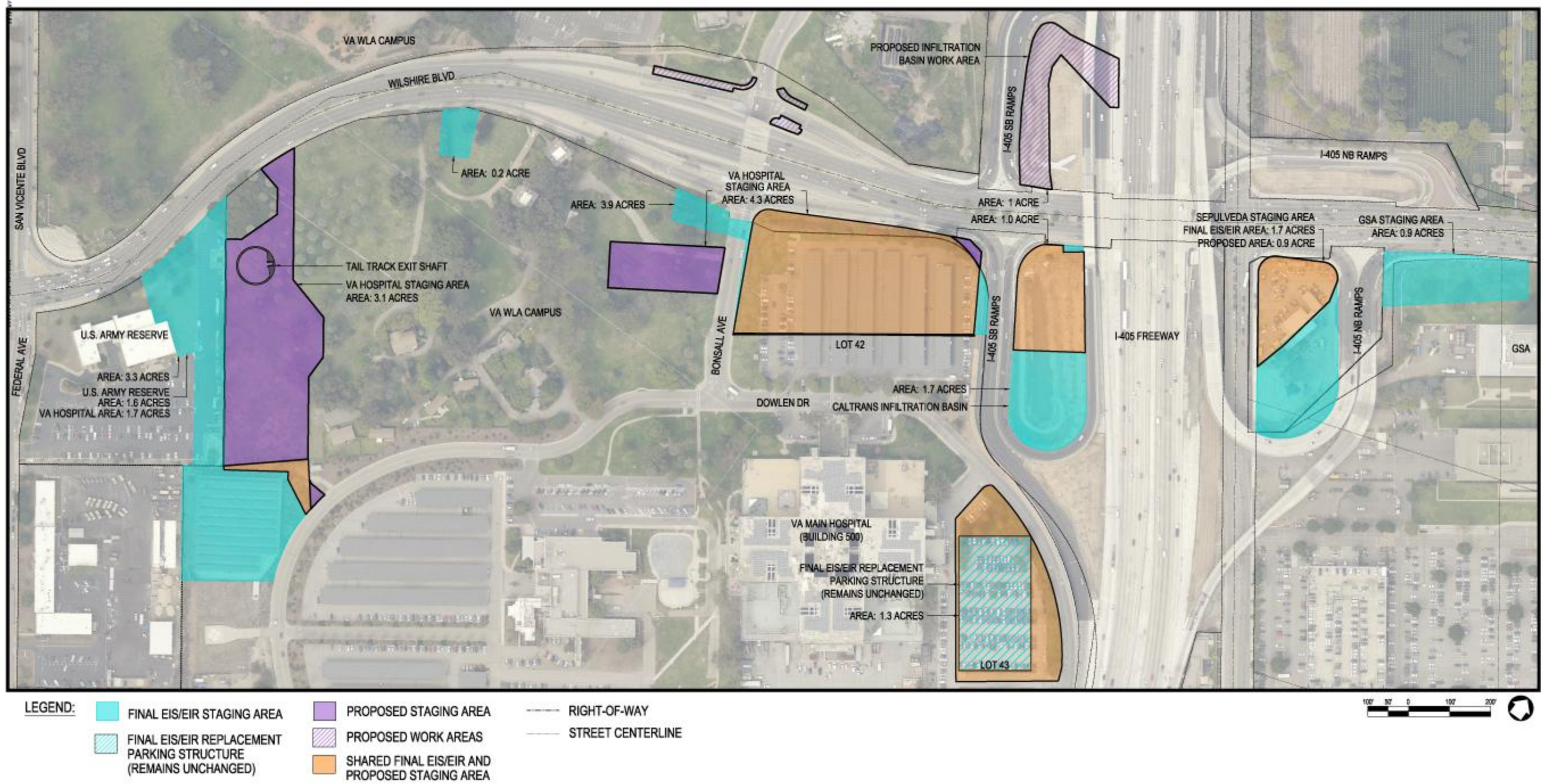
The Westwood/UCLA Station would generally be constructed concurrently with the Westwood/VA Hospital Station. The Westwood/UCLA Station is located underneath Wilshire Boulevard and requires full street decking of that roadway, which would be installed over a series of weekends. The advance utility relocation would move utilities away from the pile corridor and lower them under the decking. This approach is consistent with the Final EIS/EIR. Once the decking is installed, excavation would commence. The sequence then is the same as described for the Westwood/VA Hospital Station. The stations contractor would construct the station entrances at a similar time or just after the station boxes for each station. Changes to station entrances from the Final EIS/EIR are described in Sections 2.2 and 2.6 for the Westwood/VA Hospital and Westwood/UCLA Stations, respectively.

In addition to the station construction, the station contractor must install the concrete invert, track, wayside cabling, and systems in the tunnels and stations. This work can commence after the train rooms at both stations are clear of obstructions. Once construction activities are complete, systems testing and integration for the power, communications, and signaling systems can be undertaken. On completion of systems testing and integration, test running and trial operations are undertaken ahead of revenue service. These activities are generally subsurface and are consistent with the Final EIS/EIR.

2.1 Construction Staging Areas

The construction staging areas identified on or in proximity to the Veterans Affairs West Los Angeles Campus (VA WLA Campus) have been refined since issuance of the Final EIS/EIR (Metro) 2012a). The locations of the construction staging areas in the Final EIS/EIR and the refined construction staging areas adjacent to and west of I-405 are shown in Figure 2-2. The following sections summarize the refinements to construction staging areas west of I-405.

Figure 2-2: Construction Staging Areas – Final EIS/EIR and Proposed



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2.1.1 Western VA Construction Staging Area

As stated in Chapter 2, Section 2.6.4 of the Final EIS/EIR under the heading “Westwood/VA Hospital South Station,” two options for the location of the construction staging area for the Westwood/VA Hospital Station were considered: within a parking lot located south of Wilshire Boulevard and east of Bonsall Avenue (referred to as Lot 42) and on the U.S. Army Reserve site located west of the VA WLA Campus. The construction staging area at the U.S. Army Reserve site would be approximately 3.3 acres, of which approximately 1.7 acres would be located on the western side of the VA WLA Campus and 1.6 acres would be on the U.S. Army Reserve site. According to the Final EIS/EIR, this staging area would be used if Lot 42 were unavailable at the time of project construction. In an effort to minimize construction-related impacts to the VA Main Hospital (Building 500, also identified as the James W. Wadsworth Building), Metro proposes to stage a substantial portion of major construction activities as far from the Main Hospital as feasible. (As described in Section 2.1.2, construction staging for the Westwood/VA Hospital Station box would continue to occur from Lot 42. Due to the overlap in the tunnel and station contracts described above, Metro requires larger construction staging areas to support construction of Section 3.)

Based on coordination with the U.S. Army, locating a portion of the construction staging area on the U.S. Army Reserve site is no longer feasible. Therefore, Metro proposes a construction staging area located completely on the western portion of the VA WLA Campus. In the Final EIS/EIR, the portion of the alternate staging area on the VA WLA Campus was located in an area that has since been converted into a solar farm. The solar farm provides an alternative source of energy to the VA. The VA has also indicated that this site would be used to support construction of projects identified in the *Greater Los Angeles Draft Master Plan* (U.S. Department of VA 2016), for which the VA is preparing a Draft Programmatic EIS. Information provided by the VA also indicates that the solar farm may be a site of future construction. Therefore, to avoid impacts to the solar farm and future construction activities undertaken by the VA, Metro has reconfigured the portion of the construction staging area on the VA WLA Campus. The footprint of the construction staging area also seeks to minimize impacts to landscaping in the West Los Angeles Veterans Affairs Historic District (WLA VA Historic District), including to the “Palm Grid,” which is identified as a contributing element to the historic district. The construction staging area would be approximately 3.1 acres, which is approximately 0.2 acre smaller than the footprint of the alternate site identified in the Final EIS/EIR.

Metro proposes to use this construction staging area to support the TBM (including launching the TBMs) and spoil removal activities, for construction field offices, to allow construction vehicle circulation, and to house temporary electrical power equipment. Metro also proposes to locate an electric tower crane adjacent to the tail track exit shaft that would be used to move materials in and out of the shaft. The tower crane would be approximately 120 feet high with a horizontal boom length of approximately 160 feet (Figure 2-3). Conveyors would be used in the tunnels to move excavated materials from the TBM to the access shaft and out to the storage piles. A vertical conveyor would move material from the bottom of the shaft, and transfer conveyors would move spoils from the top of the tail track exit shaft to the storage piles. The vertical conveyor would be approximately 30 feet above the ground surface, as would the transfer conveyors. Two vertical conveyor belt storage towers would be erected adjacent to the tail track exit shaft. These towers would be 90 to 100 feet high and approximately 10 feet wide by 20 feet in length. The vertical conveyor belt storage towers would be enclosed to control noise and dust. The tail track exit shaft is approximately 90 feet in internal diameter and is the location from which the TBMs would be launched. Storage silos approximately 40 to 50 feet in height would also be located on the site. These would be enclosed structures, storing grouting materials for the TBM.

Figure 2-3: Tower Crane and Vertical Conveyor Belt Storage Towers (Example)



Source: Photo from presentation on Line A Extension Prague Metro by Ermin Stehlik – Gall Zeidler Consultants at BTS 2013 Conference

Utilization of this construction staging area would move a substantial portion of major construction activities away from the VA Main Hospital (Building 500), thereby reducing impacts to the hospital and its patrons, including veterans, compared to those described in the Final EIS/EIR for the option where all construction staging on the VA WLA Campus occurred in Lot 42. Specifically, the Lot 42 construction staging area is approximately 300 feet from the entrance to the VA Main Hospital while the tail track exit shaft on the Western VA construction staging area is approximately 1,400 feet from the entrance. This reduction of impacts occurs even though the staging area on the VA WLA Campus has increased in size from 1.7 acres in the Final EIS/EIR to 3.1 acres. In particular, benefits associated with moving the staging area would include a reduction in noise, improved air quality, and reduced truck trips near the VA Main Hospital (Building 500).

This construction staging area would be accessed directly from Wilshire Boulevard via a new driveway to the staging area, thereby reducing construction vehicle activity elsewhere on the VA WLA Campus relative to the Final EIS/EIR, which assumed construction truck activity would occur on Bonsall Avenue and Dowlen Drive. Dowlen Drive would no longer be used to access the construction staging area except for emergency situations. At the request of the VA, the driveway at the Western VA construction staging area from Wilshire Boulevard and Dowlen Drive would also accommodate future traffic associated with construction activities undertaken by the VA on the south campus. The location and size of the construction staging area, as well as the construction activities that would occur there, have been coordinated with representatives of the VA. Refer to Section 2.2 for information on permanent aboveground features located in the western portion of the VA WLA Campus.

The Final EIS/EIR assumed that if construction were staged from Lot 42, support and launch of the TBM would occur at this location as well. The Final EIS/EIR assumed the tunnels located west of the station, known as tail tracks and used for storage of trains, would be mined structures (as shown on Drawing No.

A-011 in Appendix B of the Final EIS/EIR), meaning that the structures would be almost entirely hand excavated with small excavators as opposed to TBMs. As the TBM would now be launched from the Western VA construction staging area, the tail tracks would be constructed using the TBM instead, which provides benefits to schedule and reduced construction risk. The proposed use of the TBM rather than mining would allow for a more controlled excavation as the TBM operates with a shield under mechanically pressurized conditions.

2.1.2 Lot 42 Construction Staging Area

The Final EIS/EIR included a construction staging area within the VA WLA Campus parking lot located south of Wilshire Boulevard and east of Bonsall Avenue (referred to as Lot 42). The size of this construction staging area remains largely unchanged; however, certain major construction activities, such as support for operation of the TBM, have been shifted to the construction staging area on the west side of the VA WLA Campus to minimize construction-related impacts to the VA Main Hospital (Building 500).

2.1.3 Construction Staging and Work Areas in Caltrans Infiltration Basins

The Final EIS/EIR also included a construction staging area within a Caltrans infiltration basin (a stormwater Best Management Practice or BMP) located south of Wilshire Boulevard and bounded by the I-405 raised west embankment and the I-405 southbound off-ramp to Wilshire Boulevard (Figure 2-2). The size of this construction staging area has been reduced since issuance of the Final EIS/EIR from 1.7 acres to 1 acre as a result of a consolidated construction staging area and design refinement.

During the advancement of design, it was determined that the Caltrans infiltration basin located north of Wilshire Boulevard and bounded by I-405 and the on-ramp to southbound I-405 would require modifications to replace the volume of water displaced by construction within the south basin. Modifications include excavation and backfill with permeable material, as well as storm drain diversions. The approximately 1-acre site is shown in Figure 2-2. The basins are for the exclusive use of Caltrans and cannot be used by other agencies for drainage purposes unless encroachment permits submitted by those agencies are approved by Caltrans. Metro's contractor will be required to obtain permits for the handling and disposal of water in the construction staging areas.

2.1.4 Construction Staging Area Located West of Bonsall Avenue

A construction staging area west of Bonsall Avenue is also required to construct the west crossover and west end of the station box (refer to Section 2.2 for a description of the change in location of the station box and Section 2.5 for a description of the construction method for the west crossover). Very limited construction traffic (approximately 20 vehicles per day) is proposed in this staging area; the contract documents require that the site not be used for storage of diesel engine equipment, for contractor parking, or for construction facilities such as trailers. The staging area is approximately 10 feet wider than the station piled walls and approximately 300 feet long. The approximately 1-acre site is shown in Figure 2-2.

2.1.5 Replacement Parking Structure

The Final EIS/EIR identified the construction of a replacement parking structure within an existing doctors' parking lot on the VA WLA Campus (Lot 43), located east of the VA Main Hospital (Building 500), to offset the permanent and temporary loss of parking that would occur in Lot 42 during construction of

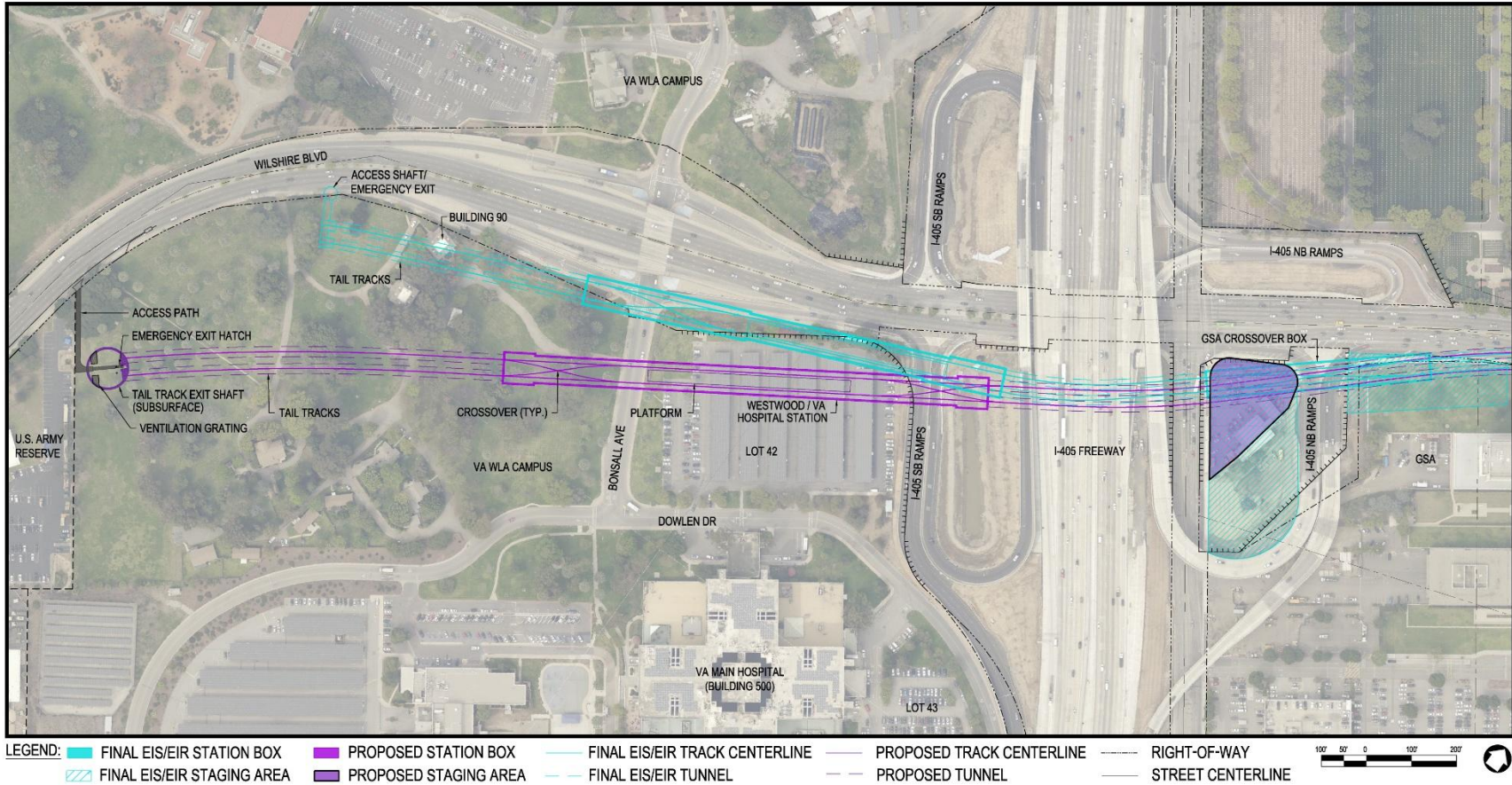
the station. Metro is coordinating with representatives of the VA regarding the location and capacity of the parking structure, but at present assumes the structure would be five stories in height plus a ground floor and would continue to be located in Lot 43. The northern half of the existing parking lot would be demolished to accommodate the parking structure.

2.2 Alignment at the VA Medical Center and Westwood/VA Hospital Station Entrance

Within proximity to the Westwood/VA Hospital Station, the alignment as evaluated in the Final EIS/EIR contained several smaller radius (tighter) curves and an east crossover structure (referred to as the GSA [General Services Administration] crossover) within the GSA property east of I-405 (a crossover is specialized trackwork that allows a train to reverse direction and use an adjacent track to continue operation). Metro Rail Design Criteria require that a terminal station include two crossovers, before and after the station and, therefore, there is also a west crossover attached to the west end of the platform. Through the advancement of design, the curves in the alignment have been minimized to improve operating conditions for a future transit extension from the Westwood/VA Hospital Station. The Final EIS/EIR and refined alignments are shown in Figure 2-4. In the Final EIS/EIR, the tail tracks were situated in tunnels directly beneath a contributing element to the WLA VA Historic District, referred to as Building 90: Duplex. As a result of the refinement to the alignment, the tail track tunnels are no longer situated beneath any building within the VA WLA Campus or the WLA VA Historic District (Figure 2-4).

The refinement to the alignment would accommodate a crossover directly east of the Westwood/VA Hospital Station and partly within the Caltrans infiltration basin, which would be connected to the station platform (this crossover is referred to as the East Crossover at the VA Campus). This location for this crossover is operationally preferred by Metro compared to the GSA crossover because the crossover is located closer to the station platform and allows for a much more efficient turnaround of the trains. With this refinement, the GSA crossover would be eliminated and a cross passage within Caltrans right-of-way east of I-405 would be added (the Project is constructed as two tunnels; a cross passage is a small passageway that connects those tunnels to provide egress in the case of fire or another emergency). Placement of the cross passage off-street in this location minimizes impacts to Wilshire Boulevard and the I-405 northbound ramps. The Final EIS/EIR included two construction staging areas for construction of the GSA crossover—one on GSA property and the other within Caltrans right-of-way in an area bounded by Wilshire Boulevard to the north and the I-405 northbound ramps (Figure 2-4). The construction staging area on the GSA property would be eliminated completely because all construction on the GSA property would occur from underground. The construction staging area within Caltrans right-of-way would no longer be required to support construction at the GSA property; however, this staging area would be used for construction of the cross passage, necessary grout injection to support utilities beneath Sepulveda Boulevard (refer to Section 2.8), and as a staging site for advance utility relocations. The overall size of this Caltrans staging area has been reduced from 1.72 acres to 0.94 acre (a 0.78-acre reduction) because these construction activities can be accommodated on a smaller staging area than what was required for the crossover. Minimizing construction on the GSA property would benefit the Project and the GSA, as there would be less disruption, noise and vibration, haul routes, and traffic in front of the building.

Figure 2-4: Tunnel and Crossover Alignment at VA Medical Center – Final EIS/EIR and Proposed

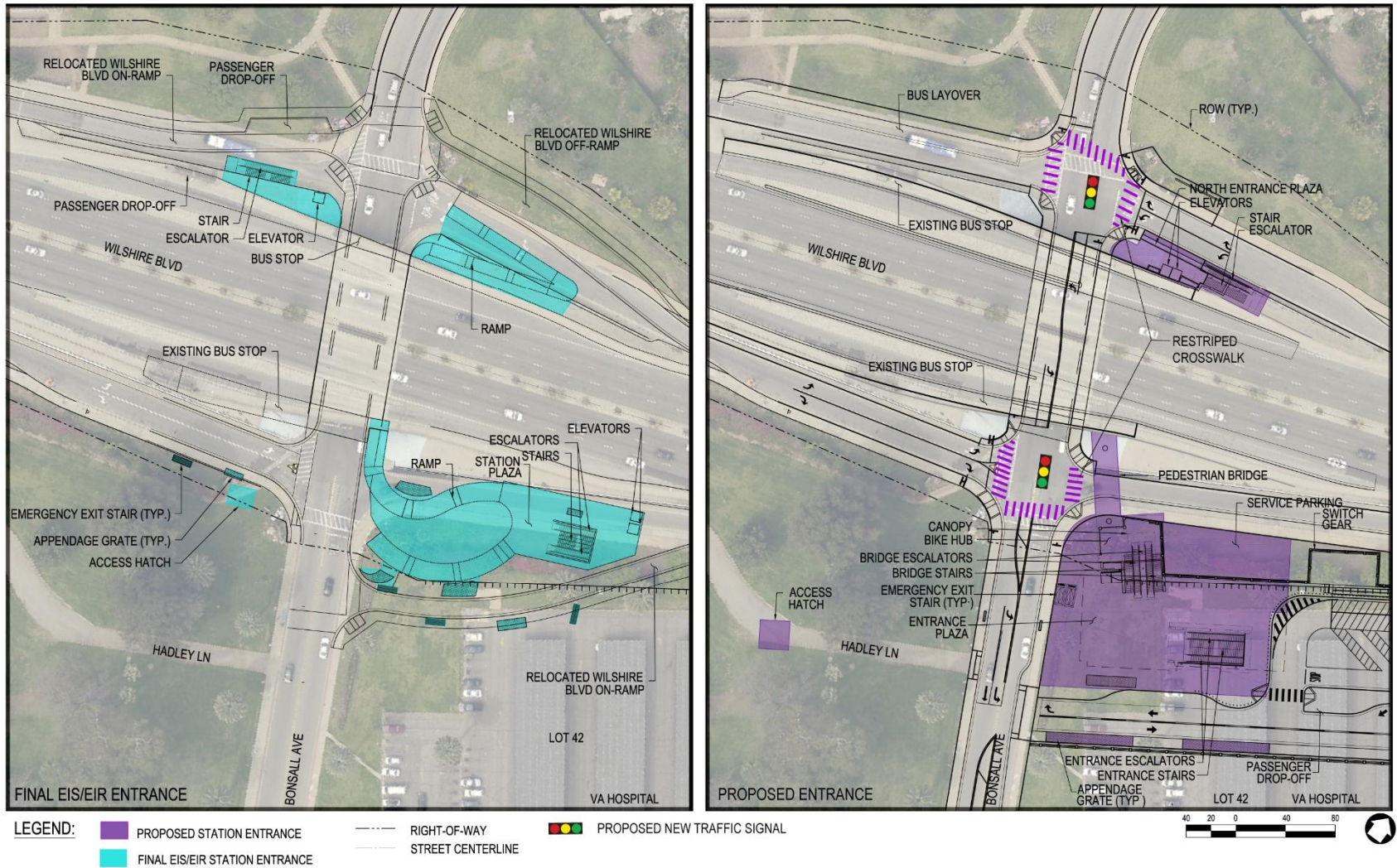


The tail tracks for the Final EIS/EIR alignment would terminate in an access shaft, consisting of an exit stair and ventilation shaft, located subsurface within the WLA VA Historic District and in the sidewalk along Wilshire Boulevard for emergency exiting (the Final EIS/EIR referred to the access shaft as an “emergency exit”; this term will be used in this memorandum since the purpose of the shaft is to provide an emergency exit from the subway tunnels). As a result of the refinement to the alignment, relocation of the emergency exit was required to the westernmost part of the WLA VA Historic District. The tail track exit shaft described in Section 2.1.1 would be modified when construction is complete to accommodate a small permanent subsurface access shaft for emergency egress in the event of a fire and a ventilation shaft. Features at the surface would include ventilation grates and an access hatch, each of which would be terminated just above grade level, sufficiently high to prevent flooding. A path would connect the emergency exit to Wilshire Boulevard and a gate would be provided at the exterior. The path would help direct personnel exiting the shaft to the street rather than entering the WLA VA Historic District. The permanent aboveground features are shown in Figure 2-4.

As a result of the refinement to the alignment, the alignment and station box have been shifted south by approximately 150 feet away from Wilshire Boulevard. The alignment and station box would continue to be located beneath the existing parking lot on the VA WLA Campus. The station box has been moved west, beneath the WLA VA Historic District, by approximately an additional 150 feet as a result of the crossover being added to the east side of the platform. The station box and crossover cannot be moved east because open-cut construction would require closure of portions of I-405. Metro Operations does not favor a separated station box with portions moved east of the I-405. Additionally, this design would reduce the design headways and the ability of trains to turn around at the terminal station. It is not favorable to move the station to the west, as this pushes it farther into the WLA VA Historic District and closer to contributing elements within the district. The shift in the station box required refinements to the station entrance and pedestrian circulation features. With this refinement, the station entrance would be located approximately 100 feet closer to the VA Main Hospital (Building 500), benefiting transit passengers, including veterans and employees, with destinations at this facility. Additionally, the pedestrian circulation features between the station entrance and Wilshire Boulevard would be less circuitous than those included in the Final EIS/EIR design. New vertical circulation elements (elevators and escalators) would be included, thus improving passenger connectivity, particularly for patrons with disabilities (Figure 2-5).

The refinements to the station entrance and pedestrian circulation features would also eliminate the need to reconfigure the access ramps on both sides of Wilshire Boulevard and reduce the impact to the Bonsall Avenue and access ramps intersection. Reconfiguration of the access ramp on the east side of Bonsall Avenue is no longer required; therefore, the pedestrian ramp in the Final EIS/EIR has been replaced with a pedestrian bridge compliant with the Americans with Disabilities Act (ADA) and Architectural Barriers Act to provide access from the Westwood/VA Hospital Station entrance to the bus stop on eastbound Wilshire Boulevard (Figure 2-5). These refinements are being coordinated with representatives of the VA WLA Campus.

Figure 2-5: Westwood/VA Hospital Station Entrance and Pedestrian Circulation Features – Final EIS/EIR and Proposed



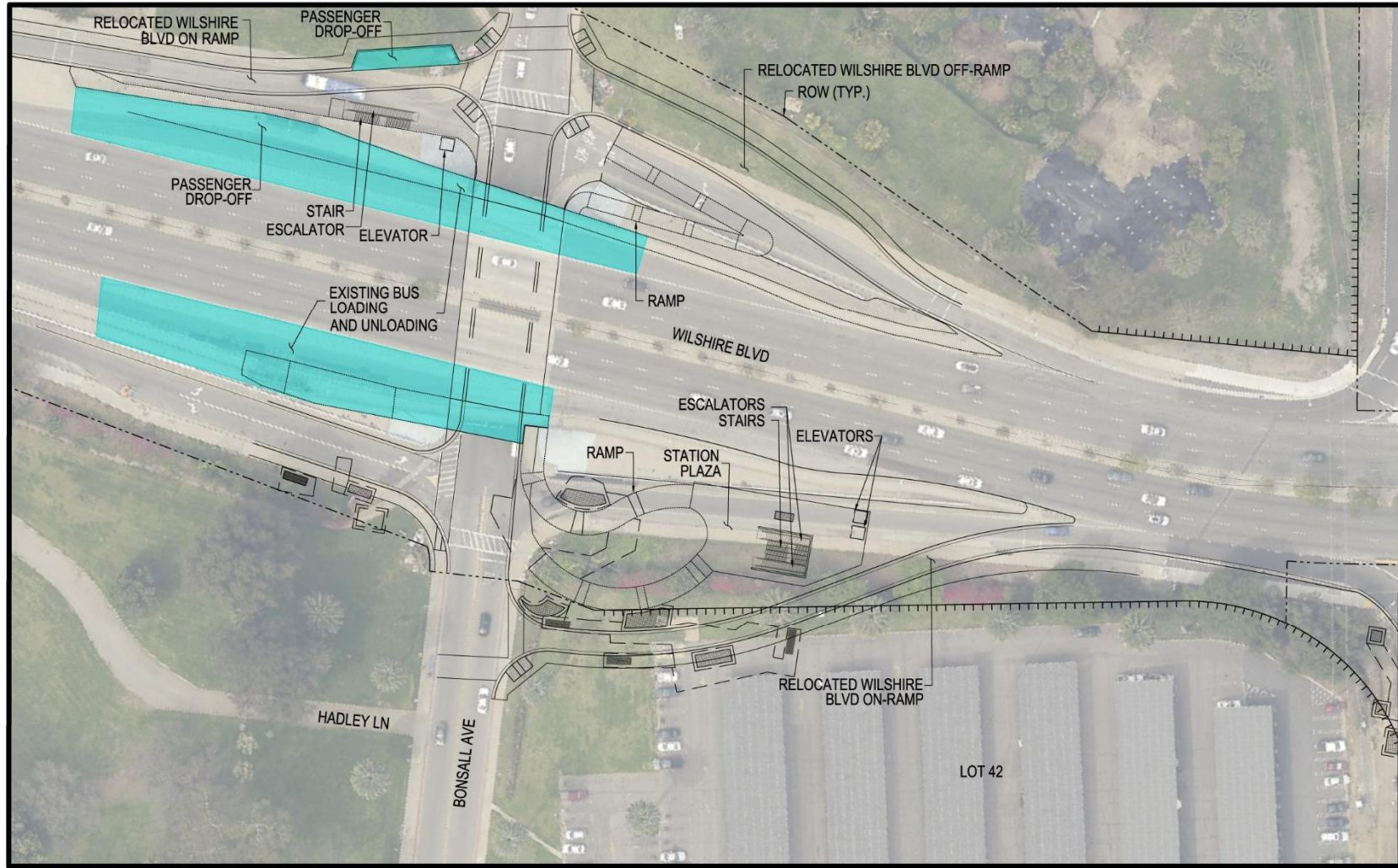
2.3 Westwood/VA Hospital Station Access

Refinements were made to the provision of passenger drop-off and bus access to the Westwood/VA Hospital Station. The Final EIS/EIR included a passenger drop-off area on the westbound access ramp from Bonsall Avenue to Wilshire Boulevard (i.e., on the north side of Wilshire Boulevard) and the westbound bus turnout. The *Westside Subway Extension Project Station Circulation Report* (Metro 2011a) specified that a passenger drop-off area could not be accommodated on the eastbound bus turnout or access ramp because of space constraints; however, passenger drop-off activities were expected to occur informally in both locations. The locations of the potential drop-off areas are shown in Figure 2-6.

As a result of further design, it was determined that the westbound access ramp from Bonsall Avenue to Wilshire Boulevard was too short to accommodate a passenger drop-off area. Additionally, the slope of the ramp is not ADA compliant to accommodate drop offs without requiring substantial modifications. There was also concern that informal passenger drop off would occur from various locations on the VA WLA Campus. Therefore, through coordination with representatives of the VA WLA Campus, a formal passenger drop-off area is now proposed within the northern portion of the existing VA Hospital parking lot (referred to as Lot 42) just east of the proposed station plaza and entrance (Figure 2-7). The passenger drop-off area would have approximately 40 spaces for short-term parking (15 to 30 minutes) and include lighting, storm drain BMPs, and traffic islands. The provision of the dedicated passenger drop-off/pick-up area would benefit the VA WLA Campus and the veteran community as it is designed to prevent Metro passengers that are not associated with the VA from being dropped off or picked up within the VA WLA Campus. Signage (including “no stopping” signs) would be located to direct Metro passengers to the drop-off area and to ensure vehicles do not stop at other points on the campus to drop off passengers. Access to the drop-off area would be via Bonsall Avenue; the new intersection would be striped with a dedicated left-turn lane. Based on analyses completed in support of design, consistent with the *California Manual of Uniform Traffic Control Devices*, a traffic signal would be required 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. These locations are currently all-way stop-sign controlled. The passenger drop-off area would be designed to accommodate bus service operated by the VA Medical Center; however, public transit provided by other operators (e.g., Metro) would not use the drop-off area.

A bus layover area located on Los Angeles County property has been added along the westbound on-ramp from Bonsall Avenue to Wilshire Boulevard at the request of Metro’s Bus/Rail Interface group (Figure 2-7). This layover area would facilitate future transit services to West Los Angeles and Santa Monica. However, there are no planned changes to transit frequency and service routes identified at this time and, therefore, transit frequency and routes remain unchanged from the Final EIS/EIR. To accommodate the new bus layover area, the ramp would be widened, which would extend into the adjacent sloped lawn area. The widening would occur within Los Angeles County property.

Figure 2-6: Bus and Passenger Drop-off Areas – Final EIS/EIR



LEGEND: FINAL EIS/EIR STATION BUS AND PASSENGER DROP-OFF AREA
 RIGHT-OF-WAY
 STREET CENTERLINE

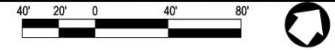
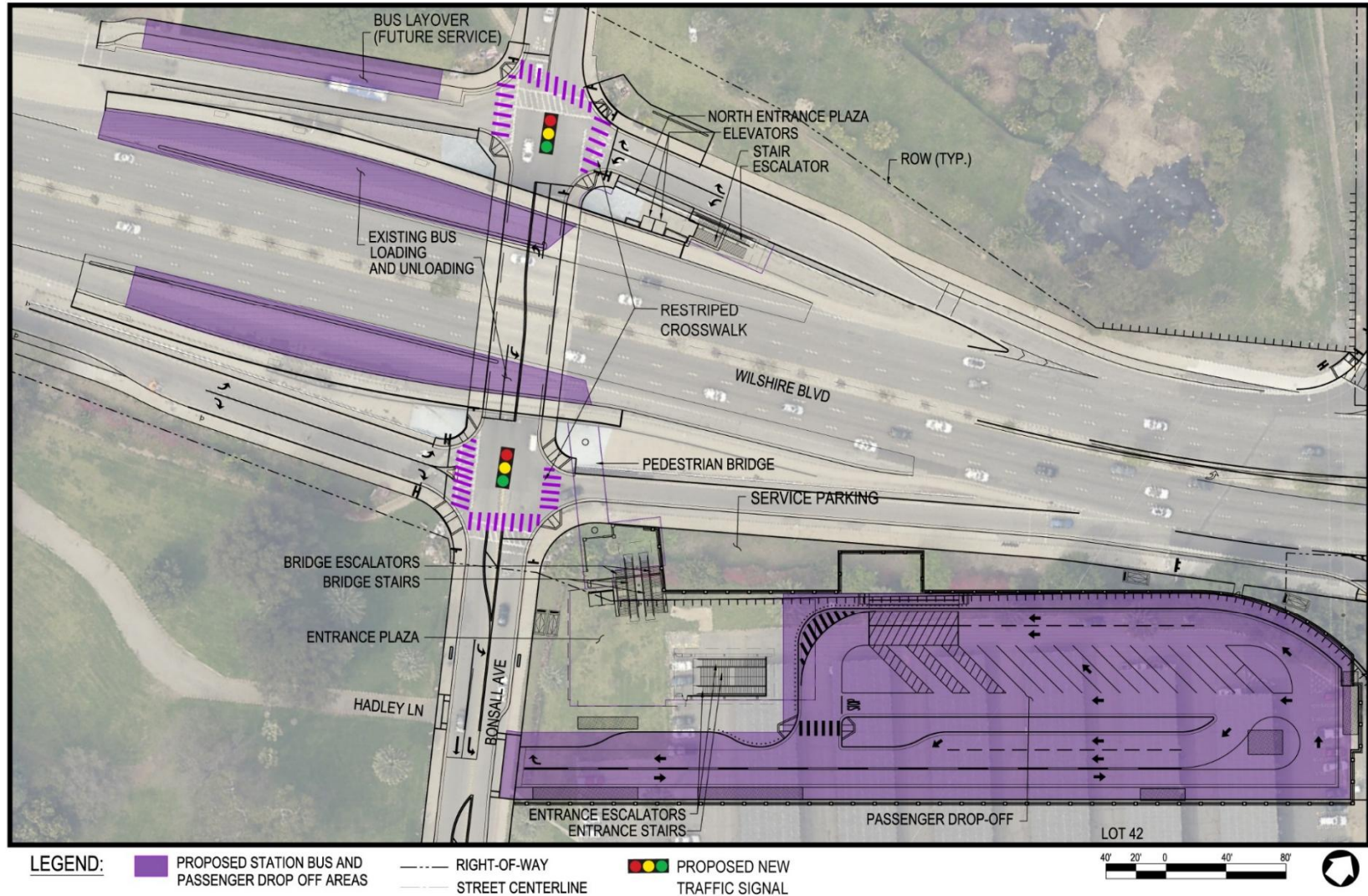


Figure 2-7: Bus and Passenger Drop-off Areas – Proposed



2.4 Murals

The Final EIS/EIR identified military-themed murals painted on the walls of the Bonsall Avenue underpass and access ramps to/from Wilshire Boulevard (Figure 2-8). These murals, located on Los Angeles County property, were painted in 1995 by Peter Stewart and other veteran volunteers known as “the crew” and are public art. The Final EIS/EIR assumed that the murals could be protected in place during construction of the Westwood/VA Hospital Station. However, studies conducted since completion of the Final EIS/EIR indicate that removal of the northeast mural wall along the south side of the westbound Wilshire Boulevard off-ramp to Bonsall Avenue (Figure 2-9) would be required for construction of the station circulation elements at that location. Once the stairs and escalators are constructed, there would not be sufficient space to accommodate the mural in its original location. As such, Metro proposes removal of the entire northeast mural and conveying the story of that mural in a reduced-scale version using a more durable medium of mosaic tile in another location. The mosaic wall would be located across from the current location of the northeast mural into an embankment and retaining wall on Los Angeles County property. Metro is coordinating with the VA, veterans groups (e.g., the National Veterans Foundation), and other stakeholders (e.g., the Los Angeles County Arts Commission) regarding this proposal and has received support from stakeholders. Reconfiguration of the mural into a mosaic is subject to the approval of the Los Angeles County Arts Commission and the Los Angeles County Board of Supervisors and agreement by Los Angeles County to maintain the mosaic in perpetuity.

Figure 2-8: Murals

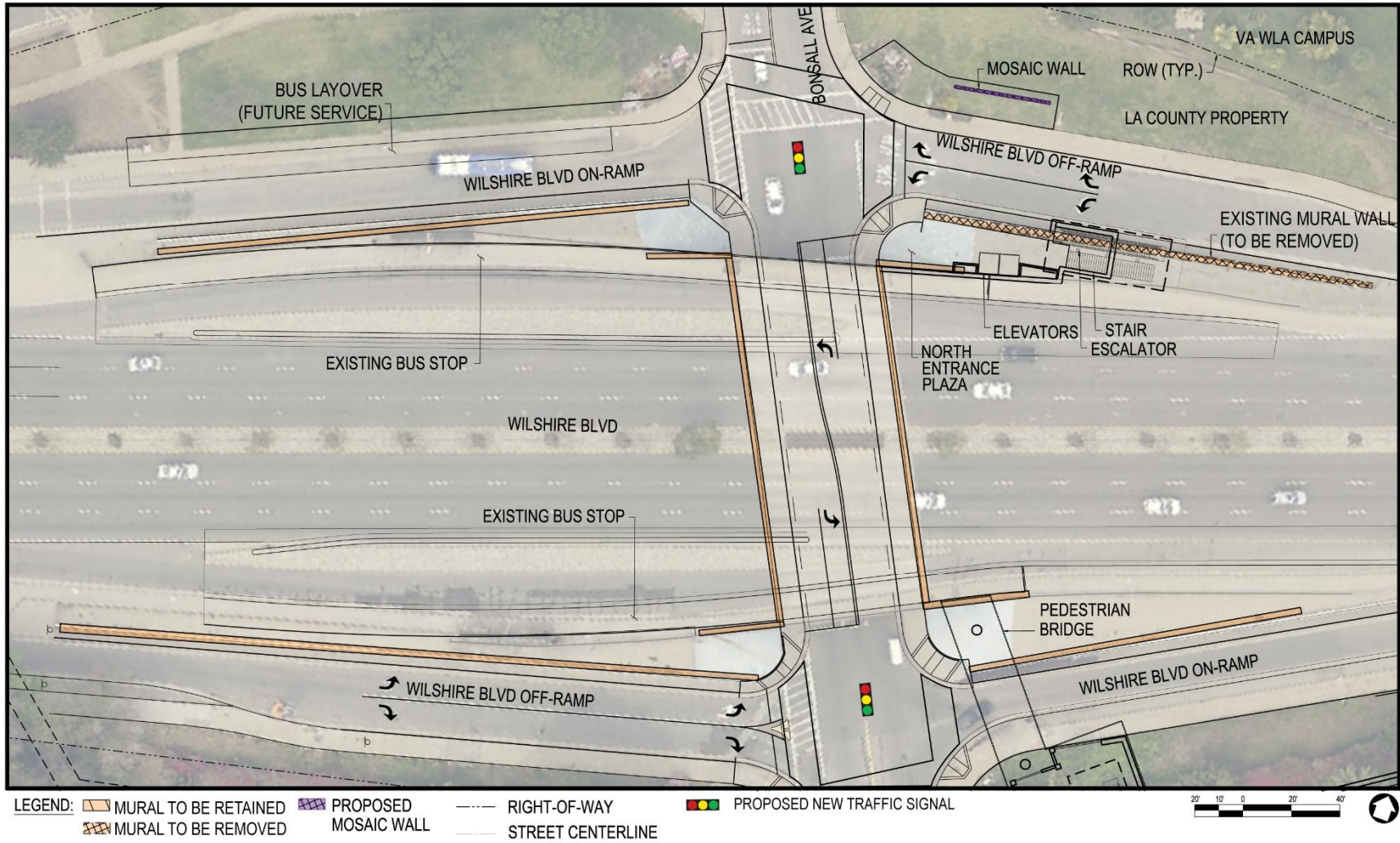


Figure 2-9: Northeast Mural Wall



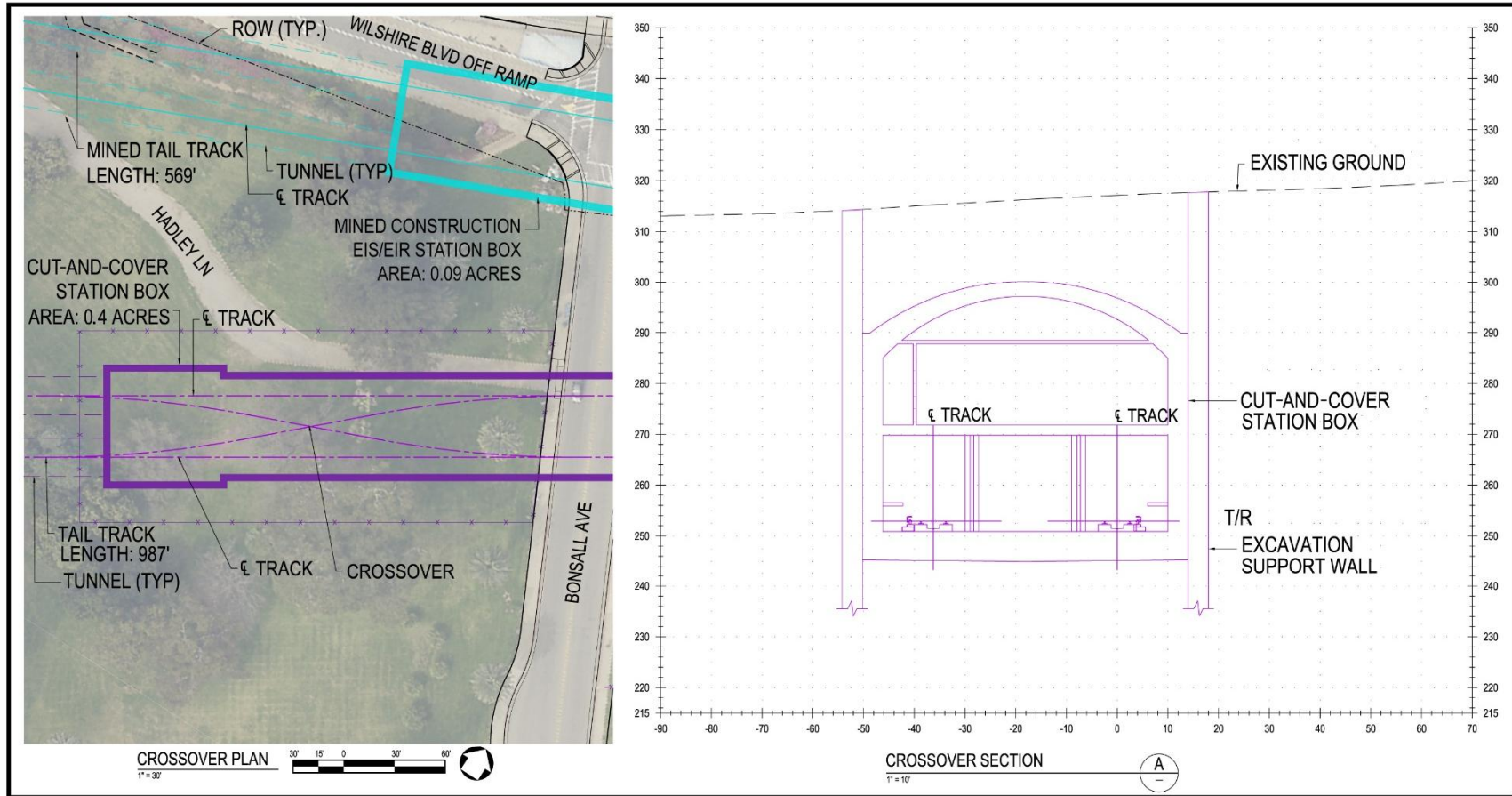
Source: Metro 2018

2.5 Construction Method for Westwood/VA Hospital Station West Crossover

The Project as defined in the Final EIS/EIR included a crossover located west of the Westwood/VA Hospital Station platform; the crossover structure would be approximately 300 feet long. The crossover was to be constructed adopting sequential excavation mining methods at its western end (approximately 50 feet) to reduce impacts to the lawn area within the WLA VA Historic District, which is located at the surface above a portion of the crossover. The adjacent platform, and most of the crossover, which was located underneath an existing VA WLA Campus parking lot (Lot 42), was to be constructed via the cut-and-cover method. The refined alignment would move approximately 250 feet of the crossover section west of Bonsall Avenue beneath the lawn area. With the refined alignment and schedule, the tunnels would be excavated in advance of the crossover from the tail track exit shaft, and the tunnel linings would then be removed during excavation of the crossover. Geotechnical investigations completed since publication of the Final EIS/EIR for the refined alignment confirmed that sands and clays of the Younger and Older Alluvium are present (Metro 2017c). These “soft ground” soils are less favorable for the sequential excavation mining methods, which require specialized construction techniques and monitoring to ensure a safe excavation. Multiple headings (a series of small sections within the cavern face) would need to be excavated for construction safety, slowing progress of the excavation. Therefore, sequential excavation mining methods for the crossover would increase construction risks, including schedule and worker safety. As such, Metro proposes constructing the crossover via the cut-and-cover method, similar to the rest of the station structure. The proposed cut-and-cover area and associated construction staging area are shown in Figure 2-10.

As stated in Section 2.2, the Project is constructed as two tunnels, one tunnel for each direction of travel. At terminal stations, a crossover is required to allow trains arriving in one tunnel to cross over into the other tunnel to depart. Because a crossover allows a train to reverse direction, the crossover must connect trackwork located in one tunnel with that in the other tunnel. Typically, crossovers are constructed in a structure directly next to the station and extend for the full width of the station. The TBM tunnels are not normally sized to accommodate any portion of the crossover structure, meaning the width is insufficient to permit the movement of the train through the crossover trackwork. As stated in Section 2.7, the Section 3 tunnel diameter has increased from an outside diameter of 20 feet 10 inches to 22 feet 6 inches to permit 50 feet of the crossover trackwork to extend into the tunnels, which reduces the length of the cut-and-cover area required for the crossover within the WLA VA Historic District west of the station from 300 feet to 250 feet. The 250-foot cut-and-cover area west of Bonsall Avenue is in addition to the cut-and-cover area required for the station box east of Bonsall Avenue.

Figure 2-10: Construction Method for Westwood/VA Hospital Station West Crossover



LEGEND:
■ PROPOSED STATION BOX ■ FINAL EIS/EIR STATION BOX - - - - RIGHT-OF-WAY
✱ PROPOSED STAGING AREA — PROPOSED TRACK CENTERLINE

2.6 Westwood/UCLA Station Entrances

The Final EIS/EIR included two options for the location of the Westwood/UCLA Station, referred to as the on- or off-street station option (described in Chapter 2, Section 2.6.4 of the Final EIS/EIR). Since completion of the Final EIS/EIR, the on-street station option has been advanced because the off-street option would undermine several large buildings with very deep basements, resulting in high risk to construction of the Project. As stated in Section 2.6.4 of the Final EIS/EIR, the on-street option also had two scenarios for entrance locations: (1) two entrances would be provided, both of which would be north of Wilshire Boulevard, and (2) three entrances would be provided – two north of Wilshire Boulevard and one south of Wilshire Boulevard. Metro is advancing this second scenario.

Refinements of varying degrees are proposed at all three station entrances. The locations of station entrances as evaluated in the Final EIS/EIR are shown in Figure 2-11 and the proposed locations are shown in Figure 2-12. Through coordination with UCLA, the location of the main station entrance on the UCLA Campus within the area identified as Lot 36 has been shifted slightly to the east and closer to Gayley Avenue, and the plaza has been shifted south toward Wilshire Boulevard. This design moves the entrance closer to the intersection of Wilshire Boulevard and Gayley Avenue and reduces the station footprint in Lot 36, which increases the amount of land returned to UCLA after construction. This refinement would require relocation of a portion of a Los Angeles County storm drain; however, no other changes would be necessary.

The location of the east station half entrance on the north side of Wilshire Boulevard, adjacent to Westwood Boulevard, has also been refined. Through the advancement of design and coordination with the property owner, it was determined that the entrance as designed and located in the Final EIS/EIR would require substantial structural reframing to the Linde (Westwood) Medical Plaza located at 10921 Wilshire Boulevard. Other station entrance options were examined; however, the City of Los Angeles Department of Transportation expressed concerns that these entrance options could result in additional pedestrian congestion at the corner of Wilshire and Westwood Boulevards. Therefore, Metro is proposing to locate a full station entrance within the east portion of the Linde (Westwood) Medical Plaza in a space currently occupied by Chase Bank, thereby displacing Chase Bank. The one-story building occupied by Chase Bank would be deconstructed to accommodate the full station entrance; the full station entrance would have two sets of escalators, stairs, and elevators. A full station entrance in this location would minimize impacts to the foundation and structural framing of the Linde (Westwood) Medical Plaza building and the adjacent parking structure because mining under the building and parking structure would no longer be required. Instead, the deconstruction of the Chase Bank provides the space needed for the full entrance. This station location would also provide a larger area for pedestrian activity.

Currently, four planters are located within the landscaped plaza fronting the Chase Bank retail space; vegetation of various sizes and species, including a number of tall palms, are located within the planters. The planters are raised above the plaza. All four planters would be removed to support construction of the station. Metro does not propose to replace the planters when construction is complete as they present a tripping hazard and restrict pedestrian movement.

Minor refinements are proposed to the half entrance on the south side of Wilshire Boulevard. Metro proposes to replace the escalators presented in the Final EIS/EIR with up to two elevators to improve ADA accessibility. The addition of the elevators required shifting the stairs slightly closer to the intersection of Wilshire and Westwood Boulevards in order to provide sufficient room for queueing.

Figure 2-11: Westwood/UCLA Station Entrances – Final EIS/EIR

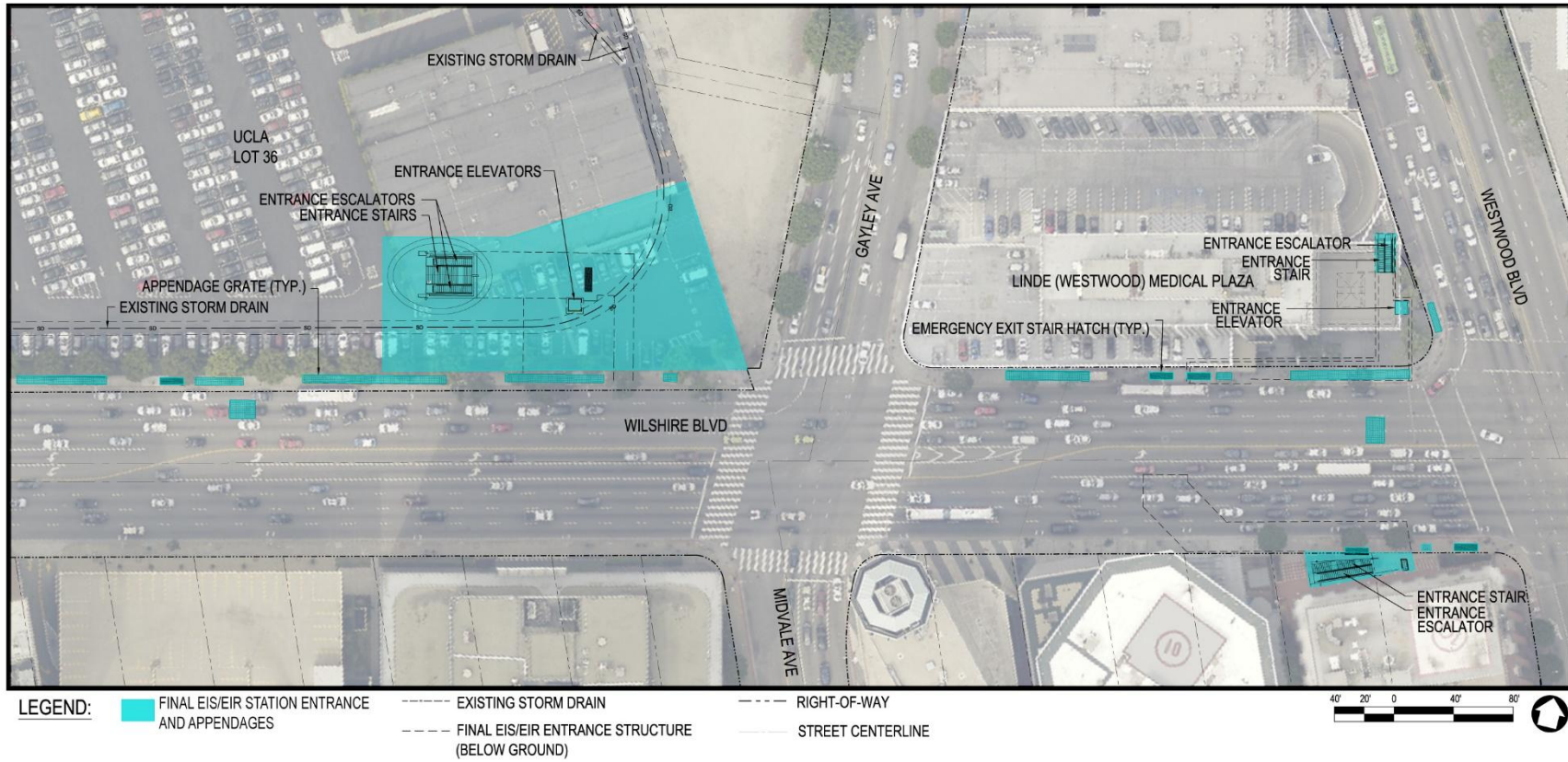
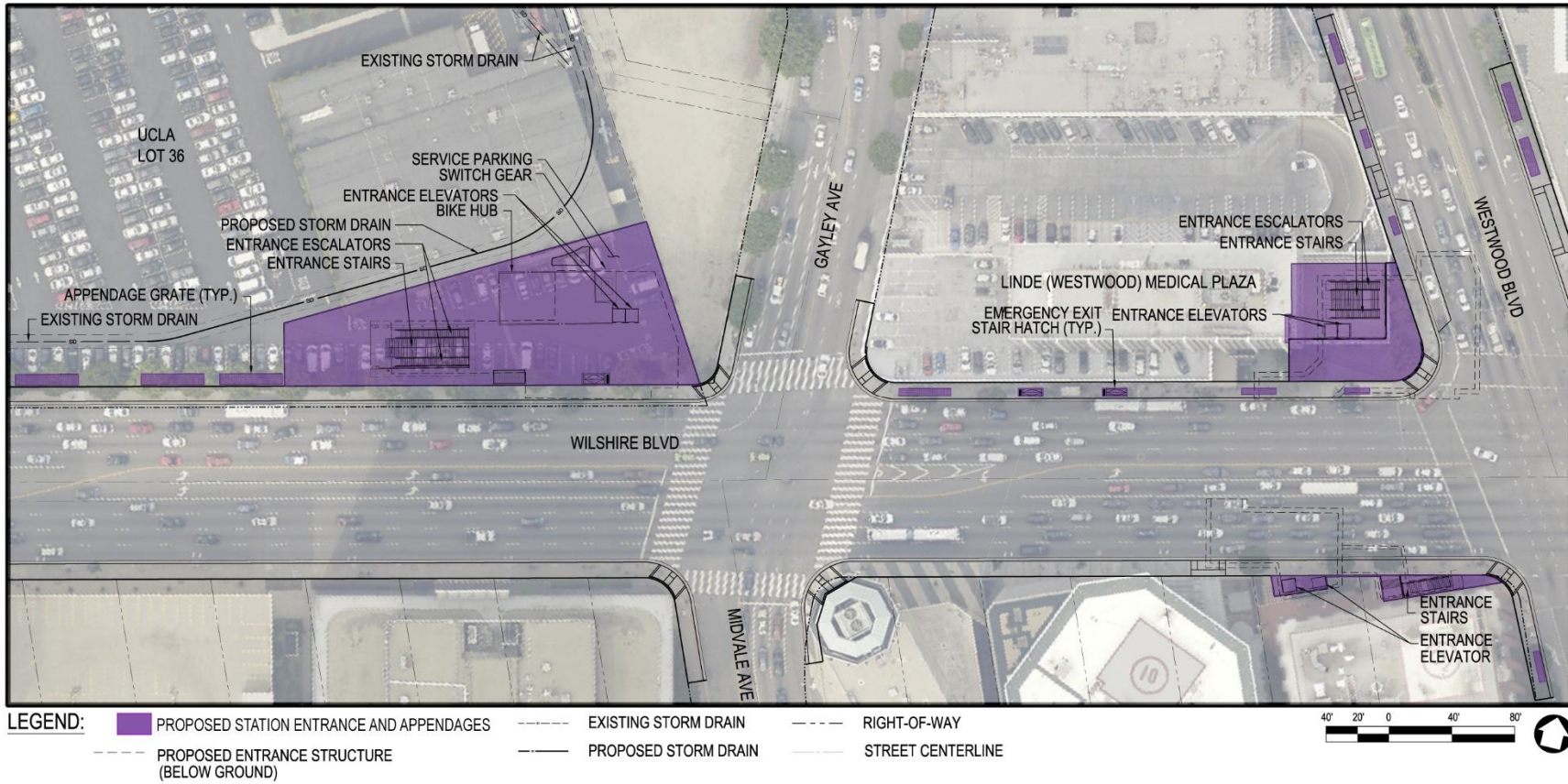


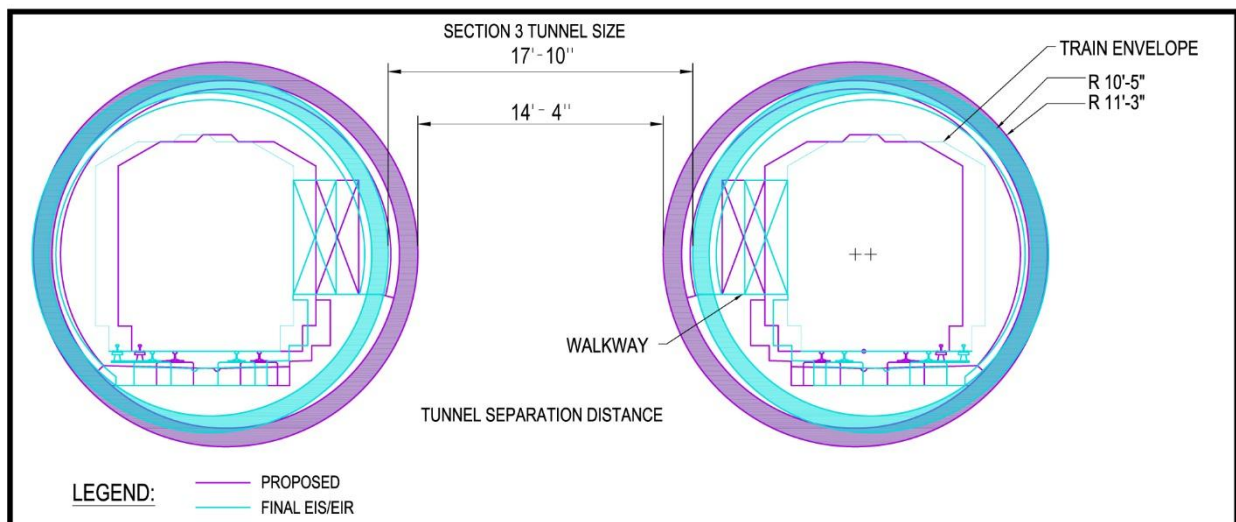
Figure 2-12: Westwood/UCLA Station Entrances – Proposed



2.7 Tunnel Size

For Section 3 of the project alignment, the size of the tunnel has increased from an outside diameter of 20 feet 10 inches to 22 feet 6 inches to accommodate portions of the crossover at the Westwood/VA Hospital Station and thereby reduce the size of the cut-and-cover excavation, as described in Section 2.5. The change in diameter size is shown on Figure 2-13. The distance between the tunnels has been reduced to keep the tunnels within the subsurface easement areas identified in the Final EIS/EIR. The larger diameter would allow some of the special trackwork of the crossovers to start within the tunnels, and thereby reduce the length of the station box cut-and-cover excavation by approximately 50 feet at each crossover. As a result, the station would not extend into the I-405 off-ramp near the east end of the station, and the easement area required at the WLA VA Historic District on the west end of the station box would be reduced.

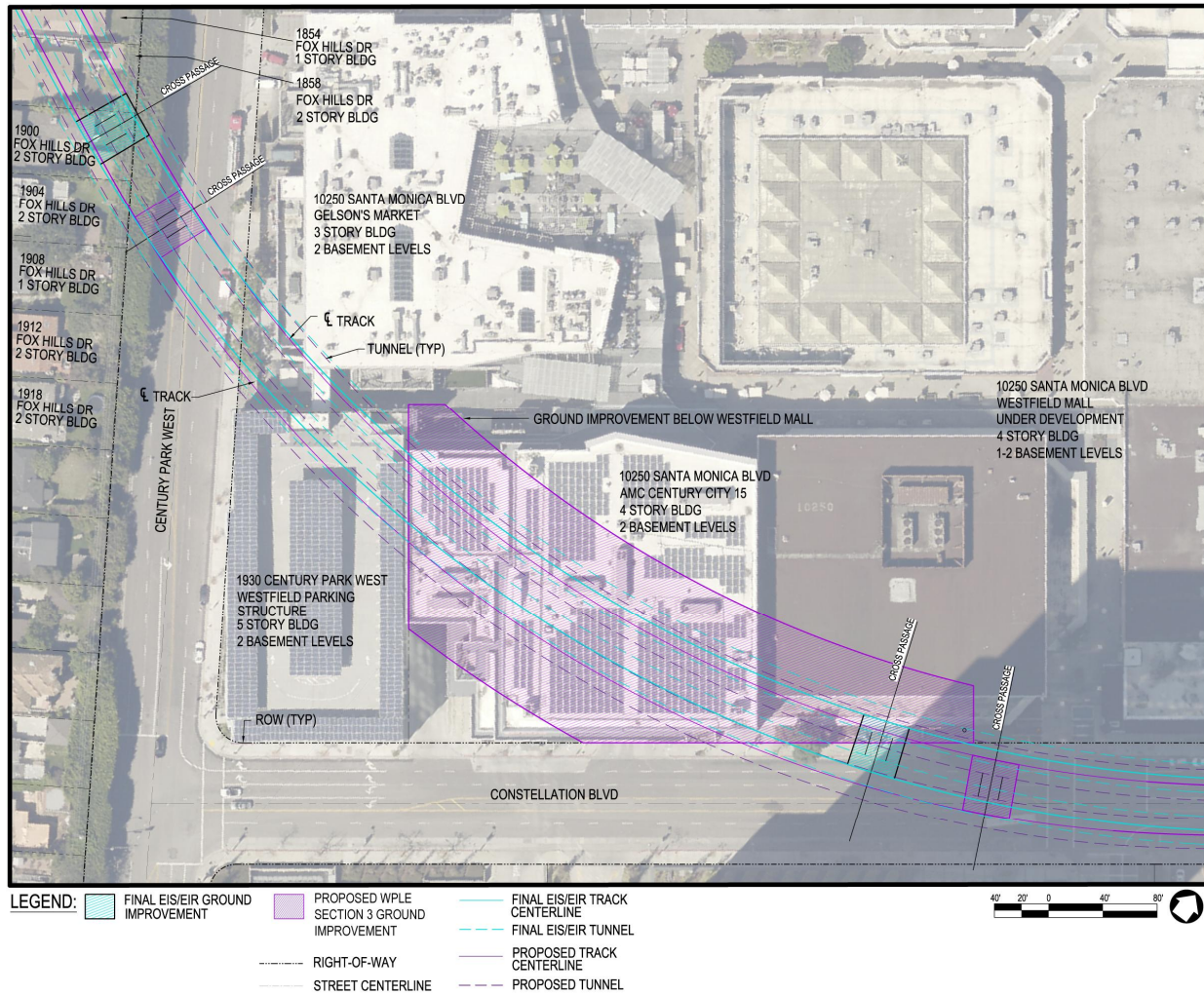
Figure 2-13: Tunnel Size – Final EIS/EIR and Proposed



2.8 Grouting

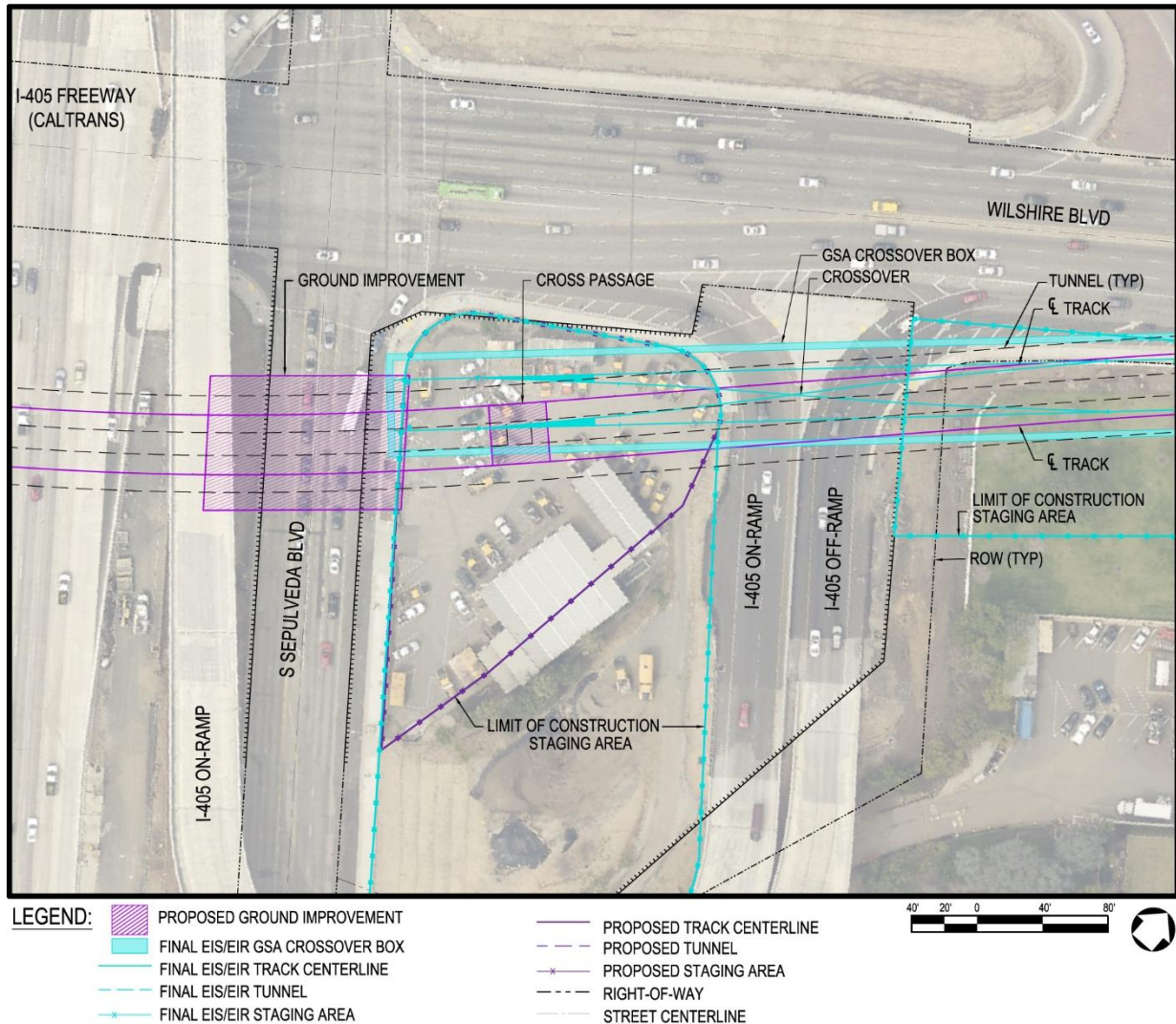
Further geotechnical studies completed in support of the advancement of design have indicated that ground improvement (grouting) may be required beneath Westfield Mall to minimize ground settlement during tunneling of Section 3 of the Project near the intersection of Century Park West and Constellation Boulevard (Metro 2017b). The grouting may be provided from several shafts, or trenches, located within Century Park West and/or Constellation Boulevard (Figure 2-14). In either or both locations, the shafts would be approximately 20 feet in diameter and 80 feet deep. The shafts may be in use for several months, requiring traffic lane closures. Trenches would be longer, however, they would not impact additional traffic lanes.

Figure 2-14: Ground Improvement Grouting for WPLE Section 3 at Westfield Mall



Ground improvement is also proposed at Sepulveda Boulevard from below the level of existing utilities to below the bottom of the tunnels, fully encompassing the tunnels, to protect the utilities as the tunnels pass beneath them (Figure 2-15). Several major utilities are in this location, some of which are deep. A 96-inch-diameter water main is the deepest utility, the bottom of which is 35 feet below the ground surface; the top of the tunnels is approximately 12 feet below this utility. Other utilities are as shallow as 4 feet below ground level. Grouting is therefore required to protect against excessive ground settlement effects. As stated in Section 2.2, grouting would be provided from a shaft located within Caltrans right-of-way and street closures would not be required.

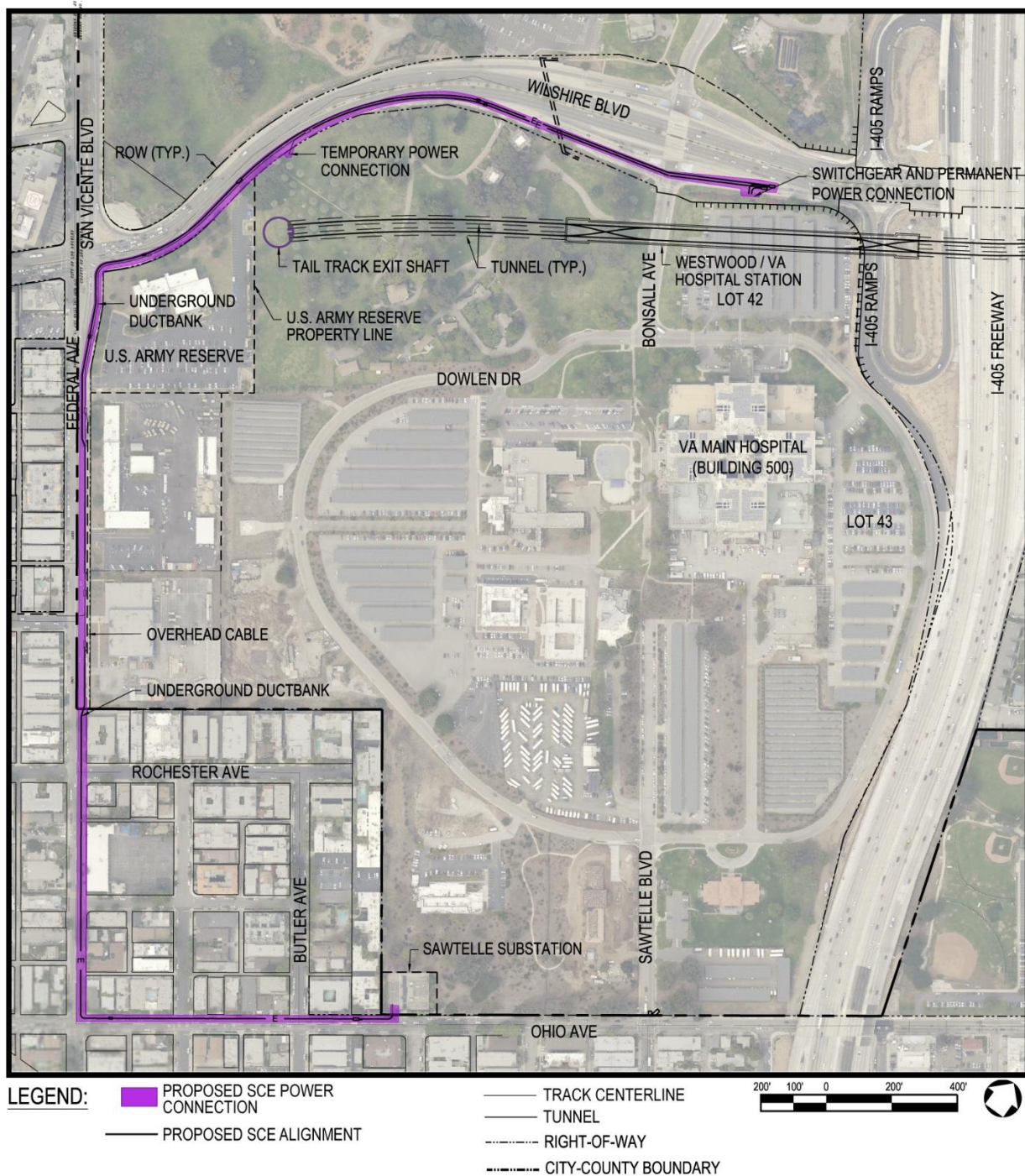
Figure 2-15: Ground Improvement Grouting at Sepulveda Boulevard



2.9 Underground Conduits

Temporary power for construction, including power required to operate the TBMs and for station construction, would require installation of new power cables from the existing Southern California Edison (SCE) Sawtelle substation to the Western VA construction staging area via Ohio Avenue, Federal Avenue, and Wilshire Boulevard (Figure 2-16); these cables were not identified in the Final EIS/EIR. The route would be a combination of new power lines on existing overhead lines and new underground conduits within public rights-of-way. SCE would install the new overhead lines, and construction of the new underground conduits would be performed by Metro. Some of these same conduits would be used for permanent primary power for the Project and would be extended from the Western VA construction staging area to the permanent Westwood/VA Hospital Station switchgear site along Wilshire Boulevard and the off-ramp to Bonsall Avenue. Other conduits are included as backup for Metro, which is a standard request from SCE when constructing new power routes.

Figure 2-16: Temporary and Permanent Power



In addition, a secondary (emergency) power source would be provided to the Westwood/VA Hospital Station from the existing SCE Colorado substation in the event that the Sawtelle substation fails, as Metro requires two independent power sources for reliability. Details of the new power line are still being determined, but the power line would be within the public rights-of-way and is expected to use existing SCE overhead infrastructure for the majority of the route as well as some new underground conduits constructed by Metro. The civil work would be carried out by the Metro contractor for the area. The conduits are expected to run underground and parallel with the Sawtelle route, from Texas Avenue to the Westwood/VA Hospital Station switchgear.

The provision of power is a minor action located within public rights-of-way. The primary power route would extend for approximately 0.8 mile from the Sawtelle substation to the Western VA construction staging area and would pass through the jurisdictions of the City of Los Angeles and the County of Los Angeles. The work would require coordination with both the City and the County for traffic control during construction. The route would extend an additional 0.3 mile from the Western VA construction staging area to the Westwood/VA Hospital Station switchgear. The secondary power route extends for approximately 4 miles, of which approximately 3.5 miles would use existing SCE infrastructure and would not require any civil construction work. The new underground portion of the secondary power route is the remaining approximate 0.5 mile, which is located within the jurisdiction of the County of Los Angeles, parallel to the primary power route.

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3.0 EVALUATION OF THE PROJECT REFINEMENTS

This section presents the transportation and environmental evaluation of the long-term (operational), short-term (construction), and cumulative impacts for the project refinements described in Section 2.0 of this technical memorandum. The evaluation was conducted consistent with the methodology used in the *Westside Subway Extension Final Environmental Impact Statement/Final Environmental Impact Report* (Final EIS/EIR) (Los Angeles County Metropolitan Transportation Authority [Metro] 2012a) unless noted otherwise. Table 3-1 presents the project refinements and the transportation and environmental topics that were screened to determine if additional analysis for long-term or construction impacts was required. Each topic discussion begins by summarizing the findings from the Final EIS/EIR and then presents the evaluation conducted for those refinements that have the potential to affect the conclusions in the Final EIS/EIR. The evaluation also considers whether the refinements require modifications to the mitigation measures identified in the Final EIS/EIR. For reference, the Mitigation Monitoring and Reporting Program included as Appendix I to the Final EIS/EIR is included as Appendix A of this technical memorandum.

In support of the reevaluation summarized in this section, the following technical studies have been prepared. These studies are included in Appendix B of this technical memorandum:

- Westside Purple Line Extension Project Section 3, Westwood/VA Hospital Station Passenger Drop-off Facility Traffic Impact Study (Metro 2018a)
- Westside Purple Line Extension Project Section 3, Air Quality Technical Memorandum (Metro 2018b)
- Westside Purple Line Extension Project Section 3, Historic Property Reassessment of Effects Report (Metro 2018c)
- Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum (Metro 2018d)
- Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements (Metro 2018e)
- Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report (Metro 2018f)

Table 3-1: Evaluation of Project Refinements

Project Refinement	Public Transit	Streets and Highways	Parking	Pedestrian, Bicycle and Bus Transit	Land Use	Communities and Neighborhoods	Acquisitions and Displacements of Existing Uses	Visual Quality	Air Quality	Climate Change	Noise and Vibration	Energy	Geologic Hazards	Hazardous Waste and Materials	Ecosystems / Biological Resources	Water Resources	Safety and Security	Parklands and Community Services and Facilities	Historic and Archaeological Resources	Growth-Inducing Impacts	Section 4(f)	Environmental Justice
Section 2.1 Construction Staging Areas		C	C		C	C	C	C	C	C	C	C			C	LT C		C	C		C	C
Section 2.2 Alignment at the VA Medical Center and Westwood/VA Hospital Station Entrances	LT	C		LT	LT C	LT C	LT C	LT	C	C	LT C	C					LT C	LT C	LT C		LT C	LT C
Section 2.3 Westwood/VA Hospital Station Access	LT	LT		LT	LT	LT	LT C		LT C	LT C	LT	C				LT	LT	LT	LT C		LT C	LT C
Section 2.4 Murals					LT	LT		LT										LT	LT		LT	
Section 2.5 Construction Method for Westwood/VA Hospital Station West Crossover		C				C	C	C	C	C	C	C			C	LT C		C	C		C	C
Section 2.6 Westwood/UCLA Station Entrances		C	LT C	LT	LT	LT	LT C	LT	C	C	LT C	C			LT			LT C	LT C		LT C	LT C
Section 2.7 Tunnel Size		C							C	C		C	C									
Section 2.8 Grouting		C											C						C			
Section 2.9 Underground Conduits	C	C	C								C									LT		C

Notes: LT = long-term analysis could require updates; C = construction analysis could require updates
UCLA = University of California, Los Angeles; VA = Veterans Affairs

3.1 Public Transit

Long-term and construction-related impacts to public transit were evaluated in Chapter 3, Sections 3.4.2 and 3.8.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to public transit. As demonstrated in these sections, the project refinements would continue to provide transit system benefits during operations, consistent with the impact conclusions in the Final EIS/EIR. During construction, the project refinements would not result in new adverse impacts to public transit or increase the severity of adverse impacts identified in the Final EIS/EIR.

3.1.1 Long-Term Operational Evaluation

Chapter 3, Section 3.4.2 of the Final EIS/EIR evaluated whether the Project would result in impacts to transit travel times between various origins and destinations, as well as between stations along the Locally Preferred Alternative (LPA) alignment. Additionally, the Final EIS/EIR considered impacts to transit speed. Implementation of the project refinements would not result in changes to the number of stations or travel times for the Westside Purple Line Extension (WPLE) Project. One refinement—the alignment at the Veterans Administration (VA) Medical Center and Westwood/VA Hospital Station entrance (Section 2.2)—resulted in modifications to the LPA alignment. However, this refinement improved operating conditions, including for a future extension of the WPLE Project to the west toward Santa Monica. Specifically, the straighter alignment would allow for faster travel speeds for trains traveling between the Westwood/VA Hospital Station and future stations to the west. In addition, the tail track exit shaft, which would be subsurface after construction, provides a location to receive a future tunnel boring machines (TBM) and to connect the future rail tracks and systems without interfering with the Section 3 revenue service (note: the launch or receiving of a TBM in support of an extension of the subway would be cleared in a future National Environmental Policy Act/California Environmental Quality Act document as part of the environmental evaluation for that project). In comparison, staging tunnel construction from Lot 42, as was envisioned in the Final EIS/EIR, would not have provided the means to launch or receive a TBM for a future westward expansion. Furthermore, the addition of the East Crossover at the VA Campus immediately east of the station platform (Section 2.2) improves the ability of Metro to reverse trains at the terminal station. This improves the operational recovery time in instances when service is delayed or otherwise off schedule.

Section 3.4.2 of the Final EIS/EIR also considered whether the WPLE Project would affect local bus service levels. Specifically, the Final EIS/EIR stated that possible service changes could occur to Metro Lines 20 and 720 to support the subway extension because these routes most closely parallel the service that would be provided by the Project. However, the travel forecasting estimates for the LPA assumed that transit lines for both rail and bus services, including all station and alignment options still under consideration, will provide the same service as defined under the No Build Alternative. Therefore, while these changes could be anticipated they were not assumed as part of the analysis included in the Final EIS/EIR. The refinements would not result in changes to ridership or the provision of bus service (e.g., routing or locations of bus stops) within Section 3 of the WPLE Project and, therefore, service levels would not be affected. The refinements to the Westwood/VA Hospital Station entrance (Section 2.2) and the provision of the passenger drop-off area (Section 2.3) would have no effect on how buses serve the existing bus stops, nor would the refinements introduce new stops for existing routes. As part of these refinements, a pedestrian bridge would be provided from the station entrance to an existing bus stop on eastbound Wilshire Boulevard, which would provide improved and safer pedestrian access for those

transferring between the bus and subway compared to the pedestrian ramp design included in the Final EIS/EIR. Additionally, escalators and elevators would be added on the north side of Wilshire Boulevard between Bonsall Avenue and the existing bus stop on westbound Wilshire Boulevard. These features would provide improved pedestrian access between the new subway station and existing bus stops, which would benefit transit patrons who transfer between these modes. As part of approved Mitigation Measure T-16 (Study Bus-Rail Interface), Metro coordinates with the Metro's bus service and other municipal transit providers. Per these coordination meetings, bus stop locations will remain in their current location. Other municipal operators, such as the Santa Monica's Big Blue Bus, will continue to provide similar service.

As described in Section 2.3, a bus layover area has been added along the westbound on-ramp from Bonsall Avenue to Wilshire Boulevard at the request of Metro's Bus/Rail Interface group to facilitate the potential future transit services to West Los Angeles and Santa Monica. The addition of the bus layover area would provide a benefit for future bus services in this area. There are no planned changes to transit frequency and service routes and, therefore, transit frequency and routes remain unchanged from the Final EIS/EIR. Although the routes, timing, and extent of the potential additional future transit services to West Los Angeles and Santa Monica are not known at this time, it is not anticipated that such future transit services would cause significant environmental impacts. Rather, the impacts would be similar to those of existing transit services and would tend to reduce traffic congestion, air pollutant emissions, and greenhouse gas emissions impacts.

The refinements would not affect transit reliability, ridership, transit expandability, or passenger comfort and convenience because the service provided on the WPLE Project in terms of travel times and the number of stations would remain unchanged with implementation of the project refinements compared to the Final EIS/EIR.

The Final EIS/EIR did not identify mitigation measures related to transit for the WPLE Project. Because the project refinements do not result in new adverse impacts, mitigation is not required with implementation of these refinements. Therefore, the impact conclusions in the Final EIS/EIR related to public transit remain unchanged.

3.1.2 Construction Phase Evaluation

Chapter 3, Section 3.8.3 of the Final EIS/EIR stated that temporary street closures would require temporary rerouting of bus routes and additional bus stop locations, which could increase transit travel time. Metro committed to coordinating with transit providers prior to temporary street closures or other changes that affect bus stop locations or operations. The Final EIS/EIR also included Mitigation Measure TCON-6 (Temporary Bus Stops and Route Diversions) to minimize impacts at each construction location. The Final EIS/EIR concluded that although impacts to transit are temporary and would be reduced with mitigation, impacts would remain adverse and unavoidable during construction.

Construction of the underground conduits (Section 2.9) could result in changes in impacts to public transit; this refinement is evaluated in the following section. The other refinements described in Section 2.0, including grouting (Section 2.8), would not affect implementation of Mitigation Measure TCON-6 or change street closures in a manner that would require additional bus detours or increase bus travel times compared to the Final EIS/EIR. Further information on traffic control zones for grouting is provided in Section 3.2.2.3 of this memorandum. Therefore, those project refinements would not increase the

severity of impacts identified in the Final EIS/EIR related to public transit and the impact conclusions in the Final EIS/EIR remain unchanged during construction of the project refinements.

3.1.2.1 Underground Conduits

As described in Section 3.2.2.4, construction of the underground conduits would require short-term closures of the parking lane on westbound Ohio Avenue, the parking lane on northbound Federal Avenue, and the eastbound far right travel lane on Wilshire Boulevard during off-peak hours (midday off-peak for Ohio and Federal Avenues and evening off-peak for Wilshire Boulevard). The Big Blue Bus and Metro do not operate bus routes on Ohio or Federal Avenues. A bus stop for the Big Blue Bus is located at the intersection of Federal Avenue and Wilshire Boulevard; however, the bus stop for the eastbound direction is located west of the intersection and therefore would not be affected by construction of the conduits.

As shown in Figure 2-7, there is an existing bus route on eastbound Wilshire Boulevard near the ramp to Bonsall Avenue. Construction of the underground conduits would not require relocation or the temporary closure of this bus stop. Per signage, the far-right lane in the eastbound direction on the portion of Wilshire Boulevard between Federal Avenue and the off-ramp to Bonsall Avenue is a bus-only lane from 7:00-9:00 a.m. and 4:00-7:00 p.m. Based on existing bus schedules for the Big Blue Bus and Metro, up to 70 buses associated with four bus routes travel along this segment of Wilshire Boulevard between 7:00 p.m. and 6:00 a.m. (Big Blue Bus Routes 2 and 18 and Metro Routes 20 and 720). Construction of the underground conduit would require work within that lane; however, as stated in Section 3.2.2.4 work would occur during off-peak periods, primarily between 10:00 p.m. and 6:00 a.m. when the bus-only lane is open to general purpose traffic. The entire lane would not be closed at any one time. The bus-only lane would be available for bus use during peak periods, consistent with the signage. During off-peak periods, buses would be required to use other eastbound lanes on Wilshire Boulevard where portions of the far-right lane are closed. Based on 2007 traffic counts from the City of Los Angeles Department of Transportation for Wilshire Boulevard at Federal Avenue (the most recent year for which counts are available), between 10:00 p.m. and 6:00 a.m. there are less than 1,000 vehicles per hour on Wilshire Boulevard traveling eastbound (City of Los Angeles Department of Transportation 2007); these vehicles are spread between three lanes, not including the bus lane. Based on general traffic guidelines, this roadway would accommodate up to 4,800 vehicles per hour (or approximately 1,600 vehicles per lane), excluding the bus lane that accommodates general purpose traffic during this timeframe. Therefore, this segment of Wilshire Boulevard would have sufficient capacity to accommodate the buses that would use the general purpose lanes without resulting in adverse impacts to the bus travel time.

Therefore, construction of the underground conduit would not result in adverse impacts to buses on Wilshire Boulevard because the bus-only lane would remain open during peak periods; bus stops would not need to be relocated; bus speeds would be maintained when a lane is closed on Wilshire Boulevard; and detour routes for the bus would not be required.

3.2 Streets and Highways

Long-term and construction-related impacts to streets and highways, including traffic circulation, were evaluated in Chapter 3, Sections 3.5.2 and 3.8.2, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to streets and highways, including traffic circulation. As demonstrated in these sections, the project refinements would

not result in adverse impacts to streets and highways during operation of the Project, consistent with the impact conclusions in the Final EIS/EIR. During construction, the project refinements would not result in new adverse impacts or increase the severity of adverse impacts identified in the Final EIS/EIR.

3.2.1 Long-Term Operational Evaluation

Chapter 3, Section 3.5.2 of the Final EIS/EIR evaluated impacts to the street and highway system in terms of changes in regional traffic (vehicle miles traveled, vehicle hours traveled, average vehicle speed, and vehicle trips, including daily and during the AM and PM peak hours) and transit mode share. The project refinements would not change the number of stations or add project features compared to the Project as evaluated in the Final EIS/EIR (e.g., new park-and-ride facilities); therefore, these performance measures would remain unchanged compared to the Final EIS/EIR.

Section 3.5.2 of the Final EIS/EIR also included an intersection analysis for 126 intersections within 1 mile of the WPLE Project station locations. The traffic analysis prepared in support of the Final EIS/EIR did not identify adverse impacts to intersections in Section 3 of the WPLE Project. The refinement to the location of the passenger drop-off area at the Westwood/VA Hospital Station (Section 2.3) has the potential to affect nearby intersections during operation of the Project. The traffic analysis for the passenger drop-off area at the Westwood/VA Hospital Station is summarized in the next section.

The other refinements do not have the potential to affect streets or highways because the refinements would not affect traffic flow (e.g., addition of a traffic signal, reduction in lanes), increase traffic volumes, require closures of driveways, or introduce new driveways. Therefore, for the other refinements there is no change to the conclusions presented in the Final EIS/EIR.

The Final EIS/EIR also included an evaluation of traffic impacts due to spillover parking (spillover parking occurs when those passengers who wish to park at a transit station cannot find designated transit parking and park elsewhere, either in a private lot or along a street, thus spilling over into the surrounding area). Spillover parking could create traffic impacts as those wishing to park near a station drive along local roads trying to find an available parking space. Implementation of the project refinements would not affect spillover parking compared to the Final EIS/EIR because the refinements would not increase the demand for parking at stations or result in the permanent removal of on- or off-street parking spaces that are open to the public. Therefore, the impact conclusions related to traffic impacts resulting from spillover parking remain unchanged from the Final EIS/EIR.

Mitigation related to streets and highways was not required within Section 3 of the WPLE Project as evaluated in the Final EIS/EIR. As summarized in the next section, the change in location of the passenger drop-off area does not result in an adverse impact to streets and highways and, therefore, mitigation is not required within Section 3 of the WPLE Project.

3.2.1.1 Westwood/VA Hospital Station Access

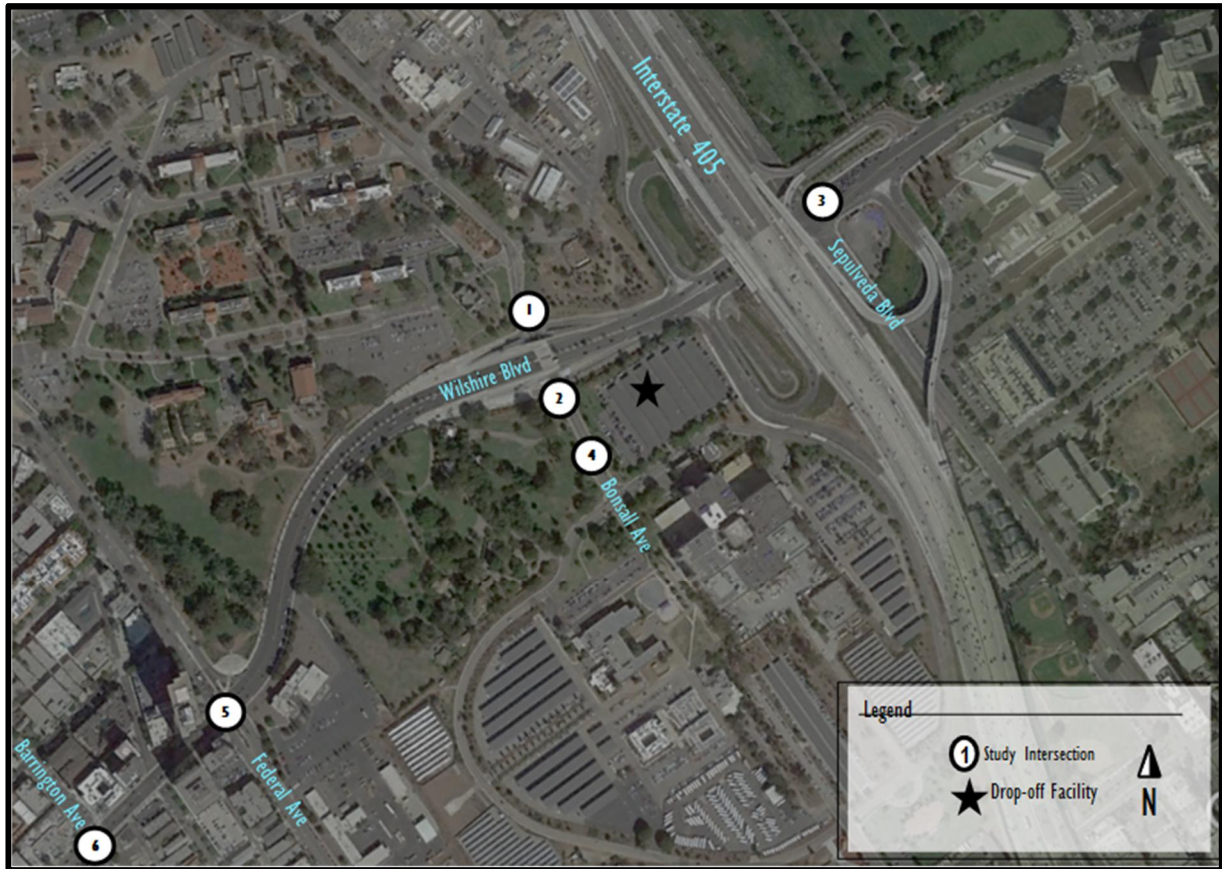
As stated in Section 2.3, the Final EIS/EIR included a passenger drop-off area on the westbound access ramp from Bonsall Avenue to Wilshire Boulevard and the westbound bus turnout, although it was assumed that passenger drop-off activities could also occur on the eastbound access ramp. Through coordination with representatives of the VA, the passenger drop-off area has been relocated to within the northern portion of the existing VA parking lot (Lot 42). A preliminary traffic signal warrant analysis was conducted, which identified the need for new traffic signals at two locations on Bonsall Avenue—at

the Wilshire Boulevard eastbound access ramps and the Wilshire Boulevard westbound access ramps; these locations are currently stop-sign controlled. The driveway into the passenger drop-off area would include a designated left-turn lane for vehicles traveling southbound on Bonsall Avenue. Bonsall Avenue is sufficiently wide that it can accommodate the additional dedicated left-turn lane without requiring widening. The remaining through lane would be wide enough to accommodate emergency vehicles and VA passenger vans. The configuration of the new driveway and the locations of the new traffic signals are shown on Figure 2-7. Internal circulation of the drop-off area will be designed such that a vehicle can continue traveling through the drop-off area without needing to exit onto Bonsall Avenue if a parking space is not found on the first pass through.

A traffic study was conducted for the following six intersections (including the new driveway) and four freeway interchange locations during the AM and PM peak hours to evaluate whether traffic associated with the passenger drop-off area would result in adverse impacts:

- Intersections (the numbers correspond to Figure 3-1):
 1. Wilshire Boulevard/Bonsall Avenue (North) (unsignalized, would be signalized as part of design)
 2. Wilshire Boulevard/Bonsall Avenue (South) (unsignalized, would be signalized as part of design)
 3. Wilshire Boulevard/Sepulveda Boulevard (signalized)
 4. Bonsall Avenue/Passenger Drop-Off Facility Driveway (proposed unsignalized intersection)
 5. Wilshire Boulevard/Federal Avenue (signalized)
 6. Wilshire Boulevard/Barrington Avenue (signalized)
- Interstate 405 (I-405)/Wilshire Boulevard Freeway Interchange Locations
 - Northbound (NB) I-405 to Wilshire Boulevard Off-ramp
 - Wilshire Boulevard to NB I-405 On-ramp
 - Southbound (SB) I-405 to Wilshire Boulevard Off-ramp
 - Wilshire Boulevard to SB I-405 On-ramp

Figure 3-1: Traffic Study Area



Source: Metro 2018a

The results of the traffic study, including the methodology and study area, are detailed in the *Westside Purple Line Extension Project Section 3, Westwood/VA Hospital Station Passenger Drop-off Facility Traffic Impact Study* (Metro 2018a) (included in Appendix B of this technical memorandum). The analysis was conducted for an opening year (2025) (Table 3-2) and a horizon year (2045) (Table 3-3) scenario. Based on the results of the study, there would not be adverse impacts in 2025 or 2045 associated with relocating the passenger drop-off area to a location within Lot 42. Additionally, the new traffic signals at Bonsall Avenue and the Wilshire Boulevard eastbound and westbound access ramps would provide a net benefit by reducing delay compared to current conditions, particularly during the p.m. peak hour in 2045. This benefit would occur for all those traveling along Bonsall Avenue as well as those using the ramps traveling to or from Bonsall Avenue, including veterans with origins or destinations at the Veterans Administration West Los Angeles Campus (VA WLA Campus) on both the north and south side of Wilshire Boulevard. Additionally, the provision of the passenger drop-off area would provide other benefits in terms of circulation on the VA WLA Campus because the drop-off area is designed to prevent Metro passengers that are not associated with the VA WLA Campus from being dropped off or picked up within the wider VA WLA Campus. Therefore, the impact conclusions in the Final EIS/EIR related to streets and highways remain unchanged with the refinement to the passenger drop-off area.

Table 3-2: Opening Year (2025) No Build/Build Conditions Peak Hour Intersection Level of Service

Intersection	Control Type	2025 No Build Conditions		2025 Build Conditions		Δ Delay	Significant?
		Delay	LOS	Delay	LOS		
AM Peak Hour							
1. Bonsall Avenue (North) and Wilshire Boulevard	All-Way Stop ¹	35.0	D	14.8	B	-20.2	No
2. Bonsall Avenue (South) and Wilshire Boulevard	All-Way Stop ¹	13.9	B	12.4	B	-1.5	No
3. Sepulveda Boulevard and Wilshire Boulevard	Traffic Signal	30.4	C	30.7	C	0.3	No
4. Drop-off Project Driveway and Bonsall Avenue	Side Street Stop ²			10.4	B	N/A	N/A
5. Federal Avenue and Wilshire Boulevard	Traffic Signal	110.2	F	110.3	F	0.1	No
6. Barrington Avenue and Wilshire Boulevard	Traffic Signal	23.2	C	23.3	C	0.1	No
PM Peak Hour							
1. Bonsall Avenue (North) and Wilshire Boulevard	All-Way Stop ¹	22.6	C	9.5	A	-13.1	No
2. Bonsall Avenue (South) and Wilshire Boulevard	All-Way Stop ¹	17.4	C	20.7	C	3.3	No
3. Sepulveda Boulevard and Wilshire Boulevard	Traffic Signal	32.0	C	32.2	C	0.2	No
4. Drop-off Project Driveway and Bonsall Avenue	Side Street Stop ²			12.3	B	N/A	N/A
5. Federal Avenue and Wilshire Boulevard	Traffic Signal	61.9	E	64.5	E	2.6	No
6. Barrington Avenue and Wilshire Boulevard	Traffic Signal	21.5	C	21.6	C	0.1	No

Source: Metro 2018a

 Notes: ¹ = Intersection control changes to signalized in the Build Condition

² = Intersection does not exist under No Build Condition but is side street stop-sign controlled in the Build Condition

LOS = level of service; Δ = change in delay; N/A = not applicable

Table 3-3: Horizon Year (2045) No Build / Build Conditions Peak Hour Intersection Level of Service

Intersection	Control Type	2045 No Build Conditions		2045 Build Conditions		Δ Delay	Significant?
		Delay	LOS	Delay	LOS		
AM Peak Hour							
1. Bonsall Avenue (North) and Wilshire Boulevard	All-Way Stop ¹	93.2	F	26.4	C	-66.8	No
2. Bonsall Avenue (South) and Wilshire Boulevard	All-Way Stop ¹	45.7	E	28.6	C	-17.1	No
3. Sepulveda Boulevard and Wilshire Boulevard	Traffic Signal	43.6	D	42.7	D	-0.9	No
4. Drop-off Project Driveway and Bonsall Avenue	Side Street Stop ²			11.6	B	N/A	N/A
5. Federal Avenue and Wilshire Boulevard	Traffic Signal	149.9	F	153.3	F	3.4	No
6. Barrington Avenue and Wilshire Boulevard	Traffic Signal	47.7	D	48.7	D	1.0	No
PM Peak Hour							
1. Bonsall Avenue (North) and Wilshire Boulevard	All-Way Stop ¹	109.0	F	20.4	C	-88.6	No
2. Bonsall Avenue (South) and Wilshire Boulevard	All-Way Stop ¹	369.9	F	151.2	F	-218.7	No
3. Sepulveda Boulevard and Wilshire Boulevard	Traffic Signal	57.2	E	57.8	E	0.6	No
4. Drop-off Project Driveway and Bonsall Avenue	Side Street Stop ²			34.8	D	N/A	N/A
5. Federal Avenue and Wilshire Boulevard	Traffic Signal	87.3	F	89.9	F	2.6	No
6. Barrington Avenue and Wilshire Boulevard	Traffic Signal	51.0	D	53.7	D	2.7	No

Source: Metro 2018a

Notes: ¹ Intersection control changes to signalized in the Build Condition;

² = Intersection does not exist under No Build Condition but is side street stop-sign controlled in the Build Condition

LOS = level of service; Δ = change in delay

3.2.2 Construction Phase Evaluation

Chapter 3, Section 3.8.2 of the Final EIS/EIR evaluated construction-related impacts to traffic circulation from construction staging areas and other construction activities, truck haul routes, and grout injection. The Final EIS/EIR concluded that although impacts to traffic circulation are temporary and would be reduced with mitigation, impacts would remain adverse and unavoidable during construction.

None of the project refinements would affect access by existing driveways as the refinements would not require partial or full closure of driveways.

The refinements with the potential to affect traffic or circulation during construction are shown in Table 3-1 and evaluated in the following sections. The refinements to the Westwood/VA Hospital Station access (Section 2.3) and murals (Section 2.4) do not have the potential to affect traffic or circulation during construction because these elements would not require street or lane closures, new haul routes, or substantial increases in truck trips compared to the Final EIS/EIR. Consistent with Mitigation Measure TCON-1 (Traffic Control Plans), the construction contractor will prepare site-specific traffic-control plans to minimize construction impacts to the degree possible for each work zone. Traffic-control plans would follow state and local jurisdictional guidelines and standards, and closures would be developed in close coordination with the California Department of Transportation (Caltrans), Los Angeles County, the City of Los Angeles, and the VA, as

applicable. Therefore, the impact conclusions in the Final EIS/EIR related to construction-related impacts to streets and highways in those locations remain unchanged compared to the Final EIS/EIR.

3.2.2.1 Construction on and Adjacent to VA WLA Campus

Figure 3-2 and Figure 3-3 present truck haul routes adjacent to and within the VA WLA Campus as identified in the Final EIS/EIR and proposed, respectively. Major differences between the haul routes are as follows:

- The Final EIS/EIR included a construction staging area on General Services Administration (GSA) property for construction of the GSA crossover; haul trucks exiting this construction staging area traveled east on Wilshire Boulevard. With the elimination of the GSA crossover, the construction staging area on the GSA property and the associated haul truck activity from that staging area have been eliminated.
- Construction of the GSA crossover also required a construction staging area within Caltrans right-of-way east of I-405 and south of Wilshire Boulevard. The Final EIS/EIR did not identify the number of haul trips associated with this staging area compared to the one on the GSA property. As stated in Section 2.2, the staging area in Caltrans right-of-way would not be eliminated as it would support construction of the cross passage, necessary grout injection to support utilities beneath Sepulveda Boulevard (refer to Section 2.8), and as a staging site for advance utility relocations. Access to this staging area would be via northbound Sepulveda Boulevard.
- Work associated with the Caltrans infiltration basin located north of Wilshire Boulevard would require truck haul routes on the I-405 ramps to access and exit the work area. Work in this location was not identified in the Final EIS/EIR.
- The Final EIS/EIR included a construction staging area for construction of the access shaft/emergency exit located on the south side of Wilshire Boulevard, partially on the VA WLA Campus, located part way between the U.S. Army Reserve construction staging area and Lot 42. Trucks would exit and access the staging area from Wilshire Boulevard. As a result of straightening the alignment, the Final EIS/EIR access shaft/emergency exit at this location has been eliminated. An emergency exit would instead be constructed within the grassy area on the western portion of the VA WLA Campus adjacent to the U.S. Army Reserve site; therefore, the staging area on the VA WLA Campus and associated access point from Wilshire Boulevard associated with the Final EIS/EIR have been eliminated.
- The Final EIS/EIR included truck haul routes on Dowlen Drive west of Bonsall Avenue to provide access to the construction staging area located on the west side of the VA WLA Campus adjacent to the U.S. Army Reserve site. This haul route has been eliminated to minimize truck activity on the VA WLA Campus. The construction specifications state that haul routes cannot occur on this section of Dowlen Drive, except for emergency access by the contractor.
- Truck haul routes associated with the staging areas in Lot 42 and the location of the replacement parking structure in Lot 43 remain unchanged since the Final EIS/EIR. In the Final EIS/EIR, the construction staging area at the U.S. Army Reserve site would be served by a new driveway from Wilshire Boulevard. Similarly, the Western VA construction staging area would be served by a new driveway from Wilshire Boulevard.
- As shown in Figure 3-3, there would be limited haul truck activity (less than 20 trucks per day) associated with the construction staging area west of Bonsall Avenue that would support construction of the Westwood/VA Hospital west crossover.

Figure 3-2: Truck Haul Routes – Final EIS/EIR

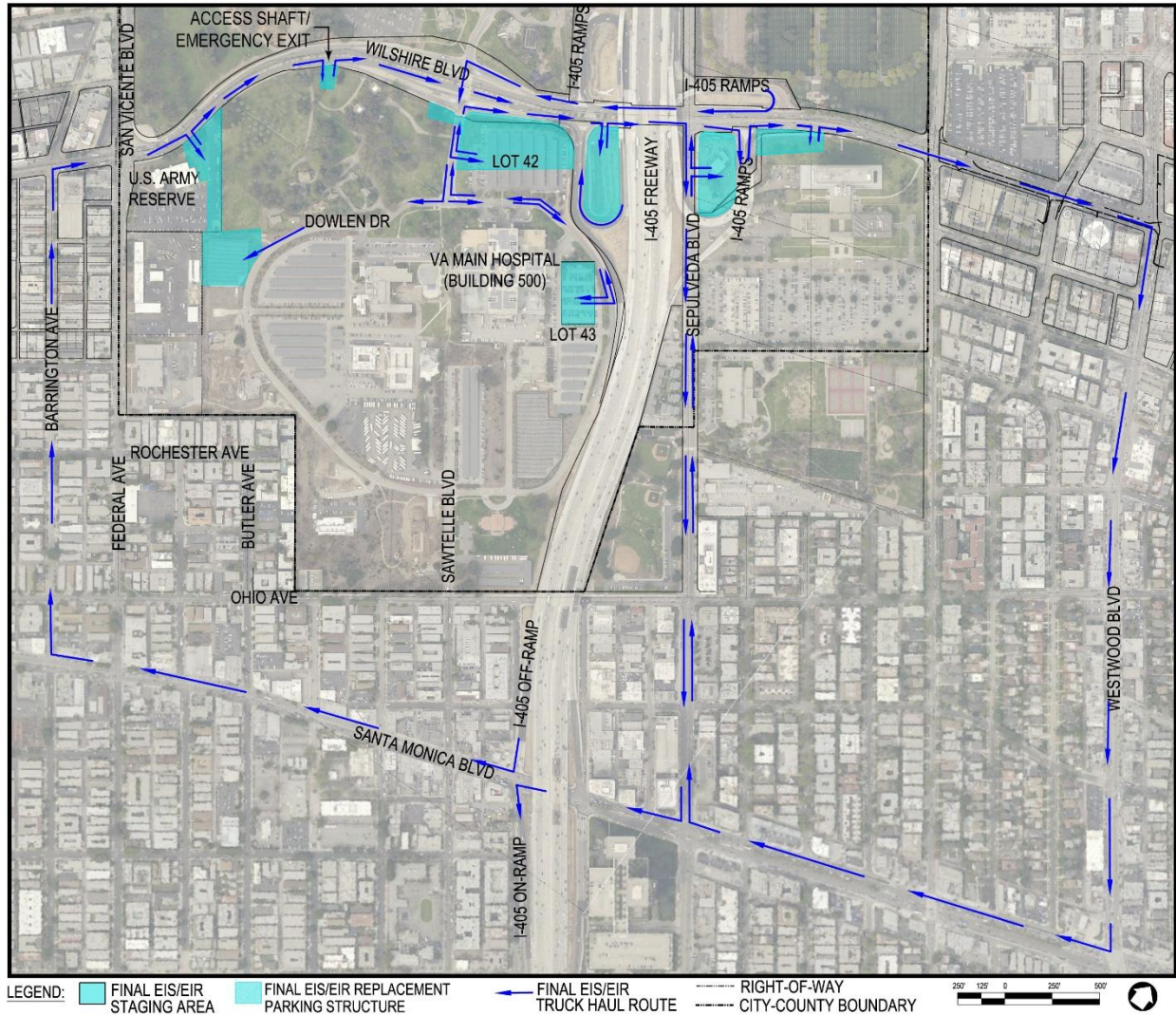
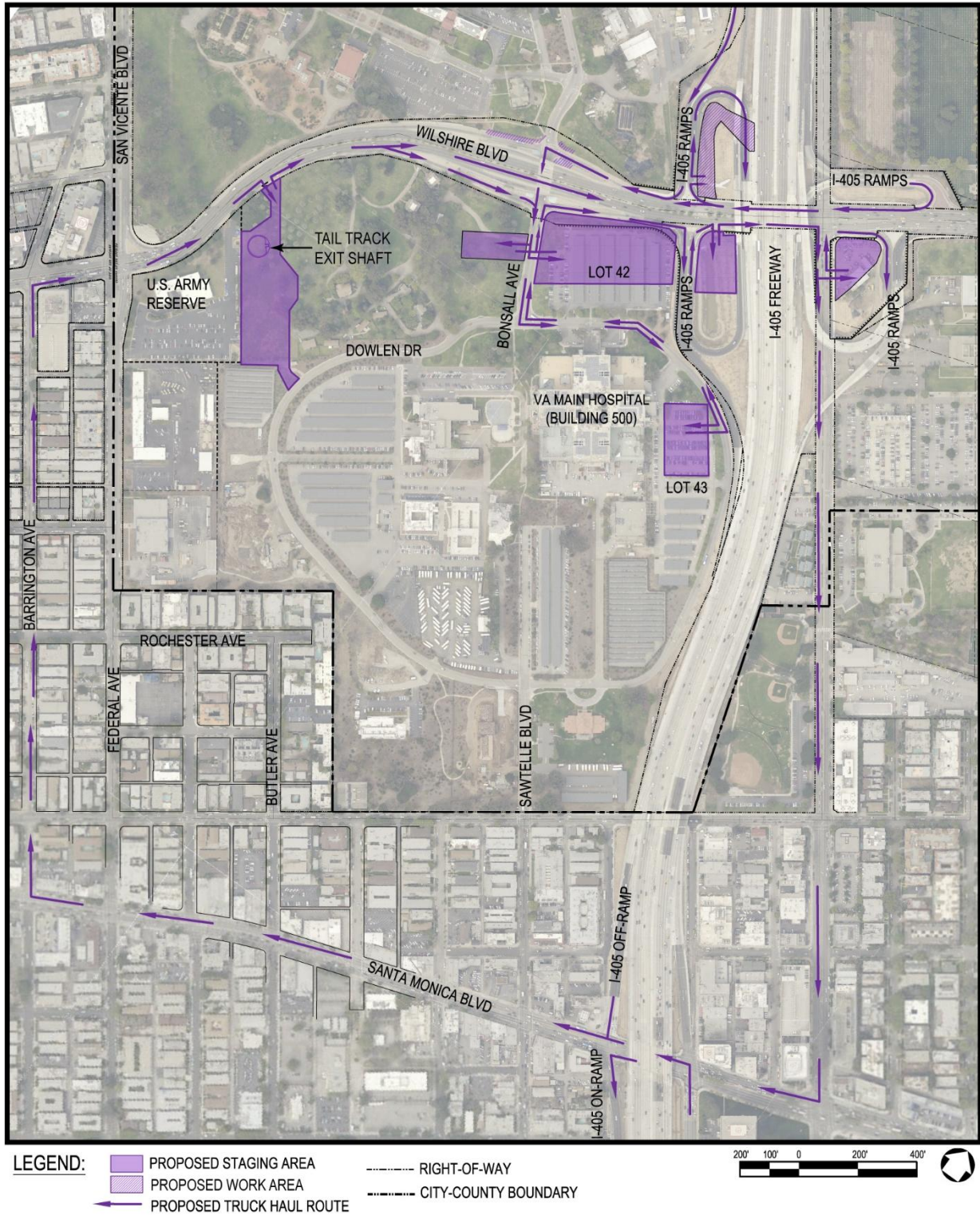


Figure 3-3: Truck Haul Routes – Proposed



Consistent with the Final EIS/EIR and Mitigation Measure TCON-2 (Designated Haul Routes), haul truck activity would occur during off-peak and nighttime periods (between 7:00 p.m. and 6:00 a.m.), as feasible, to minimize traffic disruptions during times when traffic volumes are typically greater. It is acknowledged that due to the nature of services provided by the VA Main Hospital, traffic on the campus occurs throughout the day and haul truck activity could be disruptive to patients regardless of the time of day. It is anticipated that haul routes during off-peak and nighttime periods would be less disruptive to patients than if those trips were to occur during peak periods. As shown in Figure 3-3, haul truck activity would occur along a short segment of Bonsall Avenue from the westbound off-ramp to a new entry point to Lot 42 north of Dowlen Drive. The only haul route activity proposed adjacent to the VA Main Hospital (Building 500) is associated with construction of the replacement parking structure in Lot 43. The haul routes to/from Lot 42 and shifting the majority of major construction activities to the Western VA construction staging area was proposed to minimize impacts to the VA Main Hospital and the patients on the VA WLA Campus to the extent feasible. Haul routes within the VA WLA Campus are being coordinated with representatives of the VA. Also consistent with the Final EIS/EIR, haul routes may be further refined as construction sequencing is finalized and are subject to approval of the relevant jurisdictions. As stated in Section 4.3.1, Metro is also coordinating traffic handling plans with Los Angeles County and the City of Los Angeles.

Table 3-4 presents haul truck trips by location/construction activity as evaluated in the Final EIS/EIR and with the proposed refinements. The number of truck trips was revised subsequent to the April 2012 Metro Board adoption of the Final EIS/EIR based on the most up to date construction information. The updated analysis was presented in the *Westside Subway Extension Project Air Quality Construction Impacts Memorandum* (Metro 2012b), which was prepared in support of the *Westside Subway Extension Project Addendum* (Metro 2012c); the addendum was adopted by the Metro Board in May 2012. The analysis assumed 40 to 100 daily truck trips per typical station. Construction traffic would occur near the Western VA construction staging area as a result of shifting a substantial amount of the heavy construction activities to this location from the Westwood/VA Hospital Station staging area. The Final EIS/EIR identified up to 140 trips per day associated with the TBM activity at the Westwood/VA Hospital Station while the *Westside Subway Extension Project Addendum* (Metro 2012c) assumed up to 100 trips per day for a typical station with a TBM entry/exit point. The TBM would be launched from the Western VA construction staging area, eliminating up to 140 trucks per day from VA WLA Campus roads during tunneling based on the Final EIS/EIR analysis and up to 100 trips per day based on the Addendum. Up to 160 trips per day are anticipated at the Western VA construction staging area due to the increase in volume of excavation associated with the increase in tunnel diameter (Section 2.7). Shifting trips off the VA WLA Campus would provide a benefit for the campus as well as the veterans, staff, and other visitors who travel through the campus because construction-related traffic and the presence of heavy construction equipment would be reduced on the campus compared to what was evaluated in the Final EIS/EIR.

While trips associated with the TBM activity have been shifted from the Westwood/VA Hospital Station construction staging area to the Western VA construction staging area, the number of construction truck trips associated with the station construction on the VA WLA Campus has increased since the Final EIS/EIR. This increase is a result of the increase in the quantity of excavation resulting from the larger station with a crossover on each side of the platform. The maximum number of daily trips remains consistent with the addendum. Construction of the station would be staged from Lot 42, consistent with the Final EIS/EIR. As shown in Figure 3-3, trucks would access that staging area from westbound Wilshire Boulevard, turn left on Bonsall Avenue, and then left into Lot 42 via a new driveway. Exiting the staging area, trucks would make a right on Bonsall Avenue and turn right onto eastbound Wilshire Boulevard. Therefore, the portion of the haul route on the VA WLA Campus would be minimal to avoid conflicts with traffic destined for the VA WLA Campus.

Table 3-4: Estimated Daily Haul Truck Trips – Final EIS/EIR and Proposed

Location/Activity	Final EIS/EIR	Proposed	Maximum Increase/Decrease in Daily Haul Truck Trips
Westwood/UCLA Station¹			
Station Box Construction ¹	60-100	60-140	+40
Other Related Construction ²	40-60	2-20	-40
GSA Double Crossover³			
Station Box Construction	60-100	No longer part of the Project	-100
Other Related Construction	40-60	No longer part of the Project	-60
Caltrans Right-of-Way East of I-405 (Sepulveda Boulevard)³			
Cross Passage and Ground Improvement	Not evaluated in Final EIS/EIR	2-20	+20-
Westwood/VA Hospital Station			
Station Box Construction ⁴	40-60	60-100	+40
Tunnel Boring Machine Activity	100-140 ⁷	Activity shifted to Western VA construction staging area	-140
Other Related Construction ²	40-60	2-20	-40
Access Shaft/Emergency Exit – Westwood/VA Hospital			
Shaft Construction ¹	25	No longer part of the Project	-25
Other Related Construction	25	No longer part of the Project	-25
Western VA Construction Staging Area (TBM Launch Location)			
TBM Activity	Not evaluated in Final EIS/EIR ⁶	60-160	+160
Other Related Construction ⁵		2-20	+20

Source: Final EIS/EIR haul truck trips are from Chapter 3, Table 3-21 in the Final EIS/EIR; proposed haul truck trips were developed by WSP based on anticipated construction means and methods

Notes:¹ Proposed truck numbers include both excavation and structure.

² Construction of station appendages and other station construction.

³ The truck trips associated with the GSA crossover that was included in the Final EIS/EIR would have been split between a staging area on the GSA property and a staging area in Caltrans right-of-way east of I-405; the exact number of trips for each staging area was not specified.

⁴ Proposed truck numbers include both excavation and structure, including for the Westwood/VA Hospital Station west crossover.

⁵ Includes construction of the emergency exit.

⁶ The US Army Reserve staging area was identified as an alternate in the Final EIS/EIR; however, the number of truck trips were not identified for the site.

⁷ This number was subsequently revised to 40 to 100 trips in the *Westside Subway Extension Project Addendum* (Metro 2012c); that number represented a "typical station with a TBM entry/exit site." When compared to the Addendum, the project refinements would result in a decrease of 100 trips on the VA WLA Campus associated with TBM activity.

Caltrans = California Department of Transportation; EIS/EIR = environmental impact statement/environmental impact report; GSA = General Services Administration; TBM = tunnel boring machine; UCLA = University of California, Los Angeles; VA = Veterans Affairs

As a result of the elimination of the GSA crossover (described in Section 2.2), the 60 to 100 truck trips associated with that work have been eliminated. These trips would have been distributed between the construction staging area on the GSA property and the construction staging area in Caltrans right-of-way east of I-405. The elimination of these trips would provide a benefit for the GSA, Federal Building users, and those traveling on Wilshire Boulevard near this location. The construction staging area that in Caltrans right-of-way east of I-405 would still be used to support construction of the cross passage, grout

injection, and advanced utility relocations. Up to 20 trips per day would be associated with this staging area, which is minor.

Figure 3-4 depicts haul routes and the maximum number of truck trips associated with each construction staging area for each year of construction. As shown, truck trips associated with the construction staging areas on the Western VA construction staging area and in Lot 42 would overlap on a short segment of Wilshire Boulevard between Bonsall Avenue and I-405. A maximum of 280 vehicles would be added to this segment in the eastbound direction daily during the off-peak period in Year 4. Based on 2007 traffic counts from the City of Los Angeles Department of Transportation for Wilshire Boulevard at Federal Avenue, approximately 6,350 vehicles travel eastbound on Wilshire Boulevard during the off-peak period (City of Los Angeles Department of Transportation 2007). The 280 additional truck trips spread throughout the peak period (approximately 25 per hour) would result in a negligible change in traffic conditions in this location.

There would be no overlap in truck trips on Wilshire Boulevard associated with these construction staging areas and the staging area in UCLA Lot 36 (Figure 3-4). However, truck trips would overlap on I-405. A maximum of 440 daily off-peak trips would occur in Year 4 for all construction sites combined. When spread throughout the off-peak period, that would amount to approximately 40 trips per hour. These trips would likely travel north or south on I-405, depending on the origin or destination of the trip. Based on 2016 traffic volumes provided by Caltrans, I-405 at Wilshire Boulevard has an annual average daily traffic volume of approximately 289,000 to 310,000 vehicles in both directions combined (Caltrans 2016). Therefore, the addition of 440 trips daily during the off-peak would be negligible.

It should be noted that Chapter 2, Section 2.6.4 of the Final EIS/EIR identified the need to reconfigure the on- and off-ramps from Wilshire Boulevard to Bonsall Avenue on the north side of Wilshire Boulevard and the on-ramp from Bonsall Avenue to Wilshire Boulevard on the south side of Wilshire Boulevard to accommodate the proposed station entrance and access features. With the refinement to the Westwood/VA Hospital Station location and pedestrian circulation elements (Section 2.2), the ramps no longer need to be reconfigured, thereby reducing construction impacts and providing benefits to the traveling public on the roadway network in these locations compared to the Final EIS/EIR.

Chapter 3, Section 3.8.1 of the Final EIS/EIR assumed that the Section 3 stations would be excavated by open cut methods with temporary street decking. There is no change to this approach. The Westwood/VA Hospital Station is largely off-street and would only require partial decking at Bonsall Avenue and the I-405 on/off-ramps, consistent with the Final EIS/EIR. The partial decking would ensure that access along Bonsall Avenue is maintained at all times. There would not be full closures of Bonsall Avenue. The design and schedule for the reconfiguration of Bonsall Avenue will be undertaken by the design-build contractor. Metro will provide details for VA's review when they are made available by the contractor. Closures of southbound I-405 on- and off-ramps will be coordinated with Caltrans to permit pile driving and decking. It is anticipated that the closures of the ramps would occur during nights and weekends only to minimize traffic impacts. The number of nights or weekends that the ramps would be closed will be determined through coordination with Caltrans. Alternate access to I-405 southbound would be provided via Santa Monica Boulevard, which is approximately 0.7 mile south of Wilshire Boulevard. With Caltrans approval, there would not be adverse impacts to the I-405 ramps.

The Project would continue to implement mitigation measures TCON-1 (Traffic Control Plans), TCON-2 (Designated Haul Routes), TCON-3 (Emergency Vehicle Access), TCON-4 (Transportation Management Plan), and TCON-5 (Coordination with Planned Roadway Improvements) identified in Chapter 3 of the Final EIS/EIR

to minimize potential impacts to construction-related traffic circulation within and adjacent to the VA WLA Campus. Additionally, the construction contract specifications require the Contractor to develop a VA Hospital Access Plan that considers patient, employee, and vendor access, and includes the means by which access will be maintained to and from the hospital at all hours of the day, at all times, along Bonsall Avenue. It is anticipated that the VA would participate in the preparation and review of this document. As Bonsall Avenue would remain open at all times and support traffic in both directions, emergency access to the VA Main Hospital (Building 500) and access between the north and south campus would not be adversely affected. Additionally, Metro will coordinate with the VA to identify scheduled events that could require modifications.

As discussed in the Final EIS/EIR, construction impacts identified on traffic circulation would be temporary and residual impacts would remain adverse during construction, even with mitigation. The refinements to construction activities and staging areas on and adjacent to the VA WLA Campus would not result in new adverse impacts or increase the severity of impacts related to traffic or circulation beyond what was presented in the Final EIS/EIR. Shifting construction activities in support of tunneling from Lot 42 on the VA WLA Campus to the Western VA construction staging area would benefit the VA WLA Campus compared to what was evaluated in the Final EIS/EIR.

Construction activities on and adjacent to the VA WLA Campus in support of the WPLE Project would occur at the construction staging areas identified in Section 2.1. It should be noted that the VA is in the process of obtaining environmental clearance for the construction projects identified in the *Greater Los Angeles Campus Draft Master Plan (GLA DMP)* (VA 2016). It is anticipated that construction activities for the WPLE Project would overlap with construction in support of the GLA DMP. Please refer to Section 3.21 of this memorandum and Appendix E for an assessment of potential construction-related cumulative impacts.

3.2.2.2 Westwood/UCLA Station Entrances

With the refinements to the Westwood/UCLA Station entrances (Section 2.6), truck haul routes would remain unchanged compared to the information presented in Chapter 3, Table 3-20 of the Final EIS/EIR; however, truck trips would increase by up to 40 trips per day, from 100 trips per day to 140 trips per day (Table 3-4). This increase is related to changes in schedule and an increase in the quantity of station excavation. As stated in Section 3.2.2.1, haul routes associated with the Westwood/UCLA Station would remain east of I-405, between Lot 36 and I-405 and would not add to the volume of trucks originating from construction activities at the VA WLA Campus except on I-405 (Figure 3-4). Refer to Section 3.2.2.1 for an assessment of why there would not be adverse impacts on I-405. Consistent with the Final EIS/EIR and Mitigation Measure TCON-2 (Designated Haul Routes), it is anticipated that truck haul activity would occur during off-peak and nighttime periods to minimize peak-period traffic disruptions. When spread throughout the off-peak period, less than 4 additional trips would be added per hour during that timeframe. Based on traffic volume counts collected by the City of Los Angeles in February 2012 (the most recent year for which daily traffic counts were available for this location), over 98,000 vehicles traveled along Wilshire Boulevard near Veteran Avenue in both directions combined over the course of the day (City of Los Angeles Department of Transportation 2012). The addition of 40 trips on Wilshire Boulevard per day is minor. Metro will coordinate with UCLA to identify scheduled events that could require modifications to traffic management plans during construction of the Project. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged during construction of the project refinements.

Metro is coordinating with the City of Los Angeles and the Council District to determine whether full closures of Westwood Boulevard, Wilshire Boulevard, and Gayley Avenue can occur during construction as this is preferred over phased construction. The full closures, including duration, are conditional upon approval by the City.

3.2.2.3 Grouting

Chapter 3, Section 3.8.1 of the Final EIS/EIR stated that grouting would be injected from the street level and would be continuous—extending for 24 hours a day for a short period (up to approximately two weeks). Per Mitigation Measure TCON-1, Traffic Control Plans would be developed to minimize construction impacts to the degree possible and would be developed for various construction activities, including grout injection.

As described in Section 2.8, grouting at Sepulveda Boulevard would be provided from a shaft within Caltrans right-of-way and would not require street closures. Partial closures of either Century Park West or Constellation Boulevard would be required for grout injection at the Westfield Mall. Chapter 3, Table 3-22 of the Final EIS/EIR identified traffic control zones along Constellation Boulevard and Century Park West during construction of the Project. The Final EIS/EIR stated that traffic lane maintenance during construction would follow local agency requirements and standards with respect to lane widths, number of lanes, and duration of temporary lane closures. Consistent with Mitigation Measure TCON-1, Traffic control plans developed for grout injection at this location would be prepared and coordinated with the City of Los Angeles and other entities as applicable. Therefore, grout injection would not result in new impacts or increase in the severity of previously identified impacts and the impact conclusions in the Final EIS/EIR remain unchanged.

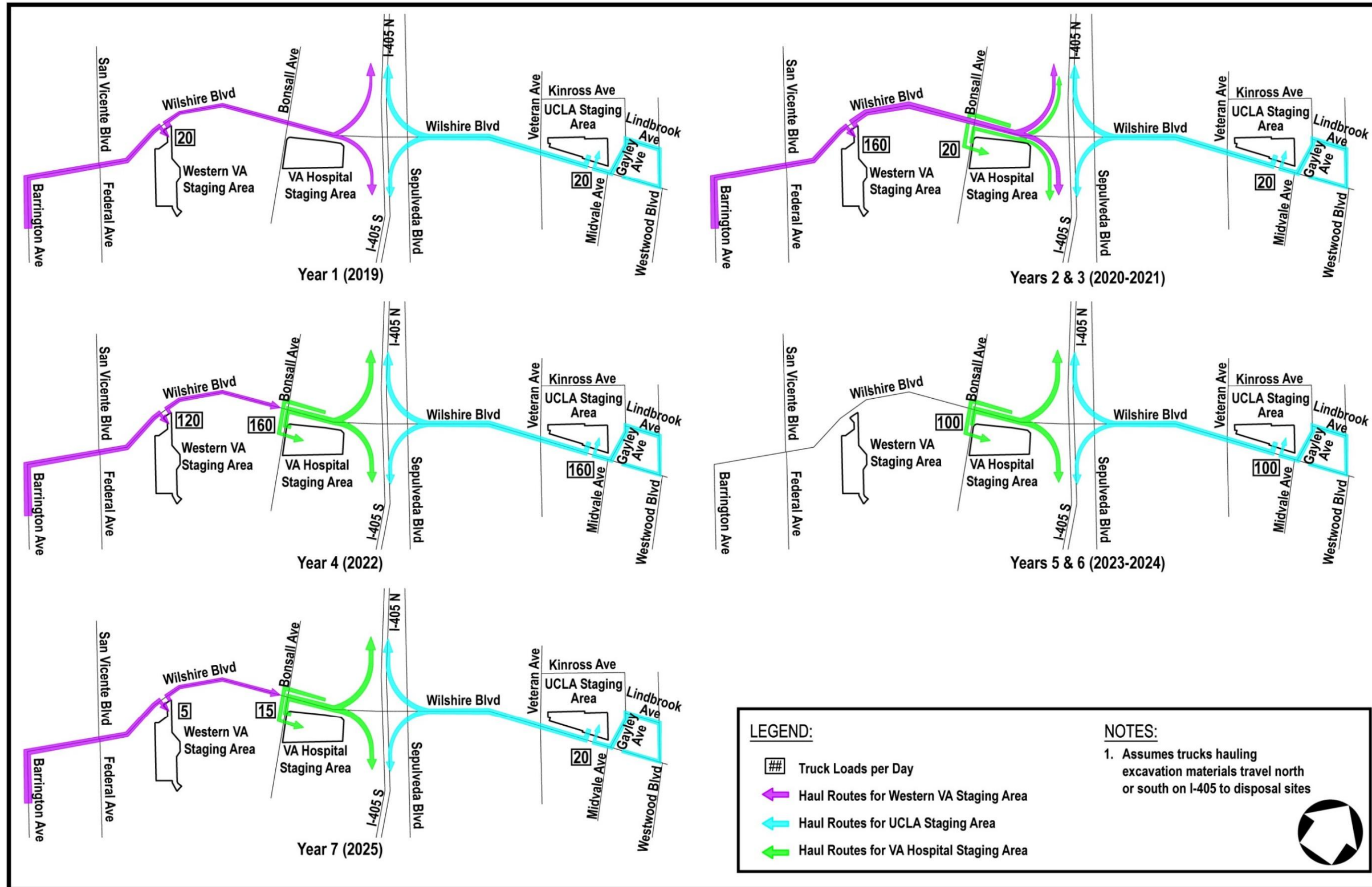
3.2.2.4 Underground Conduits

Construction of the underground conduits described in Section 2.9 would require short-term closures of the parking lane on westbound Ohio Avenue, the parking lane on northbound Federal Avenue, and eastbound far right travel lane on Wilshire Boulevard during off-peak hours. The work on Ohio and Federal Avenues would occur between 9:00 a.m. and 3:30 p.m. while the work on Wilshire Boulevard would occur between 10:00 p.m. and 6:00 a.m. Full closures of these streets would not be required. Construction of the vaults within Wilshire Boulevard could require closure of up to two eastbound lanes; however, the remaining eastbound lane would remain open. Construction of vaults on Ohio and Federal Avenues could require up to two weeks of closures; however, the limits of construction are small and there are only three to four vaults on each street. Intermittent partial (directional) closures would also be required for side streets that intersect with Federal or Ohio Avenues when work occurs in proximity to that side street. These partial closures would occur during off-peak periods for two to three days. Non-contiguous lane closures may be permitted.

The Final EIS/EIR did not identify temporary partial closures of Wilshire Boulevard adjacent to the VA WLA Campus. The closure on Ohio and Federal Avenues would affect the area of the roadway used for parking and, therefore, bi-directional traffic would be maintained during construction of the conduits. Impacts to parking are described in Section 3.3.2.3.

As stated in Section 3.1.2.1, less than 1,000 vehicles travel eastbound on this segment of Wilshire Boulevard between 10:00 p.m. and 6:00 a.m. while the roadway has a capacity for 4,800 vehicles per hour (or approximately 1,600 vehicles per lane), excluding the bus lane that accommodates general purpose traffic during this timeframe. Therefore, there is sufficient capacity on Wilshire Boulevard during the off-peak period to accommodate the temporary lane closure required for construction of the conduits. Because the partial closures would be limited to off-peak periods when traffic volumes are lower and of a short duration, the closures would not result in a new adverse impact.

Figure 3-4: Construction Truck Trips and Routes



Source: WSP 2018

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3.3 Parking

Long-term and construction-related impacts to on- and off-street and spillover parking were evaluated in Chapter 3, Sections 3.6.2 and 3.8.4, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to parking. As demonstrated in these sections, the project refinements would not require the permanent removal of on- or off-street parking and result in an increase in parking in UCLA Lot 36, which is an improved condition compared to the Final EIS/EIR. The project refinements are anticipated to reduce the spillover parking impacts identified in the Final EIS/EIR at the Westwood/VA Hospital Station. During construction, the project refinements would not result in new adverse impacts or increase the severity of adverse impacts identified in the Final EIS/EIR.

3.3.1 Long-Term Operational Evaluation

The following sections evaluate impacts of the project refinements in terms of the permanent loss of on- and off-street parking and spillover parking.

3.3.1.1 On- and Off-Street Parking

One project refinement has the potential to affect on- or off-street parking loss compared to the Project as evaluated in the Final EIS/EIR—the refinement to the Westwood/UCLA Station Entrances (Section 2.6), which is described in the following section. The other refinements described in Section 2.0 would not result in the permanent loss of on- or off-street parking spaces because the refinements would not be located in areas that are currently occupied by on- or off-street parking. As stated in Section 2.1.5, a replacement parking structure is proposed within VA Lot 43 to offset both the temporary and permanent parking spaces lost in Lot 42 on the VA WLA Campus as a result of the Project. The provision and location of this parking structure are unchanged since the Final EIS/EIR. It is anticipated that 245 parking spaces would remain in Lot 42 when construction is complete. Therefore, the project refinements at the VA WLA Campus would not result in a loss of permanent off-street parking on the campus.

Westwood/UCLA Station Entrances

Chapter 3, Section 3.8.4 of the Final EIS/EIR stated there could be a loss of existing off-street parking at UCLA Lot 36; however, the number of spaces that could be displaced was not quantified as that would be dependent on final design of the transit plaza. Based on the Final EIS/EIR Plan Set, it is estimated that up to 85 spaces could have been permanently lost as a result of the Westwood/UCLA Station in Lot 36, of which 5 spaces were striped for motorcycle parking. This does not include parking spaces that could have been accommodated in the footprint of an existing building, which would be demolished as part of the Project.

The project refinements still require demolition of an existing building on Lot 36. Based on the refinements to the station entrance and transit plaza (Section 2.6), site plans developed for this location since the Final EIS/EIR indicate a net increase of 55 parking spaces on Lot 36 when construction is complete. These spaces would be for use by UCLA and not transit users. Therefore, the refinement to the station entrance and transit plaza on Lot 36 would not result in an adverse impact to off-street parking and the net increase in parking for the UCLA campus is an improved condition compared to the Final EIS/EIR.

3.3.1.2 Spillover Parking

The Final EIS/EIR also evaluated parking impacts in terms of neighborhood spillover parking in Chapter 3, Section 3.6.1. Chapter 3, Table 3-16 of the Final EIS/EIR presented the estimated daily on-street parking demand by station during operation of the WPLE Project; the demand was generated by the transportation demand model. As identified in that table, spillover parking impacts were identified at both Section 3 stations because the model identified a demand for more parking spaces than could be accommodated via available unrestricted on-street parking.

The Final EIS/EIR included four measures that would be implemented to mitigate parking impacts during operation of the Project: T-1 (Coordination with Property Owners), T-2 (Parking Monitoring and Community Outreach), T-3 (Residential Permit Parking Program), and T-4 (Consideration of Shared Parking Program).

The project refinements on and adjacent to the Westwood/UCLA and Westwood/VA Hospital Stations have not modified the Project in a manner that would increase the demand for parking at stations (e.g., reduction in travel times, additional stops). Therefore, there could continue to be spillover parking impacts at both Section 3 stations as identified in the Final EIS/EIR; however, it is anticipated that the severity of these impacts would be unchanged at the Westwood/UCLA Station. The spillover parking analysis in the Final EIS/EIR was based on whether there was sufficient unrestricted on-street parking available to accommodate forecasted parking demand. According to Chapter 3, Table 3-16 of the Final EIS/EIR, surveys indicated a supply of two existing vacant, unrestricted on-street parking spaces within one-half mile of the Westwood/VA Hospital Station, which would not accommodate the forecasted demand of 394 spaces. As shown in Chapter 3, Figure 3-18 of the *Westside Subway Extension Parking Impacts and Policy Plan* (Metro 2010d), unrestricted on-street parking within one-half mile of this station is only available along a portion of Federal Avenue and Sepulveda Boulevard. The Final EIS/EIR did not state whether spillover parking was anticipated on the VA WLA Campus. However, Mitigation Measure T-2 stated that 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. At this station, Metro committed to monitoring spillover parking at VA lots controlled only by decals and/or signage and not those lots with controlled access (e.g., gates) after operation of the Project began. While Measure T-2 did not specify how long Metro would survey parking at the VA WLA Campus, the measure did state that monitoring would occur prior to the start of service and for six months following the start of operations where surveys are required in neighborhoods.

Consistent with the Final EIS/EIR, unrestricted on-street parking remains largely unavailable within one-half mile of the Westwood/VA Hospital Station and off-street parking within the VA WLA Campus is still for the exclusive use of VA patients, visitors, doctors, and staff. On-street parking is prohibited within the VA WLA Campus.

When Section 3 of the WPLE Project first opens, it is possible that transit patrons wishing to park and ride the system would attempt to do so at the Westwood/VA Hospital Station. However, because parking is not available to accommodate those transit patrons, spillover parking would not occur. Instead, the individual would likely drive to another station and attempt to park there or drive to their ultimate destination. Over time, it is anticipated that those transit patrons wanting to park would realize that no long-term parking is available at the Westwood/VA Hospital Station and would seek other alternatives. Further, a formal passenger drop-off area (Section 2.3) would be provided and would

accommodate those patrons who cannot access the station via walking, bicycle, or bus. For these reasons, the project refinements would not result in an adverse spillover parking impact at the Westwood/VA Hospital Station.

Even though spillover parking is not anticipated to occur for the reasons discussed above, in compliance with Mitigation Measure T-2, Metro would monitor parking at the VA WLA Campus for 6 to 12 months after the start of revenue service. If Metro determines through coordination with the VA that the spillover parking is unmanageable by VA security, a parking management plan for the VA campus would be developed and implemented. Metro would monitor those parking lots within one-quarter mile of the station entrance provided for the Westwood/VA Hospital Station, as this is the typical distance a person is willing to walk to access transit. Metro would work with the VA to identify mitigation, such as signage, if spillover parking as a result of the WLE Project occurs on the VA WLA Campus. It is anticipated that if spillover parking is occurring in parking lots, signage would be installed at those lots stating that transit parking is prohibited.

Because the severity of spillover parking is unchanged compared to the Final EIS/EIR and Metro will continue to comply with Mitigation Measures T-1 through T-4 as applicable to the stations within Section 3 of the WPLE Project, the impact conclusions in the Final EIS/EIR related to spillover parking remain unchanged.

3.3.2 Construction Phase Evaluation

Section 3.8.4 of the Final EIS/EIR stated that construction of the Project would temporarily remove on-street parking and loading zones. In addition, off-street parking would be removed at the Westwood/UCLA and Westwood/VA Hospital Stations. The Final EIS/EIR included the following mitigation measures to minimize impacts to parking during construction: TCON-7 (Parking Management), TCON-8 (Parking Monitoring and Community Outreach), and TCON-9 (Construction Worker Parking). With mitigation, impacts would remain adverse.

The following sections summarize the evaluation of the three project refinements that have the potential to affect parking during construction, as identified in Table 3-1. The project refinements associated with the alignment at the VA Medical Center and Westwood, VA Hospital Station (Section 2.2), Westwood/VA Hospital Station Access (Section 2.3), murals (Section 2.4), construction method for the Westwood/VA Hospital Station West Crossover (Section 2.5), and grouting (Section 2.8) are not located in proximity to on- or off-street parking. Additionally, the refinement associated with the tunnel size (Section 2.7) is completely underground. Therefore, these refinements do not have the potential to affect on- or off-street parking and the impact conclusions in the Final EIS/EIR related to construction-related impacts to parking in those locations remain unchanged compared to the Final EIS/EIR.

The mitigation measures identified in the Final EIS/EIR would still be applicable to the project refinements. The Final EIS/EIR stated that contractors would be required to have all employees park off-street at Metro-approved locations to minimize impacts to parking. Mitigation Measure TCON-9 (Construction Worker Parking) requires that all construction contractors identify adequate off-street parking for construction workers at Metro-approved locations. This commitment remains valid with the project refinements. The construction specifications require the contractor provide the location and details of construction worker parking to Metro for approval, consistent with Mitigation Measure TCON-9. The construction specifications will prohibit construction vehicles from parking on Bonsall Avenue.

3.3.2.1 Construction Staging Areas

Chapter 3, Section 3.8.4 of the Final EIS/EIR identified off-street parking loss during construction. At the Westwood/VA Hospital Station, the Final EIS/EIR committed to constructing a parking structure to replace permanent and temporary parking lost in Lot 42 as a result of the station. This structure was proposed within Lot 43, located east of the Main Hospital (Building 500). Consistent with the Final EIS/EIR, Metro is committed to providing a parking structure to offset the parking loss. It is anticipated that this structure would be available to the VA prior to the loss of parking in Lot 42. As stated in Section 2.1, this structure is still proposed within Lot 43, although Metro is coordinating with representatives of the VA on the timing, location, and capacity of this structure. If construction of the parking structure is not complete prior to construction in Lot 42, Metro will coordinate with the VA to identify other means to offset parking loss (e.g., provision of a shuttle from a parking lot with available parking capacity).

Approximately 90 parking spaces would remain in Lot 42 during construction; these spaces include the existing handicapped parking. There would not be adverse impacts to handicapped patients because the existing handicapped parking in Lot 42 would remain. Walking distances between the replacement parking structure and the main entrance to the hospital would be comparable to those from Lot 42 (approximately 625 feet from the parking structure to the main entrance compared to 585 feet from Lot 42). Additionally, the parking structure would be closer to the east hospital entrance that accommodates “Emergency/Admissions and Outpatient” compared to Lot 42. Therefore, the parking structure would not result in adverse impacts for patients accessing the hospital. Further, because Metro is still committed to completely replacing temporary and permanent parking lost in Lot 42 as a result of construction and operation of the Project, parking loss associated with the Westwood/VA Hospital Station remains unchanged from the Final EIS/EIR.

3.3.2.2 Westwood/UCLA Station Entrances

The Final EIS/EIR also identified a loss of off-street parking at Lot 36 associated with the Westwood/UCLA Station. The Final EIS/EIR did not quantify the number of spaces that would be temporarily lost during construction at this location. Based on the proposed construction staging, a total of 274 parking spaces would be temporarily displaced during construction activities. Coordination is occurring with UCLA regarding construction activities on the campus and the associated impacts, and Metro is committed to minimizing impacts to the extent feasible.

3.3.2.3 Underground Conduits

Chapter 3, Section 3.8.4 of the Final EIS/EIR stated that on-street parking may be prohibited during construction. On-street parking impacts are not anticipated to change as a result of the project refinements, except along Ohio and Federal Avenues to accommodate construction of the underground conduit (Section 2.9). The on-street parking loss would only occur during the midday off-peak period (9:00 a.m. to 3:30 p.m.). Based on a typical daily construction progress, construction would occur on Ohio Avenue for 50 to 100 days and on Federal Avenue for 150 to 200 days. Construction of the conduits would require the temporary closure of approximately 120 feet of the parking lane each day, which equates to the loss of approximately 6 on-street parking spaces at a time. It is anticipated that only one 120-foot stretch of the parking lane would be closed at a time; however, parking spaces would be affected for multiple off-peak periods as construction advances along the roadway. The parking lane on Ohio Avenue would not be affected at the same time as the parking lane on Federal Avenue. Construction of the electrical vaults would require closure of parking lanes for up to 10 days. There are

approximately 12 vaults along the entire route. These vaults are not expected to be constructed concurrently. Metro would comply with Final EIS/EIR Mitigation Measure TCON-7 (Parking Management) and would provide notification to residences along these roads prior to restricting parking. With prior notification, on-street parking impacts would not be adverse.

3.4 Pedestrian, Bicycle, and Bus Transit

Long-term and construction-related impacts to pedestrian, bicycle, and bus transit were evaluated in Chapter 3, Sections 3.7.2 and 3.8.5, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to pedestrian, bicycle, and bus transit. As demonstrated in these sections, the project refinements would not result in adverse impacts to pedestrian, bicycle, and bus transit during operation of the Project, consistent with the impact conclusions in the Final EIS/EIR. Project refinements at the Westwood/VA Hospital and Westwood/UCLA Stations would provide safety benefits compared to the Final EIS/EIR. During construction, the project refinements would not result in new adverse impacts or increase the severity of adverse impacts identified in the Final EIS/EIR.

3.4.1 Long-Term Operational Evaluation

Chapter 3, Section 3.7.2 of the Final EIS/EIR included an evaluation of impacts to pedestrian, bicycle, and bus transit (stop locations) at the station-area level based on two criteria:

- Criterion 1: Would the Project substantially increase hazards due to a design feature or incompatible uses?
- Criterion 2: Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

As shown in Chapter 3, Table 3-18 of the Final EIS/EIR, the Westwood/VA Hospital Station would result in impacts under Criterion 1 and the Westwood/UCLA Station and Westwood/VA Hospital Station would result in impacts under Criterion 2.

The Final EIS/EIR included Mitigation Measure T-8 (Install High-Visibility Crosswalk) on all four legs of Bonsall Avenue where it intersects with both the eastbound and westbound Wilshire Boulevard access ramps to mitigate the Criterion 1 impacts identified at the Westwood/VA Hospital Station. Additionally, the following measures would apply at both Section 3 stations to mitigate impacts under Criterion 2: T-9 (Provide Consistency with General Plan Designation Sidewalk Width Adjacent to Metro-Controlled Parcels), T-10 (Provide Consistency with General Plan Designation Sidewalk Width Coordination with Jurisdictions), T-11 (Provide High Visibility Crosswalk Treatments), T-12 (Meet Federal, State, and Local Standards for Crossing), 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). Mitigation Measure T-13 requires the provision of minimums for bicycle parking at the stations. This measure would be implemented at the station entrance at the Westwood/VA Hospital Station and the station entrance to the Westwood/UCLA Station located in Lot 36. Based on the design in the Final EIS/EIR, there was not sufficient space at the Westwood/UCLA Station entrances located north and south of Wilshire Boulevard near Westwood Boulevard to accommodate the minimum bicycle parking requirements; therefore, Mitigation Measure

T-15 applied to those entrances. Mitigation Measure T-15 requires that Metro determine alternative sites for bicycle parking. The Final EIS/EIR concluded that with implementation of the mitigation measures, there would not be adverse impacts to pedestrian, bicycle, or bus transit facilities.

The project refinements related to station entrances and station access have the potential to affect pedestrian, bicycle, and bus transit and are evaluated further below. The project refinements associated with the murals (Section 2.4), tunnel size (Section 2.7), and grouting (2.8) do not have the potential to affect pedestrian, bicycle, or bus transit because these refinements are not in proximity to any such facilities.

In regard to Criterion 1, the project refinements do not modify the aboveground station features in a manner that would result in new conflicts to pedestrian, bicycle, or bus stops. Rather, the pedestrian circulation features at the Westwood/VA Hospital Station are less circuitous as a result of the project refinements described in Section 2.2, thereby providing a benefit in terms of pedestrian circulation. The pedestrian bridge over the access ramp to Wilshire Boulevard would be compliant with the Architectural Barriers Act and Americans with Disabilities Act (ADA) and would provide safety for pedestrians traveling between the Westwood/VA Hospital Station entrance and the existing bus stop on eastbound Wilshire Boulevard because pedestrians would not need to cross the access ramp from Bonsall Avenue to Wilshire Boulevard at grade. This refinement would also provide improved and safer pedestrian access compared to the pedestrian ramp design included in the Final EIS/EIR. Escalators and elevators would also be added on the north side of Wilshire Boulevard between Bonsall Avenue and the existing bus stop on westbound Wilshire Boulevard. These features would provide improved pedestrian access between the new subway station and existing bus stops, which would benefit transit patrons who transfer between these modes. Additionally, the signalized intersections at Bonsall Avenue, signalized as part of the refinement to the Westwood/VA Hospital Station access (Section 2.3), would include pedestrian crossing signals and restriped crosswalks, improving the safety of crossing in this area beyond the benefits that were already provided through Mitigation Measure T-8 (Install High-Visibility Crosswalk), which would continue to apply to this location.

As stated in Section 2.6, a full station entrance for the Westwood/UCLA Station on the north side of Wilshire Boulevard adjacent to Westwood Boulevard would be located within a portion of the Linde (Westwood) Medical Plaza currently occupied by Chase Bank. The full station entrance in this location would provide a larger area for pedestrian activity compared to the Final EIS/EIR design. In the Final EIS/EIR, the station entrance would have been located on Westwood Boulevard, adjacent to the Linde (Westwood) Medical Plaza, which provided little area for pedestrian activity and required transit patrons to access and depart the station onto a narrow sidewalk in a congested area. The full station entrance would be located within the area currently occupied by Chase Bank adjacent to a plaza that provides substantially more room for pedestrian activity. Additionally, as stated in Section 2.6, construction of the station entrance would require removal of four planters from the landscaped plaza adjacent to the space currently occupied by Chase Bank. These planters would not be restored after construction because they present a tripping hazard and restrict pedestrian movement. Consequently, there would not be hazards associated with the refinement to the station entrance. Therefore, the refinements to the Westwood/VA Hospital and Westwood/UCLA Station entrances would provide a benefit to pedestrians traveling through these areas, even if they are not utilizing the new stations.

Additionally, as described in Section 2.3, a bus layover area has been added along the westbound on-ramp from Bonsall Avenue to Wilshire Boulevard at the request of Metro's Bus/Rail Interface group to allow for the provision of additional future transit services to West Los Angeles and Santa Monica. The design of the bus layover area would comply with all applicable codes and regulations and, therefore, would not result in an impact under Criterion 1. The bus layover area would also not be an incompatible use since it is adjacent to an existing roadway. The addition of the bus layover area for future bus service would provide a benefit for transit users traveling to or from the VA WLA Campus. The other project refinements described in Section 2.0 would not relocate or conflict with existing bus transit stops and, therefore, the refinements would not result in adverse impacts to these facilities.

None of the project refinements would result in an adverse impact under Criterion 1, and three of the refinements (the pedestrian bridge and signalized intersections at the Westwood/VA Hospital Station and the larger pedestrian area at the Westwood/UCLA Station) would remove or minimize potential hazards compared to the Final EIS/EIR.

Regarding Criterion 2, none of the project refinements would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The provision of the bus layover area for future transit service would support plans regarding public transit. Additionally, none of the project refinements would decrease the performance or safety of the pedestrian, bicycle, or transit system. Therefore, the project refinements would not result in an adverse impact under Criterion 2 and the provision of the bus layover area supports plans for public transit.

Mitigation Measure T-8 has been modified since the Final EIS/EIR. Mitigation Measure T-8 requires installation of high-visibility crosswalks at all four legs at the unsignalized intersections of Bonsall Avenue where it intersects with the eastbound and westbound Wilshire Boulevard access ramps. As stated previously, these intersections would be signalized, and consistent with Mitigation Measure T-8, high-visibility crosswalks would be installed. However, in the existing condition, crosswalks are not provided for the legs adjacent to/under the Wilshire Boulevard bridge because these areas would not provide a safe pedestrian path of travel. As shown in Figure 2-7 and consistent with existing conditions, a crosswalk would not be provided in these locations when the intersections are signalized as part of the refinements; however, crosswalks would be provided at the remaining three legs. Coordination would occur with the County of Los Angeles regarding the signalization and provision of crosswalks.

The mitigation measures identified in the Final EIS/EIR, as summarized above, would continue to apply to the project refinements. Per the latest Metro design criteria, the Westwood/UCLA Station must provide 175 spaces for bicycles in an enclosed bicycle storage facility and 20 spaces for bicycles in bike racks. Based on current design of the Westwood/UCLA Station entrance located in Lot 36, 175 spaces for bicycles would be provided in an enclosed bicycle facility along with 40 spaces for bicycles in bike racks. This quantity would exceed the requirements of Mitigation Measure T-13, thereby providing alternative sites of bicycle parking per Mitigation Measure T-15. As such, the impact conclusions in the Final EIS/EIR for pedestrian, bicycle, and bus transit remain unchanged with implementation of the project refinements. The refinements would result in benefits to pedestrian circulation at both the Westwood/UCLA and Westwood/VA Hospital Stations and improvements to the provision of future bus service near the Westwood/VA Hospital Station.

3.4.2 Construction Phase Evaluation

Chapter 3, Section 3.8.5 of the Final EIS/EIR stated that, in general, sidewalk access would be maintained on both sides of the street throughout the construction period. Additionally, pedestrian access to all businesses would be maintained during essential business operating hours. Where pedestrian detours are required, K-rail type concrete barriers or other approved barrier types would be provided to separate pedestrians from vehicular traffic and/or construction activities. Where sidewalk closures are required, such closures would be approved by the applicable jurisdiction. Bike routes would also be maintained past construction sites. The Final EIS/EIR also included two mitigation measures—TCON-10 (Pedestrian Routes and Access) and TCON-11 (Bicycle Paths and Access)—to minimize impacts to pedestrians and bicyclists during construction. The Final EIS/EIR concluded that although impacts to pedestrians and bicyclists are temporary and would be reduced with mitigation, impacts would remain adverse and unavoidable during construction.

The refinements would not require sidewalk or bicycle facility closures that were not previously identified in the Final EIS/EIR. It should be noted that the Final EIS/EIR included an emergency exit that was partially on the VA WLA Campus and partially on the sidewalk of Wilshire Boulevard. This emergency exit would have required short-term closure of the sidewalk during construction. This emergency exit has been eliminated and the new proposed emergency exit would be provided within the grassy area on the western portion of the VA WLA Campus in a location that would not require closure of sidewalks. The project refinements would not increase detour routes.

Access to businesses would continue to be maintained during essential business hours, including to the Linde (Westwood) Medical Plaza, UCLA, and VA WLA Campus. As stated in Section 3.2.2.1, the construction contract specifications require the contractor to develop a VA Hospital Access Plan that considers patient, employee, and vendor access, and includes the means by which access by sidewalk along Bonsall Avenue would be maintained to the hospital at all hours of the day, at all times. It is anticipated that the VA will participate in the preparation and review of this document. Mitigation Measures TCON-10 and TCON-11 would continue to apply during construction of the project refinements. Therefore, the impact conclusions in the Final EIS/EIR related to pedestrians and bicyclists remain unchanged during construction of the project refinements.

3.5 Land Use

Long-term and construction-related impacts to land use were evaluated in Chapter 4, Sections 4.1.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to land use. For additional information on this analysis, refer to the *Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum* (Metro 2018d) (included in Appendix B), which provides an in-depth analysis of the project refinements described in Section 2.0 related to land use and includes the most current land use information for Section 3 of the WPLE Project. As demonstrated below, the project refinements would not result in adverse impacts to land use during operation of the Project, consistent with the impact conclusions in the Final EIS/EIR. During construction, the project refinements would not result in new adverse impacts and the impact conclusions in the Final EIS/EIR remain unchanged. The following sections also summarize applicable plans and regulations that have been adopted since completion of the Final EIS/EIR.

3.5.1 Long-Term Operational Evaluation

The land use evaluation summarized in Chapter 4, Section 4.1.3 of the Final EIS/EIR considered compatibility with regional land use and development, division of an established community, compatibility with applicable land use policies, and compatibility with adjacent or surrounding land uses. The project refinements that have the potential to affect land uses during operation of the Project are shown in Table 3-1 and evaluated below.

The following project refinements do not have the potential to affect land uses in Section 3 of the WPLE Project: tunnel size (Section 2.7), grouting (Section 2.8), and underground conduits (Section 2.9). These project refinements are underground and would not alter land uses aboveground. Additionally, grouting activities would support and protect buildings and underground utilities. The project refinements related to construction staging areas (Section 2.1) and construction method for the Westwood/VA Hospital Station west crossover (Section 2.5) are related to the construction process for the Project and do not have the potential to result in long-term impacts to land use as the area would be restored to existing conditions or as agreed to by the property owner upon the conclusion of construction.

3.5.1.1 Regional Land Use and Development

Chapter 4, Section 4.1.3 of the Final EIS/EIR stated that the Project would not result in adverse long-term impacts to regional land use and development. The Project would serve the Project Area by providing a linkage to the larger regional transportation network and no adverse effects associated with regional land use and development would occur.

The refinements would continue to serve the area by providing a linkage to the larger regional transportation network. The project refinements would also continue to be consistent with federal, regional, and local land use planning regulations and development identified in the Chapter 4, Section 4.1.2 of the Final EIS/EIR and the *Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum* (Metro 2018d). Land use planning regulations and development plans identified since the preparation of the Final EIS/EIR include the Los Angeles Homeless Veterans Leasing Act of 2016, the West Los Angeles Leasing Act of 2016, the GLA DMP (VA 2016), the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) (Southern California Association of Governments (SCAG) 2016), the *Los Angeles County General Plan 2035* (County of Los Angeles 2015), the *City of Los Angeles Mobility Plan 2035* (City of Los Angeles 2015), and the *University of California 2015-25 Capital Financial Plan* (UC Capital Financial Plan) (University of California 2014). These plans and regulations are detailed in the technical memorandum (Metro 2018d). City of Los Angeles community plans identified in the Final EIS/EIR have not been updated since the completion of the Final EIS/EIR.

The project refinements would continue to serve the area by providing a linkage to the larger regional transportation network and provide enhanced pedestrian facilities (e.g., ADA-accessible pedestrian bridge, restriped crosswalks, pedestrian crossing signals) for pedestrian safety on the VA WLA Campus (provided as part of the refinements described in Sections 2.2 and 2.3). Additionally, the permanent, aboveground features associated with the Westwood/VA Hospital Station, including the passenger drop-off area, have been located to minimize the Project's footprint on the VA WLA Campus, thereby reducing impacts on future development potential and limiting restrictions to other future VA planning efforts.

The 2016-2040 RTP/SCS focuses on integrating land use and transportation decisions to encourage mass transit. The Project, including with implementation of the refinements, would continue to be consistent with the 2016-2040 RTP/SCS as the Project would encourage land use and growth patterns that facilitate transit and active transportation and also maximize mobility and accessibility for all people in the region. The Project is also identified as a transit initiative capital transit project in the 2016-2040 RTP/SCS that would expand that urban rail network.

The GLA DMP (approved January 2016 but being updated as part of the programmatic EIS process that is currently underway by the VA) identifies and considers the extension of the WPLE Project and a terminus station at the Westwood/VA Hospital Station near the intersection of Wilshire Boulevard and Bonsall Avenue. The GLA DMP identifies the WPLE Project as an opportunity for the VA WLA Campus because it would enhance campus connectivity to the rest of Los Angeles and beyond. The GLA DMP also stated that the Project would have a station entrance on the south campus where veterans, employees, and visitors can exit and easily access medical and other services provided on the campus. It is anticipated that because the Westwood/VA Hospital Station was identified in the GLA DMP, land uses proposed as part of the master plan would be compatible and integrated with the station entrance.

The Project, including with implementation of the project refinements, would also be consistent with future projects identified for the UCLA campus in the UC Capital Financial Plan. Capital-funded projects would include seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. The capital-funded projects would be located primarily in UCLA's core campus, health sciences zone, and southwest campus. The nearest capital-funded project would be the Margan Apartments Redevelopment located approximately 0.36 mile north of the Westwood/UCLA Station entrance in Lot 36. Based on its distance away from the proposed capital-funded projects, project refinements to the Westwood/UCLA Station entrances (located on the UCLA's south campus and at the Linde (Westwood) Medical Plaza) would not be affected by future programmed projects.

The project refinements are located on land owned by the federal government (alignment at the VA Medical Center and Westwood/VA Hospital Station entrance (Section 2.2) and Westwood/VA Hospital Station access (Section 2.3)). The refinements to the Westwood/UCLA Station entrance (Section 2.6) are on land owned by the Regents of the University of California (the entrance in Lot 36) and private property owners (the other two entrances). Metro is coordinating with these stakeholders to ensure that the location and design of the refinements are compatible with the applicable land use regulations and future development on these parcels, including the GLA DMP. Of note, the permanent, aboveground features associated with the Westwood/VA Hospital Station, including the passenger drop-off area, have been located to minimize the Project's footprint on the VA WLA Campus, thereby reducing impacts on future development potential and limiting restrictions to other future VA planning efforts. Therefore, the project refinements would not result in adverse effects associated with regional land use and development and the impact conclusions in the Final EIS/EIR remain unchanged.

3.5.1.2 Division of an Established Community

Chapter 4, Section 4.1.3 of the Final EIS/EIR stated that the Project would not introduce physical barriers, nor alter or divide an existing community. Planned development and redevelopment near station entrances in existing neighborhoods would enhance community connectivity by encouraging

increased pedestrian activity to maximize ridership. The communities located within Section 3 of the Project are described in Section 3.6.1 and shown on Figure 3-5.

The project refinements would not result in adverse impacts associated with division of an established community. The project refinements located on the VA WLA Campus (the alignment at the VA Medical Center and Westwood/VA Hospital Station entrance (Section 2.2) and access to the Westwood/VA Hospital Station (Section 2.3)) would not affect connectivity between the north and south campus because they would not introduce new barriers that would make traveling on the campus or between the north and south campus more difficult. The refinement to the alignment is entirely underground. The aboveground station entrance and passenger drop-off area would be adjacent to Bonsall Avenue, the on-ramp to eastbound Wilshire Boulevard, and an existing VA parking lot and would not introduce a barrier to current pedestrian routes of travel. Instead, these project refinements would benefit individuals traveling between the south and north campus through the provision of two new traffic signals with pedestrian crossing signals on Bonsall Avenue provided in support of the dedicated passenger drop-off area. These traffic signals provide a safety improvement compared to the current intersections that are stop controlled. These crossings would be compliant with ADA requirements. Ventilation grates, an emergency exit hatch, and an emergency exit walkway are proposed on the western portion of the VA WLA Campus adjacent to the U.S. Army Reserve site. These features would be raised approximately 6 inches above existing ground surface to prevent water runoff into the grate. There would be a very gradual slope (1:4 slope) to minimize the visual effect of these features, which in turn would minimize their intrusion into the area. These features, therefore, would not result in a barrier.

Metro proposes the removal of the entire northeast mural and the creation of a mosaic that would be installed across from the current location and placed on a wall surface along an existing embankment on Los Angeles County property (Section 2.4). The mosaic would not divide the VA community because it would be on an existing embankment and would not encroach into sidewalks or other areas of pedestrian activity. The mosaic would also not encroach into bicycle facilities or hinder vehicular movement. Thus, the mosaic would not introduce a new physical barrier nor alter or divide the existing community.

Project refinements related to the relocation of the Westwood/UCLA Station entrance on Lot 36 to an area east and closer to Gayley Avenue on UCLA property and relocation of the northeast station entrance into retail space on the east side of the Linde (Westwood) Medical Plaza in a space currently occupied by Chase Bank (Section 2.6) would not create a new barrier. As described in Section 2.6, four planters in the landscaped plaza adjacent to Chase Bank would be removed to provide a larger area for pedestrian activity, which would be a beneficial effect of the Project in this location. The transit plaza in Lot 36 would help to establish a pedestrian corridor between Wilshire Boulevard and Kinross Avenue, thereby improving community connectivity in this area.

Therefore, the project refinements would not result in adverse impacts associated with division of an established community and the impact conclusions of the Final EIS/EIR would remain unchanged.

3.5.1.3 Applicable Land Use Policies

Chapter 4, Section 4.1.3 of the Final EIS/EIR stated that the Project would be consistent with the goals and policies of the applicable jurisdictions along the alignment. The Project would reduce automobile usage, provide opportunities for joint development and cooperation, enhance regional connectivity, minimize environmental impacts, and maximize ridership.

As stated in Section 3.5.1.1, the most current adopted plans were reviewed in support of this environmental reevaluation of the project refinements. These plans include the 2016-2040 RTP/SCS, GLA DMP, and UC Capital Financial Plan. Overall, the project refinements would be consistent with the goals of the 2016-2040 SCAG RTP/SCS in which the refinements would continue to enhance regional connectivity, minimize environmental impacts, and maximize ridership. Elements of the refinements located on the VA WLA Campus (alignment and Westwood/VA Hospital Station entrance (Section 2.2) and Westwood/VA Hospital Station access (Section 2.3)) are under the jurisdiction of the federal government and these refinements are subject to the applicable policies of the Department of the VA. Planning consistency would be achieved through active coordination of Metro with the Department of VA, which is underway in regard to the design and location of the refinements. Project refinements on the VA WLA Campus would also be consistent with the vision and goals of the GLA DMP to revive the campus in a veteran-focused manner because the Project would provide better accessibility for veterans and their families to and from the campus via transit. Space would be provided at the passenger drop-off area to accommodate bus services operated by the VA WLA Campus, which would benefit those visiting the VA WLA Campus who do not have access to vehicles or have difficulty traveling, including veterans with disabilities.

The refinements to the Westwood/UCLA Station entrances (Section 2.6) are on land owned by the Regents of the University of California (the entrance in Lot 36) and private property owners (the other two entrances). The Project, including the project refinements, would be consistent with future projects identified for the UCLA campus in the UC Capital Financial Plan (summarized in Section 3.5.1.1). These projects would be located primarily in the UCLA's core campus. The nearest capital-funded project (the Margan Apartments Redevelopment) would be approximately 0.36 mile north of the Westwood/UCLA Station entrance in Lot 36. Based on its distance from the proposed capital-funded projects, project refinements to the Westwood/UCLA Station entrances (located on the UCLA's south campus) would not preempt or be incompatible with future programmed development in the UC Capital Financial Plan. Collectively, the refinements described in Section 2.0 would continue to reduce automobile usage, enhance regional connectivity, minimize environmental impacts, and maximize ridership. The project refinements would not require new discretionary actions related to land use beyond what was approved in the Final EIS/EIR. Therefore, the project refinements would not result in adverse impacts associated with applicable land use policies and the impact conclusions in the Final EIS/EIR remain unchanged.

3.5.1.4 Adjacent or Surrounding Land Use

Chapter 4, Section 4.1.3 of the Final EIS/EIR stated that the Project would not result in adverse direct or indirect impacts associated with land use compatibility and would not be incompatible with surrounding land uses. The Project would not introduce a new land use type into the area and station entrances would be integrated into current and future developments. The project refinements would be compatible with adjacent and surrounding land uses and would not result in adverse impacts to adjacent or surrounding land uses. Land uses around the Westwood/UCLA Station include commercial; education; multi-family residential; public facilities; and transportation land uses such as Wilshire Boulevard, Gayley Avenue, Westwood Boulevard, bus stops, and sidewalks. Land uses around the Westwood/VA Hospital Station include public facilities associated with the VA WLA Campus, including medical uses, open space, and community assets such as Wadsworth Chapel; and transportation land uses, including Wilshire Boulevard, I-405, Bonsall Avenue, bus stops, parking lots, and sidewalks. The Project, including with implementation of the project refinements, is a transit infrastructure project that would result in a transportation land use. The entrances associated with the Westwood/UCLA and Westwood/VA Hospital Stations (Sections 2.6 and 2.2, respectively) would not introduce a new land use

because the entrances would be located within and adjacent to other transportation land uses, such as Wilshire Boulevard and VA Parking Lot 42. Therefore, implementation of the Project, including the project refinements, would not introduce a new land use.

The refinements to the Westwood/VA Hospital Station access (Section 2.3) would also be compatible with adjacent land uses. The passenger drop-off area would be located within the northern portion of an existing parking lot (Lot 42) immediately south of Wilshire Boulevard, and the proposed bus layover area for future transit service would be located adjacent to existing roadway infrastructure in Los Angeles County right-of-way. Therefore, as the passenger drop-off and bus layover areas would be located in areas currently occupied by transportation land uses and adjacent to other existing transportation infrastructure, these refinements would not introduce new land uses to the surrounding area and would be compatible with the surrounding land uses. As stated in Section 3.5.1.1, the GLA DMP identified the WPLE Project, including the station entrance on the south campus, as an opportunity to enhance connectivity between the campus and Los Angeles and beyond, as well as to provide veterans, employees, and visitors access to medical and other services provided on the campus. It is anticipated that because the Westwood/VA Hospital Station was identified in the GLA DMP, land uses proposed as part of the master plan would be compatible and integrated with the station entrance.

As described in Sections 3.5.1.1 and 3.5.1.3, the project refinements located on the VA WLA Campus (alignment at the VA Medical Center and Westwood/VA Hospital Station entrance (Section 2.2) and Westwood/VA Hospital Station access (Section 2.3)) would be consistent with the applicable adopted land use planning goals and policies. The refinements are also being coordinated with representatives of the VA to ensure compatibility with the GLA DMP (adopted in January 2016 but being updated as part of the programmatic EIS process that is currently underway by the VA).

Regarding the refinements to the Westwood/UCLA Station entrances (Section 2.6), the shift in the station entrance on the UCLA Campus in Lot 36 is minor and would continue to be consistent with surrounding land uses. The refinement to the northeast entrance adjacent to the northwest corner of Wilshire and Westwood Boulevards would displace a Chase Bank, but the station entrance would be consistent with the surrounding land uses. Specifically, the station would be of similar dimensions and massing to the footprint currently occupied by the Chase Bank and would be adjacent to existing sidewalks and roadways. Based on coordination with the Linde (Westwood) Medical Plaza property owner, Chase Bank is interested in relocating to a vacant space within the Linde (Westwood) Medical Plaza that was previously occupied by a bank. As described in Section 3.7.1, the displacement of Chase Bank to accommodate the Westwood/UCLA Station entrance would not result in a loss of jobs or economic impacts.

The project refinements would not result in adverse impacts related to land use and the impact conclusions in the Final EIS/EIR remain unchanged.

3.5.2 Construction Phase Evaluation

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that construction would not directly conflict with identified local land use plans, policies, and regulations of the City of Los Angeles and Los Angeles County. Construction staging areas are on parcels that are primarily commercial, vacant, or used for parking, and would not substantially alter land uses. The Final EIS/EIR stated that construction activities would result in temporary adverse impacts related to the physical division of established communities as a result of temporary street and sidewalk closures and traffic detours; however, these impacts would

end with the completion of construction. The Final EIS/EIR identified the following measures that would maintain traffic and pedestrian circulation and access throughout construction: TCON-1 (Traffic Control Plans), TCON-10 (Pedestrian Routes and Access), and TCON-11 (Bicycle Paths and Access). With the implementation of these mitigation measures, construction would not result in the physical division of established communities.

The refinements to construction activities, equipment, and methods described in Section 2.0 are consistent with the Project as evaluated in the Final EIS/EIR, would not introduce new physical barriers or alter or create a division of an established community, and would not require temporary easements on new properties. As explained below, the refinements to the construction staging areas (Section 2.0) would not result in temporary adverse impacts to land use. Metro would acquire temporary easements for construction areas and abide by stipulations determined through coordination with the applicable property owners.

Construction of the project refinements would not result in incompatibility with the surrounding land uses. A substantial portion of heavy construction activities, such as those in support of the TBM, have been shifted from the construction staging area in Lot 42, located in front of the VA Main Hospital (Building 500), to a construction staging area on the western portion of the campus (Section 2.1.1). The relocation of heavy construction activities from an area near the VA Main Hospital (Building 500) to this staging area would also provide a benefit in terms of land use compatibility as impacts related to construction would be minimized at the hospital. The elimination of the GSA crossover (Section 2.2) would also benefit the Federal Building as a construction staging area located on GSA property has been eliminated, thereby minimizing potential impacts associated with land use compatibility during construction at this location.

The construction staging areas would not result in adverse impacts to the immediate surrounding land uses, which on the VA WLA Campus consist of parking lots, Wilshire Boulevard, I-405, Bonsall Avenue, the U.S. Army Reserve site, and the grassy area west of Bonsall Avenue. The construction staging areas would not result in adverse impacts to adjacent sensitive uses such as open space or residences. Specifically, while a portion of the grassy area west of Bonsall Avenue and south of Wilshire Boulevard would be unavailable in the location of the Western VA construction staging area (Section 2.1.1) and during construction of the west crossover (Section 2.5), a majority of the grassy area would remain open and available for use by those utilizing the VA WLA Campus, including veterans. It is acknowledged that this open grass space is an important resource to the VA WLA Campus and veteran community and construction of the Project would have temporary effects, but these effects would not be adverse because the majority of the area would remain available. The Final EIS/EIR documented existing ambient daytime-peak-noise-hour levels of 64 A-weighted decibels (dBA) equivalent noise level (Leq) in this area. The construction-related noise analysis conducted for the project refinements predicted construction noise levels in this area in the range of 61 to 64 dBA Leq, which is the same or lower than the peak hour existing ambient noise levels presented in the Final EIS/EIR. As described in Section 3.11.2.1, approximately 20-foot-high noise barrier walls consistent with Final EIS/EIR Mitigation Measure CON-27 (Noise Barrier Walls for Nighttime Construction) would be installed around the perimeter of the construction staging areas located within the grassy area on both the western side of the VA WLA Campus and immediately west of Bonsall Avenue. The noise barrier walls would reduce construction-related noise to adjacent areas, including the grassy area that would remain accessible during construction, to the extent feasible.

Section 3.11.2 of this technical memorandum evaluates noise impacts to adjacent sensitive receptors, including residences, during construction. As shown in that section, construction would not result in adverse noise impacts to these uses with implementation of mitigation. Additionally, as shown in Section 3.9.2, construction would not result in adverse air quality impacts to sensitive receptors. Mitigation measures from the Final EIS/EIR would minimize potential impacts to these sensitive land uses. These mitigation measures include CON-4 (Construction Lighting), CON-5 (Screening of Construction Staging Areas), 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), and CON-34 (Use of Temporary Noise Barriers and Sound-Control). Furthermore, impacts would end with the completion of construction, and potential adverse impacts to surrounding land uses would only occur during the construction phase. Upon the completion of construction, areas not required for the Westwood/VA Hospital Station, emergency exit, and ventilation would be restored to existing conditions or as agreed to with the property owner and returned to the property owner.

The staging areas on the VA WLA Campus have been located to avoid sidewalk and lane closures on Wilshire Boulevard and Bonsall Avenue. The construction specifications for the Project require that Bonsall Avenue and the sidewalks on both sides of Bonsall Avenue remain open at all times, thereby maintaining access between the north and south sides of the VA WLA Campus for both vehicular and pedestrian traffic. Maintaining access on Bonsall Avenue in both directions may require some temporary shifting of the alignment of Bonsall Avenue to keep it open while some construction activities take place; however, access in both directions would be preserved. Consistent with Mitigation Measure CON-1 (Signage), signage would be installed during construction. For the VA WLA Campus, this signage would include an electronic management board system to provide information on construction activities occurring on the campus. This signage would assist with wayfinding during construction.

Metro would obtain temporary easements from the VA and Caltrans for the construction staging areas described in Section 2.1 and from the Regents of the University of California for construction within Lot 36 on the UCLA campus. It is anticipated that specific construction stipulations on those properties will be determined through coordination with each property owner/jurisdiction prior to the start of construction.

Mitigation Measures TCON-1 (Traffic Control Plans), TCON-10 (Pedestrian Routes and Access), and TCON-11 (Bicycle Paths and Access) from the Final EIS/EIR would maintain traffic and pedestrian circulation and access throughout construction to the extent feasible and to maintain safety. The mitigation measures would continue to apply to construction of the refinements. Metro is also committed to maintain access and connectivity between the north and south campus. With these measures, veterans would continue to have adequate and safe access to veteran resources, services, and facilities on both the north and south sides of the VA WLA Campus. With implementation of these measures, construction would not result in a barrier between the north and south campus. Construction of the project refinements on the VA WLA Campus would be temporary and would not result in impacts to regional or land use policies or result in incompatible uses on the VA WLA Campus. Therefore, no new adverse construction impacts associated with land use would occur during construction of the project refinements and the impact conclusions in the Final EIS/EIR would remain unchanged.

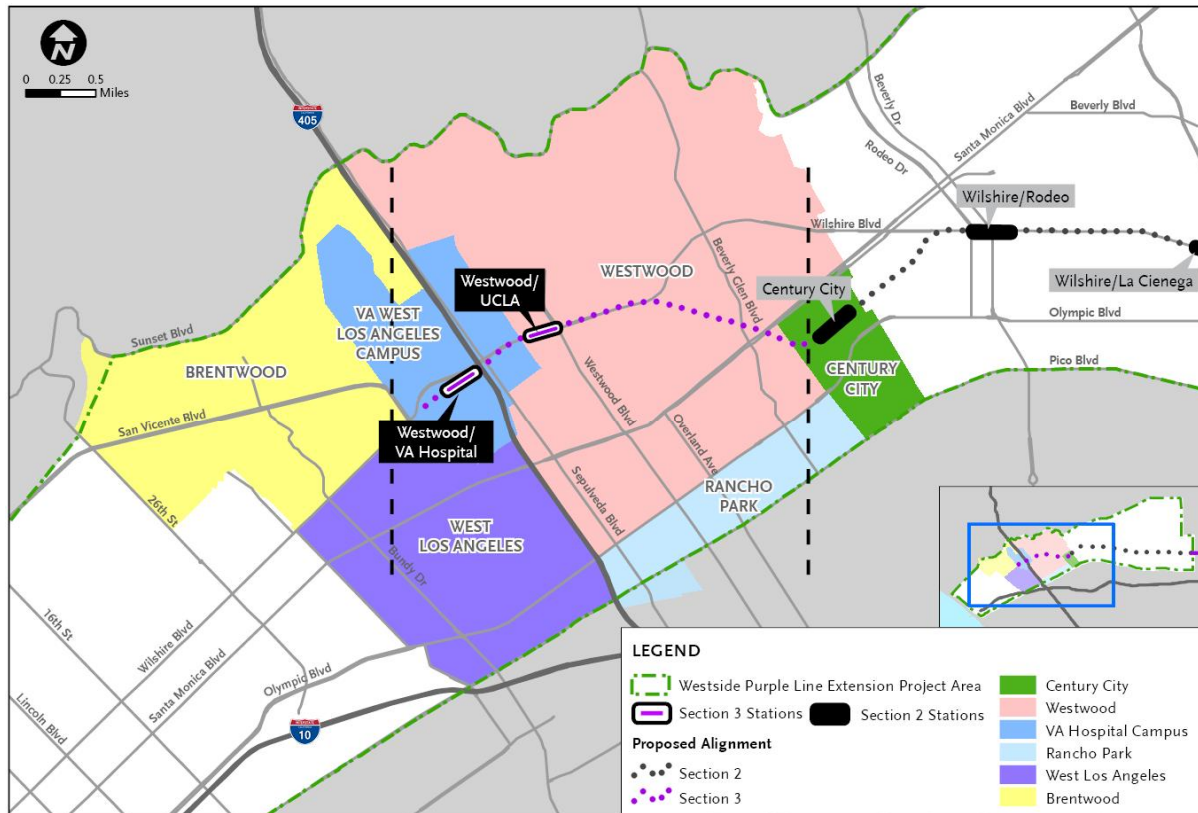
3.6 Communities and Neighborhoods

Long-term and construction-related impacts to communities and neighborhoods were evaluated in Chapter 4, Sections 4.2.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to communities and neighborhoods. For additional information on this analysis, refer to the *Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum* (Metro 2018d) (included in Appendix B), which provides an in-depth analysis of the project refinements described in Section 2.0 related to communities and neighborhoods and includes the most current community and neighborhood characteristics for Section 3. The technical memorandum also describes the growth that has occurred in the Study Area since publication of the Final EIS/EIR. As demonstrated in the technical memorandum and the sections below, the project refinements would not result in adverse impacts to communities and neighborhoods during operation of the Project, consistent with the impact conclusions in the Final EIS/EIR. During construction, the project refinements would not result in new adverse impacts and the impact conclusions in the Final EIS/EIR remain unchanged.

A community is defined in part by behavior patterns that individuals or groups of individuals hold in common. These behavior patterns are expressed through daily social interactions, the use of local facilities, participation in local organizations, and involvement in activities that satisfy the population's economic and social needs. A community is also defined by shared perceptions or attitudes, typically expressed through individuals' identification with a particular identifiable area. A community is typically grouped by its geographical area. In urban areas, a community would be supported by community facilities (e.g., schools, senior centers, city halls, parks, churches, post office) as well as supporting commercial uses (e.g. grocery stores, cleaners, and restaurants). The strength or the cohesion of a community or neighborhood to successfully adapt to change is a function of many factors, including homogeneity and/or the diversity of the population, similarities in income, as well as shared cultural or ethnic backgrounds. Additionally, the stability of a community is reflected by the number of long-time residents that reside in the community. A community asset can be defined as anything that can be used to improve the quality of community life (i.e., person, physical structure or place, community service, business). The communities located within Section 3 of the Project are shown on Figure 3-5. The Final EIS/EIR identified 22 communities in the entire Project Area (i.e., all three sections of the Project) of which 6 are located within the Section 3 Study Area: Century City, Westwood, the VA WLA Campus, Rancho Park, West Los Angeles, and Brentwood. Further information on these communities is included in *Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum* (Metro 2018d).

Since the adoption of the Final EIS/EIR, the general makeup of the community and neighborhoods in the Study Area has remained proportionally similar and the community assets identified near the station areas have not changed. However, since the completion of the Final EIS/EIR, the VA WLA Campus community has been redefined and better characterized.

Figure 3-5: Communities in the Vicinity of Section 3 of the Westside Purple Line Extension



Source: TAHA, 2017.

The VA WLA Campus community consists primarily of veterans, including chronically homeless veterans; severely disabled veterans; veterans with physical and mental disabilities such as post-traumatic stress disorder or traumatic brain injuries; substance abusers; veteran families; female veterans; elderly veterans; and patient visitors and staff of the VA Medical Center. Residents of the VA WLA Campus generally reside in the north campus. It should also be noted that VA Medical Center staff may also include veterans who share similar sensitivities as the veteran patients. In the case for the veterans community, these individuals generally share similar experiences and events linked to the armed forces and may have undergone similar stressful events during their times of service. Between 2015 and 2016, the VA Medical Center provided services to 80,195 patients (VA 2017).

Homeless veterans are a diverse and complex group of individuals with significant mental health and other healthcare concerns. Informal homeless veteran encampments have been identified in the wooded area near the Japanese Garden and just outside of the VA WLA Campus gate located at the intersection of Bringham Avenue and Gorham Avenue. According to the Los Angeles Homeless Services Authority, approximately 5,000 homeless veterans were identified living in the Greater Los Angeles Area for 2016-2017. With the development of new housing units for veterans on the VA WLA Campus in the north campus, the GLA DMP proposes the creation of new distinct neighborhoods with active community centers, open space, parking and wayfinding, and improved vehicular, bicycle, and pedestrian circulations. Community assets within the VA WLA Campus include the following:

- Murals along Bonsall Avenue underpass and ramps
- Westwood Park located at 1350 Sepulveda Boulevard
- Los Angeles National Cemetery located at 950 S. Sepulveda Boulevard
- Los Angeles National Veterans Park located in the north campus, at the northern intersection of Wilshire Boulevard and San Vicente Boulevard
- Jackie Robinson Stadium located at 100 Constitution Avenue, north campus
- MacArthur Field located at 10 Bonsall Avenue, north campus
- Veterans Barrington Park located at 333 S. Barrington Avenue, north campus
- United States Post Office – Barrington Station located at 200 S. Barrington Avenue, north campus
- Wadsworth Theatre located at 11301 Wilshire Boulevard, Building 226, north campus
- Wadsworth Chapel located at 11301 Wilshire Boulevard, north campus
- Gardens located primarily in the north campus (including Healing Garden, Arcadia's Garden, Japanese Garden, and Memorial (Rose) Garden)
- Hero's Golf Course in the north campus
- NCA Columbaria, north campus
- Additional community assets to the VA WLA Campus community would include the building facilities that provide veteran services and resources, such as the Welcome Center (Building 257) and the Administrative Buildings (Building 401)

The U.S. Army Reserve Center is the headquarters for the 311th Sustainment Command (Expeditionary) and contains the Captain Nelson M. Holderman U.S. Army Reserve Center. No permanent residents are housed on the U.S. Army Reserve site and it is not considered a community.

The Westwood community is the home to UCLA and includes residential high-rise buildings along Wilshire Boulevard in addition to commercial areas, such as "Westwood Village" and the single-family residential area of Holmby Hills. Due to its proximity to UCLA, the Westwood community includes a large student population, evidenced by one of the highest percentages of residents living within the area for less than five years (64.4 percent). Community assets in the Westwood community include UCLA and the Christian Science Churches Reading Rooms and Office located at 1125 Glendon Avenue.

3.6.1 Long-Term Operational Evaluation

The Final EIS/EIR evaluated impacts to communities and neighborhoods in terms of whether the Project would result in physical, social, or psychological barriers within an established community or neighborhood; disrupt access to community assets; or displace such assets. The Final EIS/EIR concluded that the Project would not affect existing pedestrian or vehicular traffic, affect community cohesion, or displace community assets. The Project would also comply with the ADA and would be designed to ensure accessibility to all persons. Therefore, the Project would not disrupt access or negatively affect community cohesion and would not result in adverse impacts.

The following sections evaluate the project refinements identified in Table 3-1 that may result in long-term impacts to community and neighborhoods. The following project refinements do not have the potential to affect community and neighborhoods in Section 3 of the Project: tunnel size (Section 2.7) grouting (Section 2.8), and underground conduits (Section 2.9). These refinements do not have the potential to result in adverse impacts to community and neighborhoods because they are underground and would not alter community or neighborhoods above. Further, long term, ground improvement (grouting) would support and protect buildings and underground utilities. The project refinements related to construction staging areas (Section 2.1) and construction method for the Westwood/VA Hospital Station west crossover (Section 2.5) are related to the construction of the Project and do not have the potential to result in long-term impacts to community or neighborhoods as the area would be restored to existing conditions or as agreed to by the property owner upon the conclusion of construction.

3.6.1.1 Alignment at VA Medical Center and Westwood/VA Hospital Station Entrance

The refinement to the Westwood/VA Hospital Station entrance (Section 2.2) would shift the entrance 100 feet closer to the VA Main Hospital (Building 500). This station entrance is located in an existing parking lot and would not displace identified community assets associated with the VA WLA Campus or affect access to identified community assets. Rather, shifting the station entrance south would benefit transit passengers, including veterans and employees, with destinations at the VA Main Hospital because there would be a shorter travel distance compared to the Final EIS/EIR station location. As the alignment is underground, it would not affect access to community assets or create a barrier within the community. Consistent with the Final EIS/EIR design, the Westwood/VA Hospital Station would displace a portion of the VA Parking Lot 42, which is currently used by patients and visitors. Parking lots may be considered community assets if they benefit or improve community life. However, a new parking structure is proposed within VA Lot 43 to offset both the temporary and permanent parking spaces lost as a result of the Project. As described in Section 3.3.2.1, the walking distances between the replacement parking structure and the main entrance to the hospital would be comparable to those from Lot 42 (approximately 625 feet from the parking structure to the main entrance compared to 585 feet from Lot 42). Additionally, the parking structure would be closer to the east hospital entrance which accommodates "Emergency/Admissions and Outpatient" compared to Lot 42. Existing handicapped parking in Lot 42 would remain. Therefore, the displacement of a portion of Lot 42 would not have an adverse impact to community assets.

3.6.1.2 Westwood/VA Hospital Station Access

The provision of the dedicated passenger drop-off area, including two new traffic signals on Bonsall Avenue (Section 2.3), would benefit the VA WLA Campus and the veteran community, as it is designed to prevent Metro passengers that are not associated with the VA from being dropped off or picked up within the VA WLA Campus. The traffic signals would also include pedestrian crossing signals, and the crosswalks at these intersections would be restriped, improving the safety of crossing in this area.

3.6.1.3 Murals

The murals are an important community asset to the veteran community and the VA WLA Campus. The elimination of the northeast mural and provision of a mosaic on Los Angeles County property (Section 2.4) would not introduce a new permanent physical, social, or psychological barrier or disrupt access to community facilities. The murals along the Bonsall Avenue underpass and access ramps to and from Wilshire Boulevard are public art and are culturally and socially important to members of the veteran community and the VA WLA Campus. Metro proposes eliminating the northeast mural and conveying

the story of the mural in mosaic on a wall that would be placed on an embankment located across from the current location in Los Angeles County property. The new location would provide better visibility for veterans and visitors traveling through sections of the VA WLA Campus. In recognition of the importance of these murals to the veteran community, Metro is making every effort to preserve the integrity of the murals. In that regard, Metro is coordinating with the VA, veterans groups, and other stakeholders regarding elimination of the northeast mural and conveying the story in mosaic (refer to Section 4.6.3 for an overview of the coordination in support of this refinement). Additionally, re-creating the mural as a mosaic, which is more tolerant to weather, would ensure that this portion of the community asset will be maintained over time. Therefore, this refinement would not result in adverse impacts to community assets or introduce a barrier.

3.6.1.4 Westwood/UCLA Station Entrances

Refinements to the Westwood/UCLA Station entrances (Section 2.6) would not affect access to community assets or displace any such assets. The shift in the location of the entrance on the UCLA campus is minor and does not affect community assets. Although Chase Bank is located in the Linde (Westwood) Medical Plaza, which is a historical and culturally significant building, the bank is not identified as a community asset because it is a place of business and is not identified as an important community asset to the surrounding community. As described in Section 3.7.1, based on coordination with the Linde (Westwood) Medical Plaza property owner, Chase Bank is interested in relocating within the larger building in a vacant space that was previously occupied by a bank. In addition, the next nearest Chase Bank branch is located approximately 0.5 mile south of the Linde (Westwood) Medical Plaza and would continue to serve the Westwood and West Los Angeles community. Therefore, the displacement of the Chase Bank would not result in an adverse impact to the community. The project refinement would also provide a benefit to the community because the design of the northeast entrance would replicate pertinent features of this portion of the Linde (Westwood) Medical Plaza when it was first opened, thereby restoring the character of this portion of the building compared to what exists today.

3.6.1.5 Conclusion

In conclusion, the project refinements would not result in adverse impacts related to community and neighborhoods. The project refinements would not affect community cohesion, permanently displace community assets, or affect access to such assets. The project refinements also would not result in the division of a community or introduce barriers. Rather, the project refinements have been designed and located in a manner that preserves access to community assets. Further, the project refinements to the Westwood/VA Hospital Station would yield accessibility benefits to the veteran community and their families, employees, and patients to the VA Main Hospital (Building 500) and other important community assets on the VA WLA Campus. The location of the mosaic would provide better visibility for veterans and visitors traveling along Bonsall Avenue and would preserve the murals as important resources in the veteran community. Community assets would not be displaced as a result of the project refinements and community cohesion within the VA WLA Campus and Westwood communities would not be adversely affected. Therefore, no adverse effects would occur and impact conclusions of the Final EIS/EIR would remain unchanged.

3.6.2 Construction Phase Evaluation

Chapter 4, Section 4.15.3 of the Final EIS/EIR evaluated impacts to communities and neighborhoods during construction in terms of whether construction would result in the physical division of established communities as a result of temporary street and sidewalk closures and traffic detours or create temporary barriers. The Final EIS/EIR also evaluated impacts in terms of whether construction would disrupt access to community assets.

The Final EIS/EIR stated that construction activities would result in temporary adverse impacts related to the physical division of established communities. With implementation of mitigation measures TCON-1 (Traffic Control Plans), TCON-2 (Designated Haul Routes), TCON-3 (Emergency Vehicle Access), TCON-4 (Transportation Management Plan), TCON-7 (Parking Management), TCON-8 (Parking Monitoring and Community Outreach), TCON-10 (Pedestrian Routes and Access), and TCON-11 (Bicycle Paths and Access), construction would not result in the physical division of established communities. Construction-related activities would also not result in the social or psychological division of an established community.

The Final EIS/EIR also stated that Mitigation Measure CON-1 (Signage) would be implemented during construction, which requires the provision of signage to indicate accessibility to businesses in the vicinity. The Final EIS/EIR committed Metro to develop and implement a community outreach plan to notify local communities of construction schedules, road and sidewalk closures, and detours (refer to Section 5.2 for an overview of outreach during construction). Access to hospitals and medical care facilities would be maintained during lane closures and detours associated with construction activities. As identified in Chapter 4, Section 4.15.3 of the Final EIS/EIR, Mitigation Measures CON-83 (Work with Transportation, Police, Public Works, and Community Service Departments), CON-85 (Informational Program to Enhance Safety), and CON-86 (Traffic Control) would reduce construction-related adverse impacts to community facilities. With implementation of mitigation measures, construction would not affect access to community facilities and would not result in adverse impacts to community and neighborhoods.

The refinements to construction activities, equipment, and methods described in Section 2.0 are consistent with the Project as evaluated in the Final EIS/EIR and would not displace community assets or disrupt access to assets during construction. Specifically, the construction staging areas (Section 2.1) have been located to avoid closure of roads or sidewalks. The Western VA construction staging area would also shift construction-related truck activity away from roads on the VA WLA Campus to Wilshire Boulevard, improving access within the campus during construction. Further, construction specifications will require that Bonsall Avenue, including the sidewalks, remain open at all times during construction, thereby maintaining access between the north and south sides of the VA WLA Campus for both vehicles and pedestrians. Access to businesses and other services would continue to be maintained during essential hours, including to the Linde (Westwood) Medical Plaza, UCLA, and VA WLA Campus. The mitigation measures specified above would continue to be implemented during construction of the refinements.

Access would also be maintained for handicapped veterans during construction. As described in Section 3.3.2.1, the handicapped parking spaces located in Lot 42 would not be displaced during construction. Additionally, Final EIS/EIR Mitigation Measure TCON-10 (Pedestrian Routes and Access) would ensure safe pedestrian routes and access during construction. These routes would comply with ADA requirements and would be properly signed and lighted. Consistent with Mitigation Measure CON-1

(Signage), signage would be installed during construction. For the VA WLA Campus, this signage would include an electronic management board system to provide information on construction activities occurring on the campus. This signage would assist with wayfinding during construction.

The project refinements would also not change the duration or intensity of construction in the VA WLA Campus or Westwood communities. Rather, the shift in construction staging of a substantial portion of heavy construction activities, such as those in support of the TBM, from the construction staging area in Lot 42 to a construction staging area on the western portion of the campus (Section 2.1.1) would provide benefits for the VA WLA Community by minimizing construction disruption near the VA Main Hospital. The Westwood/VA Hospital Station west crossover (Section 2.5) would be constructed via a cut-and-cover method rather than sequential excavation method. The change in construction method would not prevent access to community facilities on the VA WLA Campus. While a portion of the grassy area west of Bonsall Avenue would be unavailable for the Western VA construction staging area and during construction of the west crossover, the majority of the grassy area would remain open and available for use by those utilizing the VA WLA Campus, including veterans. It is acknowledged that this open grass space is an important resource to the VA WLA Campus and veteran community and construction of the Project would have temporary effects, but these effects would not be adverse because the majority of the area would remain available. As described in Section 3.11.2.1, approximately 20-foot-high noise barrier walls would be installed around the perimeter of the construction staging areas located within the grassy area on both the western side of the VA WLA Campus and immediately west of Bonsall Avenue, consistent with Mitigation Measure CON-27 (Noise Barrier Walls for Nighttime Construction). The noise barrier walls would reduce construction-related noise to adjacent areas, including the grassy area that would remain accessible during construction, to the extent feasible. The area would be restored upon the completion of construction, as determined through coordination with the VA.

Based on coordination with representatives of the VA, success in minimizing adverse impacts to the VA WLA Campus population is dependent upon actively engaging and informing the population during construction of the WPLE Project. To achieve this end, and consistent with Final EIS/EIR Mitigation Measure CON-83 (Work with Transportation, Police, Public Works, and Community Service Departments), Metro would implement a community outreach plan to provide notification prior to construction. Such notifications would be provided to those persons associated with the VA WLA Campus and the veteran community and would include information regarding construction schedules, road and sidewalk closures, and detours. These notifications would seek to target patients, caregivers, staff, service providers, and campus clinicians at a minimum, as well as veteran advocacy groups and organizations on and off campus. This outreach would seek to provide sufficient information to maximize awareness of the construction activities throughout the VA campus community.

The aforementioned mitigation measures would continue to apply to construction of the project refinements. Therefore, construction of the project refinements would not result in temporary adverse impacts to communities and neighborhoods, particularly the VA WLA Campus and Westwood communities, and the impact conclusions in the Final EIS/EIR remain unchanged. Refer to Section 3.18.2.1 for additional information regarding the VA WLA Campus as a community facility.

3.7 Acquisitions and Displacement of Existing Uses

Acquisitions and displacements associated with operation and construction of the Project were evaluated in Chapter 4, Section 4.2.2 and Appendix C of the Final EIS/EIR. The following sections describe changes in permanent and temporary easements as a result of the project refinements described in Section 2.0. As demonstrated in the following sections, the project refinements identified in Table 3-1 would not result in adverse acquisitions or displacement impacts during operation or construction.

3.7.1 Permanent Easements

Chapter 4, Table 4-6 in the Final EIS/EIR identified the number of full acquisitions and permanent easements required for Section 3 of the Project. Additional information on acquisitions, including displacement type and intended use, was included in Appendix C of the Final EIS/EIR. Chapter 4, Section 4.2.2 stated that displacements and permanent easements would be required for station entrances. Owners and tenants of those parcels requiring easements or displacement would be given advance written notice and would be informed of their eligibility for payments for use of their space for the station entrances. The Final EIS/EIR concluded that no adverse impacts are anticipated as a result of these permanent easements.

Table 3-5 and Table 3-6 present the permanent surface and subsurface easements required for the Project as evaluated in the Final EIS/EIR and with the project refinements, respectively. The project refinements would not require new full acquisitions; however, two new permanent surface easements would be required, one of which is in Caltrans right-of-way for emergency exit stairs. The Caltrans easement is required for a surface emergency exit hatch to the street from the station, which would be located in the sidewalk. The sidewalk would remain useable, as the hatch is rated for sidewalk loading.

New permanent surface easements are also required on the VA WLA Campus. Specifically, easements would be required within the northern portion of Lot 42 for the passenger drop-off area and station entrance plaza. In the Final EIS/EIR, the passenger drop-off area and transit plaza were located within County of Los Angeles right-of-way. However as stated in Section 2.3, there is not sufficient space within the County right-of-way (ramps) to accommodate a passenger drop-off area. Additionally, as a result of shifting the alignment and Westwood/VA Hospital Station box south as described in Section 2.2, the transit plaza is now proposed on the VA WLA Campus rather than County of Los Angeles property. Easements would also be required in two locations west of Bonsall Avenue: (1) immediately west of Bonsall Avenue for methane vents and (2) adjacent to the U.S. Army Reserve site for an emergency exit hatch, ventilation grates, and an emergency walkway. Coordination is occurring with representatives of both Caltrans and the VA regarding these new permanent surface easements (refer to Section 4.0 for additional information on coordination).

As shown in Table 3-5, permanent surface easements would decrease on three parcels, all of which are associated with the Westwood/UCLA Station entrances, as a result of the project refinements described in Section 2.6. The decrease in easement within Lot 36 is a result of the shift in the station entrance and transit plaza. For the southeast entrance (located at 10900 Wilshire Boulevard), the decrease in permanent easement is due to design refinements and maintaining the vertical circulation elements outside of the existing building basement.

Table 3-5: Permanent Surface Easements – Final EIS/EIR and Proposed (in square feet)

Location	Final EIS/EIR	Proposed	Difference (Proposed – Final EIS/EIR)
Westfield Mall	0	0	0
Westwood/UCLA Split Entrances Northeast – Linde (Westwood) Medical Plaza	7,082	5,932*	-1,150
Westwood/UCLA Split Entrances Southeast – 10900 Wilshire Boulevard	2,646	1,000*	1,646
Westwood/UCLA Lot 36	44,902	28,371*	-16,531
GSA	0	0	0
Caltrans	0	3,851	3,851
VA WLA Campus	0	86,628*	86,628
U.S. Army Reserve	0	0	0

Source: WSP 2018

Notes: Caltrans = California Department of Transportation; EIS/EIR = environmental impact statement/environmental impact report; GSA = General Services Administration; UCLA = University of California, Los Angeles; VA WLA = Veterans Affairs West Los Angeles

* Discussions are still ongoing with property owners and the easements may be modified during final design. Any modifications are anticipated to be minor and would not change the overall conclusions of the evaluation contained in this technical memorandum.

Regarding the northeast entrance, in the Final EIS/EIR, permanent easements were required from a gym and within the parking structure associated with the Linde (Westwood) Medical Plaza as a result of the underpinning required for the station entrance. These permanent easements are no longer required as a result of shifting the station entrance to the location currently occupied by Chase Bank. This is a significant benefit to the Project as the underpinning of the existing structure would have been difficult, with high construction risk, schedule, and cost. Implementation of this project refinement would require displacement of Chase Bank; this displacement is a result of a partial acquisition that affects the location of the Chase Bank. It is anticipated that Chase Bank would be relocated. Based on coordination with the property owner, Chase Bank is interested in relocating to a currently vacant space within the Linde (Westwood) Medical Plaza that was previously occupied by a bank. The property owner has already begun discussions with Chase Bank regarding this relocation. Therefore, displacement of Chase Bank would not result in a loss of jobs. According to information from the Los Angeles County Assessor website, the Linde (Westwood) Medical Plaza would contribute approximately \$346,500 in property taxes in 2018. Based on the square footage of Chase Bank compared to the entirety of the medical plaza, approximately \$13,000 in property taxes per year would be attributed to Chase Bank. In 2017, Los Angeles County had a total tax roll of \$1,416 billion, of which \$407 billion was collected from commercial/industrial properties (County of Los Angeles Office of the Assessor, 2017). Therefore, the loss of property taxes associated with eliminating the Chase Bank portion of the Linde (Westwood) Medical Plaza would not have an adverse impact on property taxes.

Consistent with the Final EIS/EIR, Mitigation Measure CN-1 (Relocation Assistance and Compensation) would be implemented to reduce potential impacts associated with the displacement and relocation of Chase Bank. This measure requires that Metro provide relocation assistance and compensation as required by both the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970, as amended (49 Code of Federal Regulations (CFR) 24) and the California Relocation Assistance Act of 1970, as amended (California Government Code Section 7260 et seq.); Metro will comply with these requirements. Additionally, Mitigation Measure CN-3 (Compensation for Easements) would be

implemented to reduce potential impacts associated with the permanent easements shown in Table 3-5. Therefore, the changes to permanent easements required as a result of the project refinements would not result in new adverse impacts and the impact conclusions in the Final EIS/EIR remain unchanged.

Changes in permanent subsurface easements since the Final EIS/EIR are shown in Table 3-6. A new subsurface easement is required at Westwood/UCLA Lot 36; however, the subsurface easement is offset by the decrease in the surface easement required at this location. This surface easement decreased by approximately 16,500 square feet since the Final EIS/EIR as a result of refinements to the location of the Westwood/UCLA Station and transit plaza (Section 2.6).

Table 3-6: Permanent Subsurface Easements – Final EIS/EIR and Proposed (in square feet)

Location	Final EIS/EIR	Proposed	Difference (Proposed – Final EIS/EIR)
Westfield Mall	39,634	40,822	1,188
Westwood/UCLA Split Entrances Northeast – Linde (Westwood) Medical Plaza	4,186	222*	-3,964
Westwood/UCLA Split Entrances Southeast – 10900 Wilshire Boulevard	212	551*	339
Westwood/UCLA Lot 36	0	2,713	2,713
GSA	21,470	22,323	853
Caltrans	67,758	68,316	558
VA WLA Campus	61,063	97,615	36,552

Source: WSP 2018

Notes: Minor refinements to the tunnel alignment under private residences do not change the real estate requirements from the Final EIS/EIR. Caltrans = California Department of Transportation; EIS/EIR = environmental impact statement/environmental impact report; GSA = General Services Administration; UCLA = University of California, Los Angeles; VA WLA = Veterans Affairs West Los Angeles. Subsurface easements are not included in instances where Metro is also acquiring a surface easement at the same location.

* Discussions are still ongoing with property owners and the exact proposed easements may be modified during final design. Any modifications are anticipated to be minor and would not change the overall conclusions of the evaluation contained in this technical memorandum

The permanent subsurface easements underneath properties previously identified in the Final EIS/EIR remain mostly unchanged, except under the VA WLA Campus. The increase in subsurface easement at the VA WLA Campus is a result of refinements to the location of the alignment and station box (Section 2.2) which located more of the tunnel structures and station box crossovers (both east and west of the platform) underneath the campus, thereby increasing the amount of permanent subsurface structures required. Additionally, the tail tracks were extended farther west underneath the VA WLA Campus, which also increased the subsurface easement required. The tail tracks terminate at the tail track exit shaft, which would also be subsurface.

3.7.2 Temporary Easements

Chapter 4, Section 4.2.2 of the Final EIS/EIR concluded that temporary easements would not result in adverse impacts as the use of the parcels would be temporary.

Table 3-7 presents the construction area footprint identified in the Final EIS/EIR and with the project refinements as described in Section 2.0. The project refinements would not require construction area footprints on parcels that had not previously been identified in the Final EIS/EIR. As a result of the project refinements, temporary construction area footprints have decreased in size at five locations, as shown in Table 3-7. This would be beneficial compared to the Final EIS/EIR.

Table 3-7: Construction Area Footprint¹ – Final EIS/EIR and Proposed
(in square feet) (excludes subsurface easements)

Location	Final EIS/EIR	Proposed	Difference (Proposed – Final EIS/EIR)
Westfield Mall	0	0	0
Westwood/UCLA Split Entrances Northeast – Linde (Westwood) Medical Plaza	7,082	6,770	-312
Westwood/UCLA Split Entrances Southeast – 10900 Wilshire Boulevard	2,646	2,707	61
Westwood/UCLA Lot 36	125,993	121,537	-4,456
GSA	45,951	0	-45,951
Caltrans	159,224	132,395	-26,829
VA WLA Campus ^{2,3}	247,985	338,699	90,714
U.S. Army Reserve ³	69,341	0	-69,341

Source: WSP 2018

Notes: ¹ The construction area footprint includes both the temporary and permanent surface area required during construction of the Project. When construction is complete, only the permanent surface easements shown in Table 3-5 would remain under Metro ownership.

² The temporary easement reported in the Final EIS/EIR did not include the construction footprint associated with the replacement parking structure in Lot 43. The construction footprint remains unchanged and for consistency is not reported for the proposed easements.

³ Based on the Final EIS/EIR, approximately 143,000 square feet for construction would be required on the VA WLA Campus and U.S. Army Reserve site combined as an alternative to staging construction from Lot 42 only.

Caltrans = California Department of Transportation; EIS/EIR = environmental impact statement/environmental impact report; GSA = General Services Administration; UCLA = University of California, Los Angeles; VA WLA = Veterans Affairs West Los Angeles

The construction area footprint at the Westwood/UCLA southeast entrance at 10900 Wilshire Boulevard has increased slightly (by 61 square feet or by approximately 2 percent) compared to the Final EIS/EIR. This increase is minor and would not affect the function of the property; therefore, it would not result in an adverse impact.

As shown in Table 3-7, the construction area footprint at the Linde (Westwood) Medical Plaza has decreased slightly since the Final EIS/EIR. Coordination is underway with the property owner regarding the real estate agreement in support of permanent and temporary easements on the property. As part of this agreement, the magnetic resonance imaging (MRI) machine may be relocated to another location within the building to ensure there is sufficient space to accommodate the MRI equipment before demolition of the existing Chase Bank building.

A larger construction area footprint would be required at the VA WLA Campus. The temporary construction area footprint at the VA WLA Campus represents construction areas located in three areas of the campus—the western portion adjacent to the U.S. Army Reserve site, within Lot 42, and in a grassy area west of Bonsall Avenue. The construction area footprint presented in Table 3-7 represents the construction area that would be required during the 7.5 years that construction occurs on the VA WLA Campus. An additional 43,041 square feet would be required within Lot 42 for up to 6 months at

the beginning of construction for utility relocation and removal of the solar panels. Therefore, for approximately 6 months, the total construction area footprint on the VA WLA Campus would be 381,740 square feet. The construction area footprint would not displace buildings. Solar panels are located within the construction area footprint in Lot 42. These solar panels are in an area identified as a construction staging area in the Final EIS/EIR and have been added since completion of the Final EIS/EIR. Construction of the Project would require removal of all the solar panels in Lot 42. Although a small portion of the Lot 42 panels are not directly impacted by construction, they cannot operate without the larger network of panels and would also be removed. This construction staging area is required for construction of the station box and, therefore, the impacts to the solar panels cannot be avoided. It should be noted that the Final EIS/EIR alternative construction staging area identified on the western portion of the VA WLA Campus would have impacted a solar farm that had been added to the VA WLA Campus since the Final EIS/EIR. In coordination with the VA, Metro revised the footprint of what is referred to in this memorandum as the Western VA construction staging area to avoid displacing the solar farm. Therefore, impacts to solar panels on the VA WLA Campus have been minimized to the extent feasible. Metro is coordinating with the VA on locations for replacement facilities or replacement of solar power with power provided by the local service provider (Southern California Edison). As a result of this coordination, removal of the solar panels would not result in adverse impacts. The temporary construction easement in Lot 42 would displace parking; however, consistent with the Final EIS/EIR, these parking spaces would be replaced in a parking structure within Lot 43 that would be constructed by Metro. Therefore, the temporary easements on the VA WLA Campus would not result in adverse impacts to the campus.

The VA is in the process of updating the Master Plan for the VA WLA Campus. Based on a conceptual site plan of the south campus provided by representatives of the VA in August 2018, the VA does not propose construction of new buildings within Lot 42, in the location of the cut-and-cover footprint for the Westwood/VA Hospital west crossover, or on the campus adjacent to the U.S. Army Reserve site where Metro proposes to stage construction for the WPLE Project. Additionally, the VA site plan does not indicate new buildings in Lot 43 where Metro proposes a replacement parking structure. Based on discussions with the VA, the VA may use the area occupied by the helipad and solar farm on the western portion of the VA WLA Campus as a construction staging area during construction on the south campus. Based on that information, the footprint of the Western VA construction staging area was revised to avoid the area, thereby minimizing potential impacts to the VA's construction activities. Coordination with representatives of the VA is underway regarding the size and location of these construction staging areas. Therefore, impacts to implementation of the VA's master plan are not anticipated as a result of the location of Metro construction staging areas for the WPLE Project.

Temporary subsurface easements were not specifically identified in the Final EIS/EIR; however, Table 3-8 presents temporary subsurface easements based on the Final EIS/EIR design and with the proposed refinements. The subsurface easements are required for construction of the Project, including grouting at the Westfield Mall (Section 2.8) and for tie-backs within Caltrans right-of-way and at the VA WLA Campus and Linde (Westwood) Medical Plaza. Tie-backs are stressed steel strands drilled into the ground and tied to the support of excavation walls that provide lateral stability to the excavation of the Westwood/UCLA and Westwood/VA Hospital Stations. These subsurface easements are temporary and ownership of the area would return to the property owner when construction is complete. The tie-backs would be left in place but could be removed if necessary by the owner in the future. Therefore, the temporary subsurface easements would not result in adverse impacts.

Table 3-8: Temporary Subsurface Easements – Final EIS/EIR and Proposed (in square feet)

Location	Final EIS/EIR	Proposed	Difference (Proposed – Final EIS/EIR)
Westfield Mall	0	103,944	103,944
Westwood/UCLA Split Entrances Northeast – Linde (Westwood) Medical Plaza	0	26,416	0
Westwood/UCLA Split Entrances Southeast – 10900 Wilshire Boulevard	0	0	0
Westwood/UCLA Lot 36	0	0	0
GSA	0	0	0
Caltrans	0	24,238	24,238
VA WLA Campus	0	119,167	119,167
U.S. Army Reserve	0	0	0

Source: WSP 2018

Notes: Caltrans = California Department of Transportation; EIS/EIR = environmental impact statement/environmental impact report; GSA = General Services Administration; UCLA = University of California, Los Angeles; VA WLA = Veterans Affairs West Los Angeles

Therefore, the changes to temporary construction easements required as a result of the project refinements would not result in new adverse impacts and the impact conclusions in the Final EIS/EIR remain unchanged.

3.8 Visual Quality

Long-term and construction-related impacts to visual quality were evaluated in Chapter 4, Sections 4.3.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to visual quality. As demonstrated in the following sections, the project refinements would not result in adverse impacts to visual quality during operation or construction of the Project, consistent with the impact conclusions in the Final EIS/EIR.

3.8.1 Long-Term Operational Evaluation

Chapter 5.0, Section 5.1 of the *Westside Subway Extension Visual and Aesthetic Resources Impact Technical Report* (Metro 2010a) presented the methodology used in the visual and aesthetic impact assessment. The evaluation considered whether the Project would:

- Conflict with the existing visual character
- Change visual quality
- Impact viewers with consideration of viewer sensitivity
- Block sensitive views, particularly those identified by local jurisdictions as requiring protection
- Create shadows
- Increase light or glare

As stated in Chapter 4, Section 4.3.4 of the Final EIS/EIR, the Project would not result in adverse impacts; however, mitigation measures were identified to avoid or minimize impacts related to conflicts between scale and visual character; building removal and right-of-way acquisition; removal of mature vegetation; location of ancillary features; and introduction of new sources of light and glare. The mitigation measures are as follows: VIS-1 (Minimize Visual Clutter), VIS-2 (Replacement for Tree Removal), VIS-3 (Source Shielding in Exterior Lighting), and VIS-4 (Integrate Station Designs with Area Redevelopment Plans). It should be noted that within proximity to the Westwood/UCLA and Westwood/VA Hospital Stations, Wilshire Boulevard is not designated a scenic corridor and there are no sensitive views identified.

The following sections evaluate the project refinements that have the potential to affect the long-term visual quality: (Table 3-1). While the murals were not evaluated under the Visual Quality section of the Final EIS/EIR (Section 4.3), the refinement to the murals (Section 2.4) is evaluated in terms of visual quality as public art, and elimination of the northeast mural wall and conveying that mural as a mosaic across from the current location could affect the visual character of the VA WLA Campus. The evaluation of these refinements is summarized in the following sections.

The refinements to the construction staging areas (Section 2.1) and construction method for the Westwood/VA Hospital Station west crossover (Section 2.5) are associated with the construction phase of the Project and accordingly visual impacts associated with construction are evaluated in Section 3.8.2. Construction activities on the VA WLA Campus would result in the temporary removal of trees, particularly those in the footprint of construction staging areas. As summarized in Section 3.8.2, trees removed during construction would be replaced with similar species or as otherwise determined through coordination with the applicable agencies (e.g., VA, State Historic Preservation Office). Select palms would be transplanted outside the construction area and replanted in the original location when construction is complete. Because these trees are located within the WLA VA Historic District, monitoring to ensure the success of replanting and requirements to replace trees that do not survive the monitoring period will be as stipulated in the forthcoming Section 106 amended Memorandum of Agreement (MOA), which will be developed in consultation with consulting parties. As such, the removal of trees during construction would not result in long-term visual impacts.

The project refinement related to the tunnel size (Section 2.7), grouting (Section 2.8), and underground conduits (Section 2.9) are entirely underground and would not have the potential to affect visual quality. Additionally, the project refinements related to access to the Westwood/VA Hospital Station (Section 2.3) consist of a new bus layover area and passenger drop-off area, neither of which would alter the visual quality or character of the surrounding area because the aboveground features (bus shelter, drop-off area) are consistent with the existing surrounding street character of Wilshire Boulevard, surface parking lot, and other bus stops. Therefore, these refinements would not result in long-term impacts to visual quality.

3.8.1.1 Alignment at the VA Medical Center and Westwood/VA Hospital Station Entrance

Chapter 4, Section 4.2.8 of the *Westside Subway Extension Visual and Aesthetic Resources Impact Technical Report* (Metro 2010a) described the existing area around the Westwood/VA Hospital Station as being surrounded by large, open landscaped areas and several parking lots. I-405 is a prominent visual feature in views to the east. Open spaces, excluding surface parking areas, are well landscaped and feature several mature trees. The technical report characterized the existing visual quality of the area as “moderate due to its general pleasant appearance, but lack of strong consistent architectural and urban design features.” Chapter 5.0, Section 5.2.4.1 of the Visual and Aesthetic Resources Impact

Technical Report concluded that design of the aboveground station components would complement the surroundings and would not detract from the area's visual character.

The refinement to the Westwood/VA Hospital Station entrance located in Lot 42 (Section 2.2) would shift the Westwood/VA Hospital Station entrance south, 100 feet closer to the VA Main Hospital (Building 500). The station entrance would continue to be located adjacent to an existing parking lot, bus stop on Wilshire Boulevard, and Wilshire Boulevard itself; therefore, the low-scale refined station entrance structure would not conflict with the surrounding area. The Final EIS/EIR included a pedestrian ramp to provide access from the station to a bus stop on eastbound Wilshire Boulevard. A pedestrian bridge is proposed in place of the ramp to provide safety and convenience for pedestrians traveling between the bus stop and the station over the access ramp to Wilshire Boulevard. This bridge would be consistent with the existing surroundings as Wilshire Boulevard also contains a bridge over Bonsall Avenue in this location. Additionally, the pedestrian bridge would not block sensitive views as none exist in this location. Therefore, the project refinements would not substantially degrade the existing visual character or quality of this location. The refinements would also not create a new source of substantial light or glare compared to the Project as evaluated in the Final EIS/EIR. Consistent with the Final EIS/EIR, the station entrance would not result in adverse visual impacts and the impact conclusions in the Final EIS/EIR remain unchanged.

3.8.1.2 Murals

The murals along Bonsall Avenue and along the on- and off-ramps from Wilshire Boulevard were painted in 1995 by Peter Stewart, a Vietnam War veteran, and illustrate the insignias of various branches of the armed forces. They are public art protected by state and federal laws (California Art Preservation Act [CIV § 987] and the federal Visual Artists Rights Act [17 United States Code § 106A]). The California Art Preservation Act protects works of fine art against alteration or destruction and recognizes the public interest in preserving the integrity of cultural and artistic creations. The Visual Arts Rights Act is a federal law that grants certain rights to artists. The Final EIS/EIR assumed that the murals would be protected in place during construction.

Construction of the station circulation features would require removal of the northeast mural (Section 2.4). Once the station features are constructed, there would not be sufficient space to restore the mural to its current location. In compliance with the aforementioned laws and in recognition of the importance of these murals to the veteran community, Metro is making every effort to preserve the integrity of the murals. Based on a review of the current condition of the murals, a qualified art preservation professional has determined that issues such as fading and delamination of the murals would be highly visible by 2024 or 2026 when Section 3 of the Project would be in operation. Therefore, Metro proposes conveying the story of the northeast mural as a mosaic wall that would be located on an embankment within Los Angeles County property across the street from its current location. Mosaic would be more tolerant to the weather elements than paint. Metro is coordinating with relevant stakeholders, including the VA, veterans groups, and the Los Angeles County Arts Commission regarding the mosaic wall, including the location. Refer to Section 4.6.3 for additional information on coordination related to the murals.

Re-creating the mural in another medium would be consistent with both the California Art Preservation Act and the Visual Arts Rights Act. Specifically, Part c(2) of the Visual Arts Rights Act states that "the modification of a work of visual art which is the result of conservation, or of the public presentation,

including lighting and placement, of the work is not a destruction, distortion, mutilation ...unless the modification is caused by gross negligence." In this instance, replicating the mural in a mosaic is for the long-term preservation of the mural, not gross negligence.

Final EIS/EIR Mitigation Measure VIS-1 (Minimize Visual Clutter) requires Metro to "preserve and enhance the unique cultural identity of each station area and its surrounding community by implementing art and landscaping." The relocation and mosaic treatment of the mural wall would be consistent with this mitigation measure because the mural wall artwork would be preserved within the general station area.

Locating the mosaic wall on the embankment in Los Angeles County property would allow for better visibility of the artwork by a number of different viewer groups who cannot see the mural wall in the current location, including the following:

- Transit passengers using the bus stop on Wilshire Boulevard
- Motorists/vehicles and pedestrians traveling northbound along Bonsall Avenue; the murals may also be visible for motorists on Wilshire Boulevard
- Future transit passengers of the Project using station circulation features on the north side of Wilshire Boulevard
- VA patrons, including veterans

This change in location and treatment for the mural would not alter or conflict with the visual character of the area, obscure scenic views or vistas, or change the visual character of the area. Therefore, the refinement to the mural wall would not result in an adverse visual impact.

3.8.1.3 Westwood/UCLA Station Entrances

Chapter 4, Section 4.2.7 of the *Westside Subway Extension Visual and Aesthetic Resources Impact Technical Report* (Metro 2010a) identified densely developed commercial areas around the Westwood/UCLA Station that contrast with the open character of the Veterans Cemetery (i.e., Los Angeles National Cemetery), the UCLA-owned parking lot, and Federal Building parking lot. The architectural style along Wilshire Boulevard was identified as International and Modern. Chapter 5.0, Section 5.2.3.7 of that report stated that the aboveground station components would complement the surrounding mid- to high-rise residential towers, hotels, and office buildings. Chapter 4, Section 4.3.3 of the Final EIS/EIR concluded that there would not be adverse long-term visual impacts associated with the Westwood/UCLA Station. The Final EIS/EIR did not discuss a loss of trees as part of the visual impacts assessment, although Mitigation Measure VIS-2 was included to minimize impacts resulting from the loss of trees and other mature vegetation.

The project refinement proposed to the northeast station entrance (adjacent to the Linde (Westwood) Medical Plaza) would require deconstruction of the Chase Bank retail space (Section 2.6). The façade of the station entrance would replicate pertinent features of this portion of the Linde (Westwood) Medical Plaza when it was first opened, restoring the character of this portion of the building compared to today. Therefore, the station entrance would not result in adverse visual impacts.

As part of this refinement to the northeast station entrance, Metro proposes removing four planters and the associated vegetation, including tall palms, from the plaza adjacent to the Chase Bank to improve pedestrian circulation and safety. Planters on other portions of the property would remain. In April 2017, an arborist evaluated the health of the palms and concluded that the palms have been stressed by crowding and over pruning and have begun to decline. The hybrid fan palms were also found to have a fungal disorder (Arbortgate Consulting Inc. 2017b). The trees are located on private property in a small landscaped plaza associated with the Linde (Westwood) Medical Plaza. While the palm trees along Wilshire Boulevard are a prominent feature, the majority of street trees along this roadway are significantly shorter and of a more human scale. Therefore, the palm trees are not consistent with the overall setting and feeling of Wilshire Boulevard and the loss of the trees would not result in an adverse visual impact.

Implementation of the project refinements would not result in adverse impacts to visual quality and the impact conclusions in the Final EIS/EIR remain unchanged.

3.8.2 Construction Phase Evaluation

Chapter 4, Section 4.15.3 the Final EIS/EIR stated that construction activities may introduce considerable heavy equipment and new lighting sources into the view corridor of public streets, sidewalks, and properties, which would conflict with the existing visual quality and character of commercial, recreation, and residential areas. Nighttime lighting would also result in adverse impacts. The Final EIS/EIR identified the following measures to mitigate visual impacts during construction: CON-2 (Timely Removal of Erosion-control Devices), CON-3 (Location of Construction Materials), CON-4 (Construction Lighting), and CON-5 (Screening of Construction Staging Areas). With the implementation of these mitigation measures, there would not be adverse visual impacts during construction.

The construction equipment and methods required for the project refinements described in Section 2.0 are consistent with those evaluated in the Final EIS/EIR with the exception of the tower crane and vertical conveyor belt storage towers identified at the Western VA construction staging area and the work area in the Caltrans infiltration basin north of Wilshire Boulevard and west of I-405 (both of which are described in Section 2.1) and the construction method for the Westwood/VA Hospital Station west crossover (Section 2.5). The tower crane is approximately 120 feet in height with a 160-foot boom length, and the vertical conveyor belt storage towers are approximately 90 feet in height, 10 feet in width, and 20 feet in length. These construction elements would be in place for the duration of the tunnel contract, approximately 2 years. The crane and conveyor belt storage towers would be near an existing building at the U.S. Army Reserve site (the U.S. Army Reserve Center, also known as Sadao Munemori Hall) that is approximately 40 feet in height, as well as several one- and two-story buildings on the VA WLA Campus. The crane and conveyor belt storage towers would be partially screened for viewers on both the north and south sides of the VA WLA Campus, the U.S. Army Reserve site, and Wilshire Boulevard by an approximately 20-foot temporary noise barrier wall that encompasses the entire perimeter of the construction staging area. Screening would also be provided by four large fig trees approximately 50 feet tall and multiple 55-foot-tall palms on the VA WLA Campus that would be maintained during construction. There are no windows on the U.S. Army Reserve Center facing the location of the tower crane and vertical conveyor belt storage towers. The noise barrier wall would not screen the crane for those viewers on upper floors of adjacent buildings or outdoors at the U.S. Army Reserve site and the VA WLA Campus.

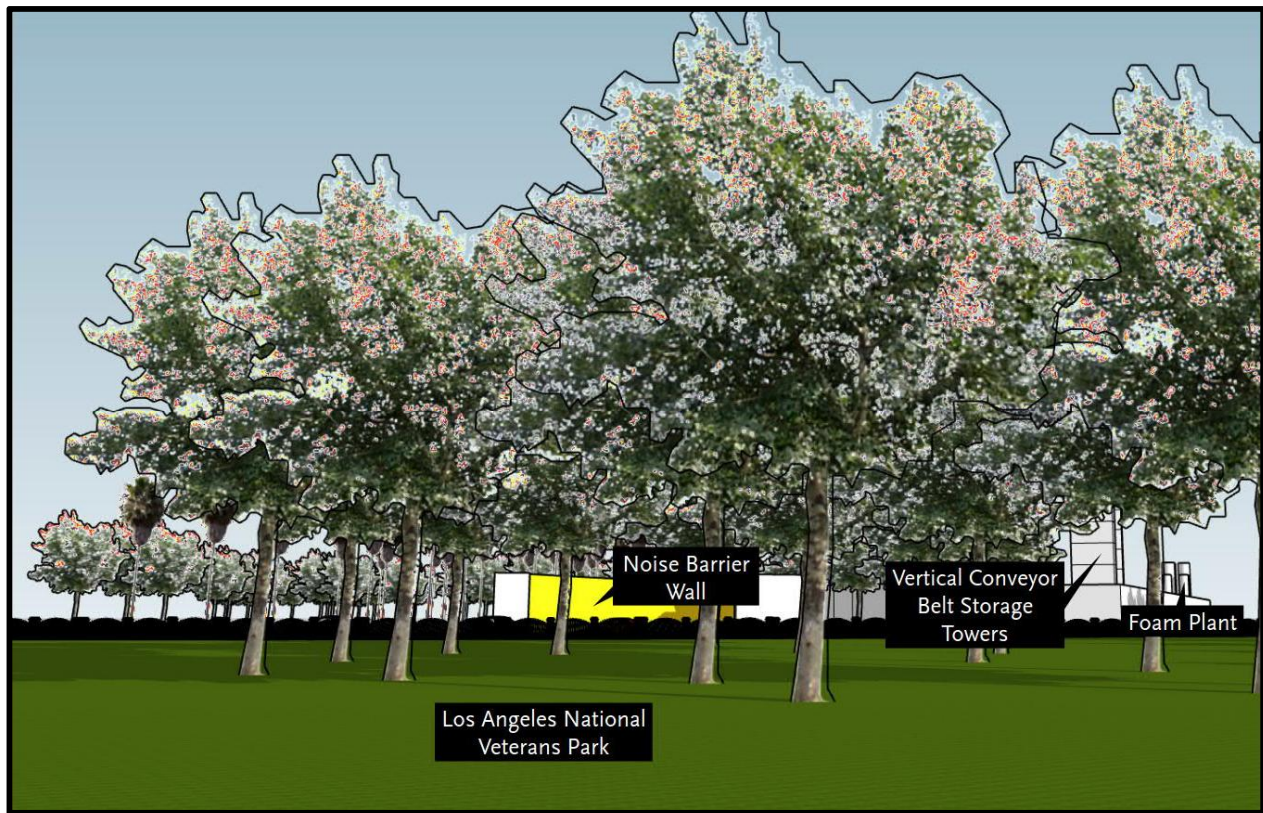
A visual impacts analysis was conducted for the Los Angeles National Veterans Park to the north of the Western VA construction staging area and the West Los Angeles Veterans Affairs (WLA VA) Historic District to the east due to the potential sensitivity to visual impacts. In both of these locations, most of the open areas where veterans, their families, and VA staff might spend time are currently shaded by fig trees and/or palms. These trees would obstruct most views of the proposed tall structures on the construction staging area, including the vertical conveyor belt storage towers and the tower crane (Figure 3-6 and Figure 3-8). In areas that have unobstructed views, the palms and figs immediately adjacent to the construction staging area would continue to provide some screening of the taller construction equipment (Figure 3-7 and Figure 3-9). The approximately 20-foot-high noise barrier wall would be visible, but would have a height and mass that would be consistent with most existing structures in the area. In addition, the barrier is expected to be a neutral color, typically in the gray to green color range. As a result, it would not create a substantial contrast with visual elements in the Los Angeles National Veterans Park or within the historic district.

Regarding shadows, there are solar farms to the south of the construction staging area on which the tower crane and other tall construction elements, such as foam plant silos, may cast shadows. Based on the analysis, shadows would be cast for less than half an hour per day. For the analysis of shadows, the summer and winter solstices as well as the spring and fall equinoxes were considered, and shadows were modeled during the time of day when shadows would be longest during that season. At these times of day, almost all areas that would be in the shade of the Western VA construction staging area would also be in the shade of existing palm trees and fig trees; therefore, shadows from project construction equipment would be negligible.

While the crane and vertical conveyor belt storage towers would have a distinct industrial character, they would be only partially visible and would not significantly contrast with other buildings at the U.S. Army Reserve site nor adjacent multi-story commercial buildings on Federal Avenue, Wilshire Boulevard, and San Vicente Avenue. Therefore, the introduction of a tower crane and vertical conveyor belt storage towers during construction would not result in an adverse temporary visual impact.

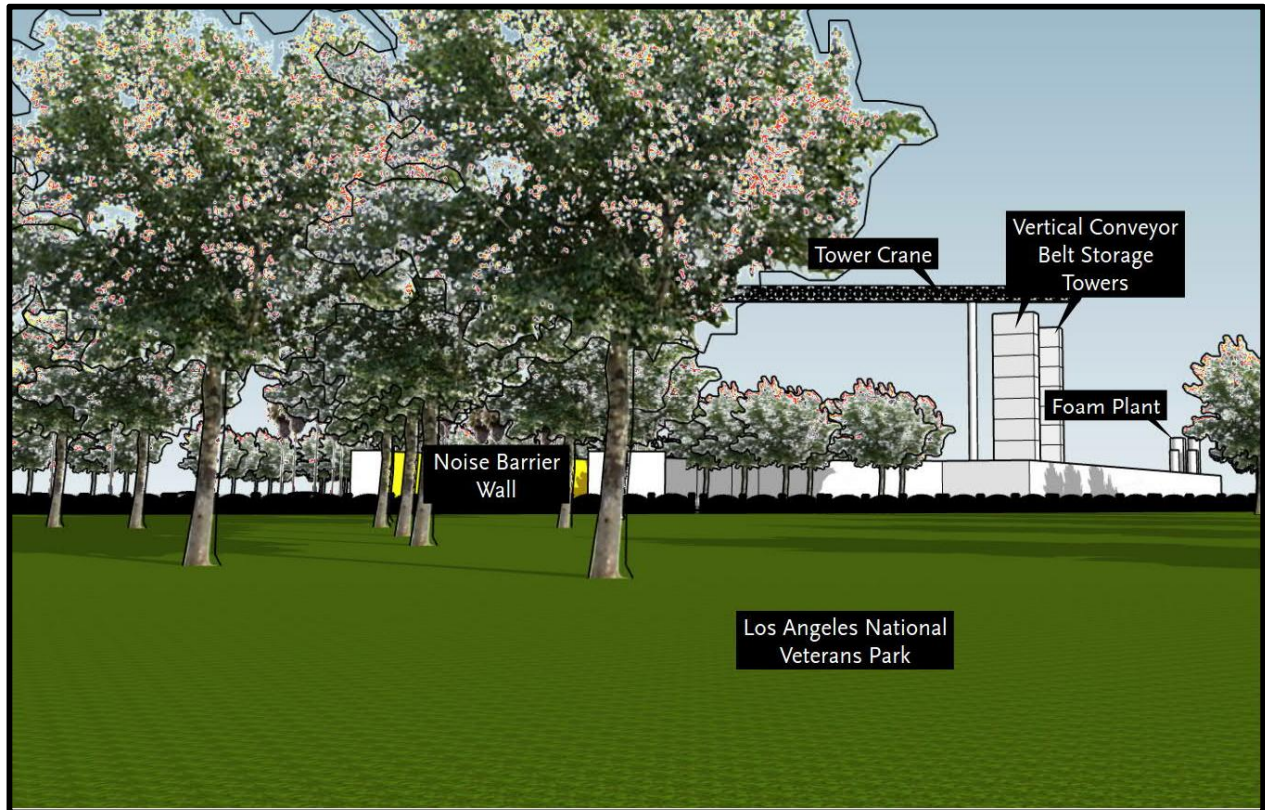
Construction activities to increase the capacity of the Caltrans infiltration basin north of Wilshire Boulevard and west of I-405 would not result in temporary adverse visual impacts. Construction activities would take approximately 1 month, and these activities would not substantially contrast with the surroundings, which include the I-405 Freeway and embankment, as well as Wilshire Boulevard.

Figure 3-6: Simulated View 01 of Western VA Construction Staging Area from Los Angeles National Veterans Park (facing south)



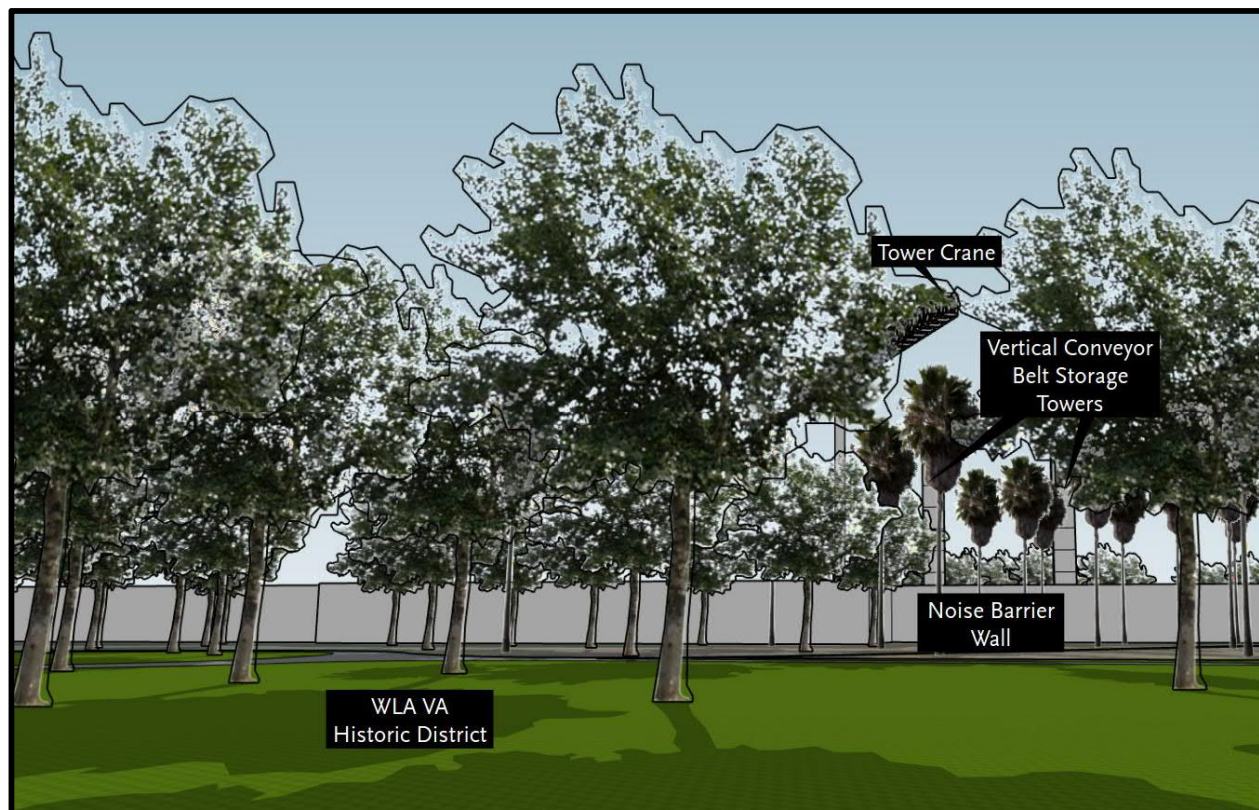
Source: TAHA 2018

Figure 3-7: Simulated View 02 of Western VA Construction Staging Area from Los Angeles National Veterans Park (facing south)



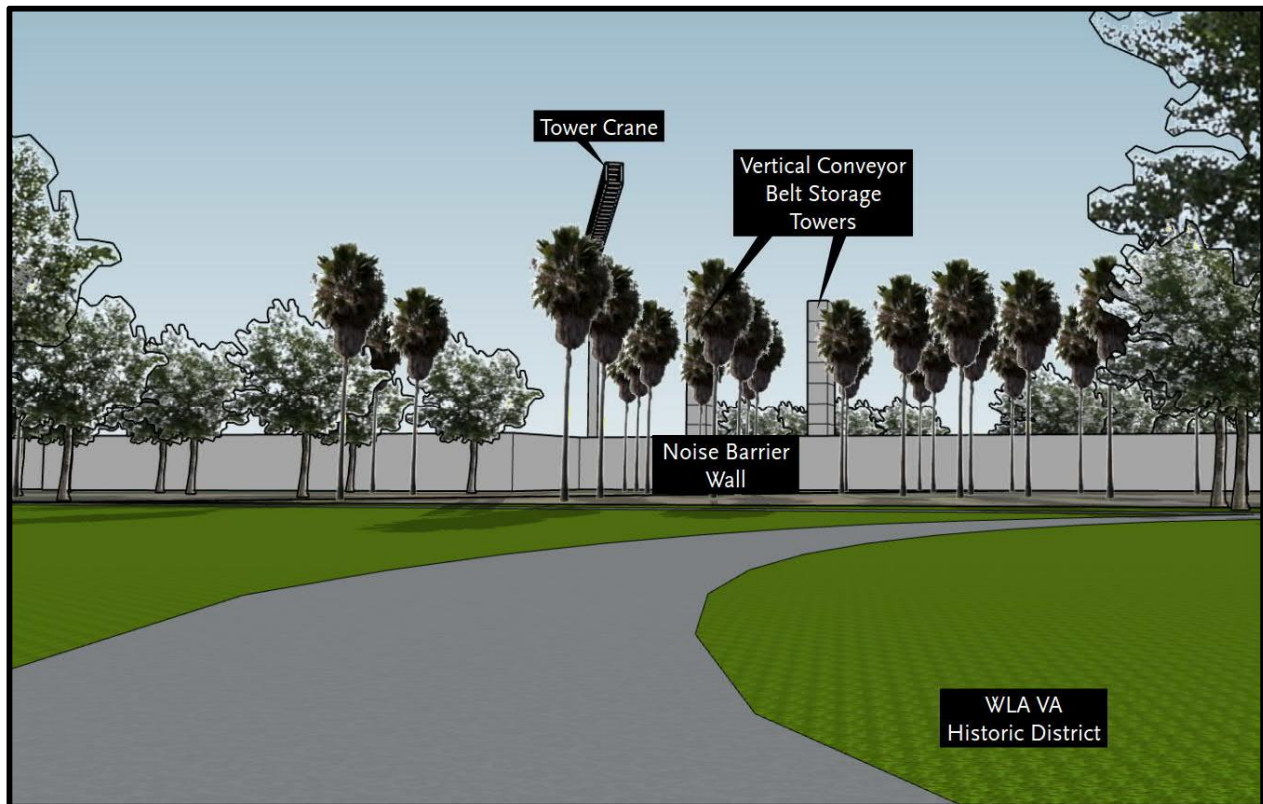
Source: TAHA 2018

Figure 3-8: Simulated View 01 of Western VA Construction Staging Area from WLA VA Historic District (facing west)



Source: TAHA 2018

Figure 3-9: Simulated View 02 of Western VA Construction Staging Area from WLA VA Historic District (facing west)



Source: TAHA 2018

The cut-and-cover area required for the Westwood/VA Hospital Station west crossover would be located in the grassy area of the WLA VA Historic District and would result in a loss of up to 11 trees and a shrub in this area. The cut-and-cover construction area would require removal of two palms on each side of Bonsall Avenue that are part of the Bonsall Avenue palm rows and are identified as a contributing element to the WLA VA Historic District (as described further in Section 3.19). The Western VA construction staging area would also require the removal of 14 Canary Island palms (3 of which are dead) that are part of a contributing element to the historic district and 11 eucalyptus trees as well as other trees that are not contributing elements. It is anticipated that the Canary Island palms that are sufficiently healthy would be removed and stored, which includes being temporarily planted in areas within and adjacent to their current location to avoid disruption of existing landscape features elsewhere on site. Chapter 4, Section 4.3 (long-term impacts) and Section 4.15 (construction-related impacts) of the Final EIS/EIR did not discuss a loss of trees as part of the visual impacts assessment. However, the *Westside Subway Extension Project Westwood/UCLA Station and the Westwood/VA Hospital Station Locations Report* (Metro 2011b) stated that the Westwood/VA Hospital Station would impact a small segment of the landscaped areas south of Wilshire Boulevard and west of Bonsall Avenue that are within the WLA VA Historic District. The loss of trees was not considered to have impacts from a visual resources standpoint, but because the trees are located within a historic district, the loss was evaluated from a historic resources standpoint. In 2017 and 2018 an arborist surveyed the trees located near the alignment within the grassy area west of Bonsall Avenue and determined that mined

construction of the west crossover could impact several trees given the proximity of construction activities to the roots. Therefore, the option evaluated in the Final EIS/EIR would also have resulted in impacts to some trees within this area of the VA WLA Campus. The results of the arborist's survey are documented in the *West LA VA Historic District Palm & Tree Inventory* (Arborage Consulting, Inc. 2018), included in Appendix B of this technical memorandum. This report also evaluates impacts to trees, including palms, as a result of cut-and-cover construction within this historic district and documents the health of the trees and palms.

For the Section 106 assessment of impacts to the trees, refer to Section 3.19 of this technical memorandum and the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c). Healthy palms that are part of contributing elements to the historic district would be removed prior to the start of construction, stored, and replanted upon the completion of construction. Trees that are not deemed healthy enough to survive transplantation would be replaced with the same species. For the other trees and shrubs affected by construction, Metro is coordinating with representatives of the VA to determine requirements for the replacement of these trees when construction is complete to minimize visual impacts. This coordination is also consistent with Mitigation Measure VIS-2 (Replacement for Tree Removal). There would not be adverse visual impacts associated with the project refinement related to the construction method for the Westwood/VA Hospital Station west crossover, the construction footprint east of Bonsall Avenue, or the Western VA construction staging area either during construction or long term because the landscaped setting would be restored when construction is complete. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

The mitigation measures identified in the Final EIS/EIR would continue to apply to construction of the project refinements. It should be noted that a substantial portion of heavy construction activities, such as support of operations of the TBM, have been shifted from the construction staging area in Lot 42, located in front of the Main Hospital (Building 500) to a construction staging area on the western portion of the campus. This refinement would benefit the Main Hospital (Building 500) and reduce visual effects to the hospital area. As stated previously, the Western VA construction staging area would be surrounded by an approximately 20-foot noise barrier wall and existing trees, which would screen the majority of construction equipment on the staging area. This barrier would be partially visible to users of Los Angeles National Veterans Park located north of the construction area and on the north side of Wilshire Boulevard. The barrier would also be partially visible and, if colored dark green, would not be entirely discernible to users of the open space area east of the staging area. In both locations, no long-distance views or viewsheds would be disrupted as the numerous existing low-hanging tree canopies in both areas focus the users on a very localized visual experience and setting.

Therefore, moving major construction activities to the Western VA construction staging area would not result in an adverse visual impact. Consistent with the Final EIS/EIR, construction of the project refinements would not result in adverse impacts to visual quality with the implementation of mitigation.

3.9 Air Quality

Long-term and construction-related impacts to air quality were evaluated in Chapter 4, Sections 4.4.3 and 4.15.3, respectively, of the Final EIS/EIR, as updated by the May 2012 Addendum to the Final EIS/EIR. Subsequent to the adoption of the Final EIS/EIR by the Metro Board, an addendum was prepared to evaluate construction-related air quality impacts as a result of updated construction information. The analysis was documented in the *Westside Subway Extension Project Addendum* (Metro 2012c) and the corresponding *Westside Subway Extension Project Air Quality Construction Impacts Memorandum* (Metro 2012b). The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to air quality. For additional information on this updated analysis, refer to the *Westside Purple Line Extension Project Section 3, Air Quality Technical Memorandum* (Metro 2018b) (included in Appendix B of this technical memorandum), which contains updated information on ambient air quality standards, available air quality data from two monitoring stations near or within the study area, and the 2017 attainment status of Los Angeles County. Detailed inputs and results of the analysis are also contained within this technical memorandum. As demonstrated in the following sections, the project refinements would not result in adverse air quality impacts during operation of the Project, consistent with the impact conclusions in the Final EIS/EIR. After the implementation of mitigation measures, air quality impacts during construction would result in a decrease in severity compared to the Final EIS/EIR.

3.9.1 Long-Term Operational Evaluation

Chapter 4, Section 4.4 of the Final EIS/EIR stated that lower regional pollutant burden levels in both the region and subarea are predicted during operation of the Project. The decrease in pollutant burden levels was a result of decreases in vehicle miles traveled (VMT) compared to the No Build Alternative. The LPA would be powered by electricity and would not emit pollutants.

The project refinements described in Section 2.0 would not affect operations of the Project and, therefore, changes in VMT would not change compared to the Final EIS/EIR and the impact conclusions of the Final EIS/EIR remain unchanged. As documented in the Final EIS/EIR, the Project would continue to operate on electrical power and not generate local air pollution during operation. The Project was presented at the Southern California Association of Governments Transportation Conformity Working Group in June 2017, and it was unanimously determined that it is not a project of air quality concern³. In addition, the project refinements would not result in traffic delays that would create a carbon monoxide hot spot. Traffic analyses were conducted in support of the passenger drop-off area and two new signalized intersections (Section 2.3), as documented in the *Westwood/VA Hospital Station Passenger Drop-Off Facility Traffic Impact Study* (Metro 2018a) and summarized in Section 3.2.1.1. Based on the analyses, there would be no traffic impacts associated with the passenger drop-off area and the addition of traffic signals. Furthermore, idling restrictions will be in place, with multiple signage indicating that the passenger drop-off area is a no-idle zone. While a new bus layover area would be added on the on-ramp from Bonsall Avenue to westbound Wilshire Boulevard, the bus layover area would facilitate potential future transit service (Section 2.3). However, there are no planned changes to transit frequency and service routes identified at this time and, therefore, transit frequency and routes remain unchanged from the Final EIS/EIR. As such,

³ The June 2017 air quality conformity analysis is discussed in detail in the *Westside Purple Line Extension Final Supplemental Environmental Impact Statement and Section 4(f) Evaluation* (Metro 2017f) prepared for the project pursuant to NEPA.

there are no changes in air quality impacts related to changes in vehicular traffic or transit service compared to the Final EIS/EIR. The Los Angeles basin has been in conformity with state and federal carbon monoxide levels for many years. Therefore, the impact conclusions in the Final EIS/EIR related to long-term air quality remain unchanged with implementation of the project refinements.

3.9.2 Construction Phase Evaluation

The May 2012 Addendum to the Final EIS/EIR (Metro 2012c) stated that emissions of volatile organic compounds, carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter smaller than or equal to 10 microns in size (PM₁₀), and particulate matter smaller than or equal to 2.5 microns in size (PM_{2.5}) would exceed South Coast Air Quality Management District (SCAQMD) thresholds and therefore result in an adverse impact prior to implementation of mitigation. The Mitigation Monitoring and Reporting Program identified the following measures to mitigate adverse air quality impacts: CON-6 (Meet Mine Safety Standards), CON-7 (Meet SCAQMD Standards), CON-8 (Monitoring and Recording of Hazardous Gases at Worksites), CON-9 (No Idling of Heavy Equipment), CON-10 (Maintenance of Construction Equipment), CON-11 (Prohibit Tampering of Equipment), CON-12 (Use of Best Available Emissions Control Technologies), CON-13 (Placement of Construction Equipment), CON-14 (Measures to Reduce the Predicted PM₁₀ Levels), CON-15 (Reduce Street Debris), CON-16 (Dust Control during Transport), CON-17 (Fugitive Dust Control), CON-18 (Street Watering), CON-19 (Spillage Prevention for Non-Earthmoving Equipment), CON-20 (Spillage Prevention for Earthmoving Equipment), and CON-21 (Additional Controls to Reduce Emissions). With implementation of these mitigation measures, PM₁₀ and PM_{2.5} impacts would be mitigated to below SCAQMD's thresholds, but NO_x impacts would likely remain significant.

The air quality evaluation was updated for construction of the project refinements described in Section 2.0. The *Westside Purple Line Extension Project Section 3, Air Quality Technical Memorandum* (Metro 2018b) (included in Appendix B) contains updated information on ambient air quality standards, available air quality data from two monitoring stations near or within the study area, and the 2017 attainment status of Los Angeles County. The updated data was used in the determination of impacts during construction of the Project with implementation of the project refinements.

The Air Quality Technical Memorandum addresses the impacts of construction activities associated with Section 3 of the Project. The regional pollutant burdens of all Section 3 construction activities, including the Westwood/VA Hospital Station, cut-and-cover construction of the Westwood/VA Hospital Station west crossover, the Westwood/UCLA Station, replacement parking structure in Lot 43 at the VA WLA Campus, and associated tunneling activities staged at the Western VA construction staging area, have been estimated and compared to the applicable SCAQMD thresholds. Furthermore, sensitive receptors are located at the VA WLA Campus. Therefore, the local (microscale) air quality impacts and health risks associated with construction near the Westwood/VA Hospital Station, tunneling, and other construction activities at the VA WLA Campus and other nearby locations have also been evaluated. The microscale analysis also includes the U.S. Army Reserve site, which currently houses a recruiting center and related military offices. The facility can serve various purposes such as training, classrooms, temporary lodging, etc. as needed. This site was included as a receptor because the project refinements would result in shifting major construction activities from Lot 42 in front of the VA Main Hospital to a location on the western VA WLA Campus adjacent to the U.S. Army Reserve site.

3.9.2.1 Emission Burden Analysis

An assessment was conducted of the air quality construction impacts associated with Section 3 construction activities, including the Westwood/VA Hospital Station, Westwood/UCLA Station, associated tunneling activities, and other construction activities based upon updated staging information and schedule, as described in the introduction of Section 2.0. This assessment used emission factors from the California Air Resources Board (CARB) model for off-road vehicle and equipment emissions (OFFROAD), as well as the CARB model for on-road vehicle emissions (EMission FACtor program, or EMFAC). Refer to the *Westside Purple Line Extension Project Section 3, Air Quality Technical Memorandum* (Metro 2018b) for additional information on methodology and model inputs. The U.S. Environmental Protection Agency (USEPA) adopted multiple tiers of emissions standards for off-road equipment ranging from Tier 1 to Tier 4, with Tier 4 being the most stringent. Based on updated information, specific pieces of equipment are required to meet Tier 4 final emission standards. Further, all trucks used for hauling and deliveries are required to be model year 2012 or newer.

To account for the tail track exit shaft, the exhaust was modeled as a point source rather than an area source. In addition to exhaust emissions from the construction equipment, fugitive dust emissions from spoil handling and re-entrained roadway dust were included in the emission burden analyses to present a full inventory of emission burdens generated by the Project.

Using the various data sources, daily construction emission levels were developed for the refinements. These values were compared to the air quality construction significance thresholds shown in Table 3-9 to determine if construction of the Project would meet or exceed these values. As shown in Table 3-9, there are no exceedances of the SCAQMD thresholds. The values presented in this table include implementation of mitigation measures identified in the Final EIS/EIR, such as watering and wheel washers consistent with CON-14 (Measures to Reduce the Predicted PM₁₀ Levels). This represents an improvement in air quality during construction compared to the impact conclusions in the Final EIS/EIR, including the Addendum (Metro 2012c), which had predicted exceedances of several SCAQMD thresholds.

Table 3-9: Estimated Maximum Daily Construction Emissions for Section 3
(lbs/day)

Activity	VOC	CO	NO _x	PM ₁₀	PM _{2.5}
Construction Equipment and Dirt Moving	2	54	20	6	4
Mobile Sources (deliveries, worker trips, hauling of material, etc.)	2	28	25	7	1
Highest Daily Total	4	82	46	12	5
SCAQMD Thresholds	75	550	100	150	55

Source: Metro 2018b

Notes: Total construction emissions may not occur during the same peak period as each emission source; therefore, the total construction emissions shown may not add up to the sum of the elements presented in this table. Peak construction emissions for CO, NO_x, PM₁₀ and PM_{2.5} are predicted to occur in the year 2021.

CO = carbon monoxide; NO_x = nitrogen oxide; PM₁₀ = particulate matter smaller than or equal to 2.5 microns in size; PM_{2.5} = particulate matter smaller than or equal to 2.5 microns in size; SCAQMD = South Coast Air Quality Management District; VA = Veterans Affairs; VOC = volatile organic compounds

The regional emissions presented in Table 3-9 are those associated with construction of all of Section 3 of the Project. These emission estimates are based upon updated models and information since issuance of the Final EIS/EIR and May 2012 Addendum (Metro 2012c). These updates include refinement of the construction emissions model reflecting project-specific equipment, including electrification of specific pieces of equipment; Tier 4 final emission standard requirements for specific pieces of equipment; and detailed equipment placement and usage. As a result of these changes, the emissions presented in this technical memorandum are lower than those presented in the Final EIS/EIR, including the May 2012 Addendum to the Final EIS/EIR (Metro 2012c). This would be true for both Section 3 and the concurrent construction schedule.

3.9.2.2 Microscale Analysis

A microscale (localized) air quality analysis was conducted to assess the potential impacts of construction activities at the VA WLA Campus. It should be noted that the Final EIS/EIR did not include this level of analysis because the SCAQMD significance levels were not exceeded. Due to community concerns, a microscale analysis of the construction phase impacts was conducted for the VA WLA Campus. This analysis accounts for construction activities on and near the VA WLA Campus, including haul routes and where construction activity/hauling of material is planned to occur during the period with the highest emission burdens. These locations include the Western VA construction staging area and construction staging area in Lot 42. Construction activities at other locations, such as at Lot 43, would not occur during the peak period of construction emissions and were therefore not included in the worst-case microscale analysis. This analysis, which follows the guidelines in SCAQMD's Final Localized Significance Threshold Methodology (SCAQMD 2003), shows the Project's local impacts on criteria pollutants of PM_{2.5}, PM₁₀, nitrogen dioxide (NO₂), and CO. Refer to the *Westside Purple Line Extension Project Section 3, Air Quality Technical Memorandum* (Metro 2018b) for additional information on methodology and model inputs. For this analysis, refined modeling was conducted using USEPA's Atmospheric Dispersion Model (AERMOD), along with the emissions burdens estimated from the construction emission burden analysis summarized in the prior section.

Figure 3-10 presents the AERMOD model layout. The construction activities are shown as the Metro staging areas. There are currently two areas where construction activity/hauling of material is planned to occur—the Western VA construction staging area and the location of the Westwood/VA Hospital Station in Lot 42. The yellow crosses represent receptor locations. These are the locations where pollutant concentrations from construction activities are estimated. A total of 3,187 receptors were analyzed. As shown in Figure 3-10, receptors were laid out in a grid pattern to help ensure that the highest pollutant contribution from the Project is captured. Per the direction of SCAQMD, a grid system of receptors was laid over the study area at ground level. In addition to the grid receptors, receptors were placed at sensitive land uses, identified as follows:

- VA Hospital Receptors: The VA hospital buildings, including the Main Hospital (Building 500) and other existing and future hospital buildings in the vicinity
- Other VA Receptors: Other sensitive buildings in the area, including living quarters and a chapel

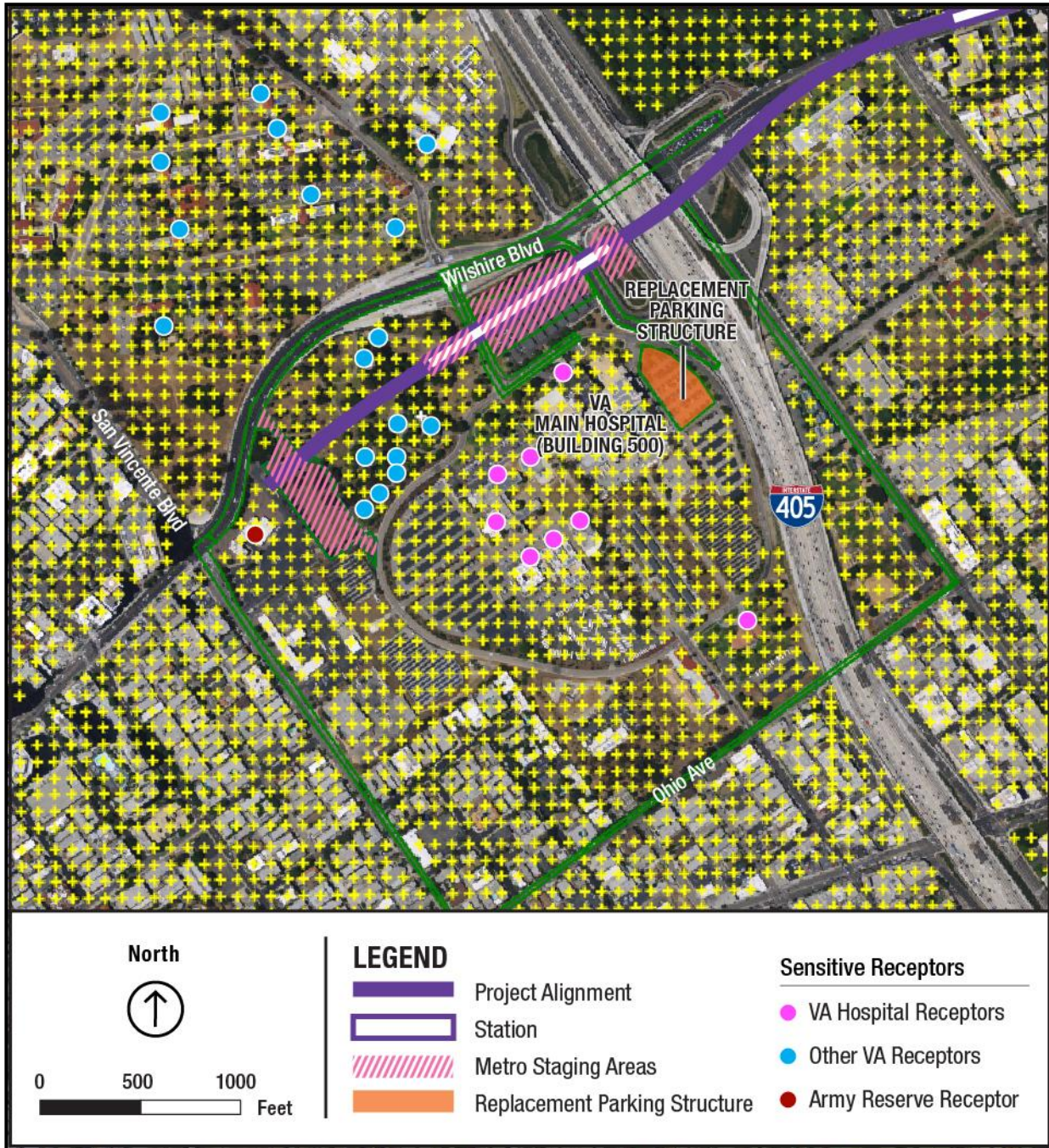
- U.S. Army Reserve Receptors: Although this building, which currently houses a military recruiting center and offices, is not traditionally considered a sensitive receptor, it has been identified as a receptor in the analysis as this facility can serve various purposes such as training, classrooms, temporary lodging, etc. as needed. The building on the U.S. Army Reserve site is located closest to the Western VA construction staging area.

These receptors are expected to capture the highest concentrations from the emissions of construction equipment in the staging areas and vehicles on the roadways. While the analyses estimated pollutant concentrations at all the receptors shown, only the maximum estimated concentration at each receptor is provided in the results.

The microscale analysis focuses on the VA WLA Campus, as the majority of construction activity, material hauling, and staging will occur at or near the VA WLA Campus. A limited amount of construction activity and staging, largely associated with construction of the station entrances, will occur in the vicinity of the Westwood/UCLA Station. The construction activities at Westwood/UCLA Station are similar to those described in the Final EIS/EIR. The closest sensitive receptors to this location are apartments on the northwest corner of Gayley Avenue and Lindbrook Drive, approximately 350 feet from proposed entrances and staging areas. At the VA WLA Campus, sensitive receptors are in much closer proximity to the construction staging areas (as close as 60 feet) compared to the Westwood/UCLA Station. Due to the limited amount of construction activities occurring at the Westwood/UCLA Station, in combination with the further distance to sensitive receptors, projected emission levels would be significantly lower at the Westwood/UCLA Station than at the VA WLA Campus. As such, any potential impacts at the Westwood/UCLA Station would be less than those at VA WLA Campus. This conclusion is supported by the detailed AERMOD microscale modeling conducted at the VA WLA Campus.

AERMOD microscale modeling is used to predict concentrations resulting from emissions from construction equipment and vehicles operating within the Project Area. A background level must be added to this value to account for pollution entering the area from other sources. The background level is the component of the total concentration not accounted for through the microscale modeling analysis. Unique background levels, based on the specific details of the applicable standards and as recommended by USEPA and SCAQMD, have been added to modeled results. The resulting pollutant concentrations (modeled result + background) were then compared to the applicable National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS).

Figure 3-10: Grid and Sensitive Receptor Locations (VA WLA Campus)



Source: WSP 2018b

Table 3-10 presents the maximum levels modeled in the microscale analysis. As shown, no exceedances of the NAAQS or CAAQS for CO, NO₂, or of the significant change threshold for PM_{2.5}, are predicted.

Table 3-10: Estimated Maximum Localized Pollutant Levels (VA WLA Campus)

Pollutant	Averaging Period	Background	On-Site Increment (Modeled Result)	Proposed Action (Modeled Result + Background)**	NAAQS	CAAQS
NO ₂ (µg/m ³)	1-hour	95.6 NAAQS 127.1 CAAQS	62.9 66.0	158.5 NAAQS 193.1 CAAQS	188	339
	Annual	25.0	6.8	31.8	100	57
CO (ppm)	1-hour	2.2	0.3	2.5	35	20
	8-hour	1.4	0.2	1.6	9	9.0
PM ₁₀ (µg/m ³)	24-hour	88	8.4	96.4	150	50/ 10.4 (incremental)
PM _{2.5} * (µg/m ³)	24-hour	N/A	3.5	N/A	10.4 (incremental)	10.4 (incremental)

Source: Metro 2018b

Note: * As per SCAQMD email on October 10, 2016, since the SCAQMD is in nonattainment for PM_{2.5} and background values already exceed both the NAAQS for the 24-hour and annual time periods, the PM_{2.5} increment should be compared to the SCAQMD significant change threshold for 24-hour PM_{2.5} for construction only. As the background levels for PM₁₀ are above the CAAQS, the PM₁₀ increment is compared to the SCAQMD significant change threshold rather than the CAAQS.

**Numbers may not add up exactly due to rounding.

CAAQS = California Ambient Air Quality Standards; CO = carbon monoxide; NAAQS = National Ambient Air Quality Standards; NO₂ = nitrogen dioxide; PM₁₀ = particulate matter smaller than or equal to 10 microns in size; PM_{2.5} = particulate matter smaller than or equal to 2.5 microns in size; ppb = parts per billion; ppm = parts per million; µg/m³ = micrograms per cubic meter; VA WLA = Veterans Affairs West Los Angeles

Exceedances of the CAAQS for PM₁₀ are predicted, but no violations of the NAAQS for PM₁₀ are predicted to occur. The exceedances of the CAAQS for PM₁₀ are anticipated at all receptors modeled because the background conditions already exceed the CAAQS. However, the project's incremental contribution to the CAAQS exceedances is below the 10.4 micrograms per cubic meter significance threshold, as established by SCAQMD for both PM₁₀ and PM_{2.5} incremental impacts, and therefore, per SCAQMD guidance, is not considered to be an adverse impact.

The estimated maximum localized pollutant levels are based on expected production rates and equipment utilization. The contractor would be required to keep a log of construction equipment used during construction along with hours of operation of each specific piece of equipment to ensure that construction activities are not in violation of applicable air quality standards.

3.9.2.3 Health Risk Analysis

A population-wide health risk assessment was conducted at the sensitive receptors identified in the previous section and in Figure 3-10 to determine the potential health risks caused by the construction of the Project. This analysis was specifically conducted to address concerns raised by representatives of the VA WLA Campus. This analysis accounts for construction activities on and near the VA WLA Campus where construction activity/hauling of material is planned to occur, specifically the Western VA construction staging area and the construction staging areas in Lot 42. Construction activities at the

other construction areas, such as Lot 43, would not occur during the peak period of construction emissions and were therefore not included in the analysis.

As discussed in the previous section regarding the microscale analyses, the health risk analysis also focuses on the VA WLA Campus, as the majority of construction activity, material hauling, and staging will occur at or near the VA WLA Campus. Due to the limited amount of construction activities occurring at the Westwood/UCLA Station, in combination with the further distance to sensitive receptors, projected health risks would be lower at the Westwood/UCLA Station than at the VA WLA Campus. As such, any potential impacts at Westwood/UCLA Station would be less than those at VA WLA Campus. Since no adverse air quality impacts to sensitive receptors were identified at the VA WLA Campus, similarly no adverse air quality impacts are anticipated near the Westwood/UCLA Station.

The Hotspots Analysis and Reporting Program Version 2 (HARP2) Risk Assessment Standalone Tool (RAST) was used to analyze cancer, chronic, 8-hour chronic, and acute health risks associated with inhalation of pollutants of concern. Other exposure pathways were not evaluated, as this analysis only considers air pollutants. The pollutants of concern analyzed in this health risk assessment were diesel particulate matter, CO, and NO₂. Each pollutant generated a risk value.

To account for sensitive receptors (such as disabled veterans), the most conservative analysis (70-year exposure, accounting for sensitive individual residents) was performed along with a 30-year exposure analysis.

Non-carcinogenic chronic risk is determined by calculating hazard quotients and indices. A hazard quotient is calculated for each organ system affected by inhalation of a pollutant. Similarly, non-carcinogenic acute risk is calculated by HARP2 RAST using the maximum hourly concentration of a pollutant, affected organ systems, and the known non-carcinogenic acute inhalation reference exposure level for the pollutant.

The analysis used the latest version of the HARP2 RAST. Cancer risk assessments were conducted for diesel particulate matter. Annual average emission concentrations calculated through AERMOD modeling at sensitive receptors were used in the HARP2 analysis, along with the appropriate exposure (i.e., receptors where people would sleep have longer exposure than offices that are only used during the workday). Using these values along with a 7-year conservative exposure of 20 hours per day, 365 days a year at the VA Hospital, other VA, at the U.S. Army Reserve receptors, the calculated excess cancer risk did not exceed the SCAQMD excess cancer risk threshold of 10 in a million. The results of this analysis are summarized in Table 3-11.

Table 3-11: Excess Cancer Risk Assessment (VA WLA Campus)

Pollutant	VA Hospital Receptors Excess Cancer Risk 70 year/30 year (in a million)	Other VA Receptors Excess Cancer Risk 70 year/30 year (in a million)	U.S. Army Reserve Receptors Excess Cancer Risk 70 year/30 year (in a million)	Excess Cancer Risk Threshold (in a million)
Diesel Particulate Matter	1.4 / 1.2	6.0 / 5.1	2.8 / 2.4	10

Source: Metro 2018b

Notes: VA WLA = Veterans Affairs West Los Angeles

Non-carcinogenic chronic risk assessments were conducted for diesel particulate matter. Non-carcinogenic acute risk assessments were conducted for CO, and NO₂. Each pollutant generated hazard indices. The hazard indices did not exceed the SCAQMD threshold of 1.0. These results are summarized in Table 3-12. Moving construction activities and staging areas away from the VA Main Hospital (Building 500) benefits veterans, as the predicted risk values are generally lower at the VA Hospital receptors as compared to the other VA receptors and the U.S. Army Reserve receptors.

Table 3-12: Acute and Chronic Non-Carcinogenic Risk Assessment (VA WLA Campus)

Location	Pollutant	Risk Assessment Type	Hazard Index	Hazard Index Threshold
VA Hospital Receptors	Diesel Particulate Matter	Chronic (non-carcinogenic)	0.004	1.0
	Nitrogen Dioxide	Acute (non-carcinogenic)	0.26	1.0
	Carbon Monoxide	Acute (non-carcinogenic)	0.12	1.0
Other VA Receptors	Diesel Particulate Matter	Chronic (non-carcinogenic)	0.02	1.0
	Nitrogen Dioxide	Acute (non-carcinogenic)	0.23	1.0
	Carbon Monoxide	Acute (non-carcinogenic)	0.12	1.0
U.S. Army Reserve Receptors	Diesel Particulate Matter	Chronic (non-carcinogenic)	0.01	1.0
	Nitrogen Dioxide	Acute (non-carcinogenic)	0.28	1.0
	Carbon Monoxide	Acute (non-carcinogenic)	0.12	1.0

Source: Metro 2018b

Note: VA WLA = Veterans Affairs West Los Angeles

3.9.2.4 Odor Assessment

The Final EIS/EIR describes the potential for construction activities to generate objectionable odors. As stated in the Final EIS/EIR, the potential for objectionable odors could be significant but would be limited to the duration of construction. The only difference in identified impacts for the construction analysis of the project refinements compared to the Final EIS/EIR is the timing of the potential odor impacts, as the construction schedule has been refined since issuance of the Final EIS/EIR.

While offensive odors rarely cause physical harm, they can be considered unpleasant. They may also be a trigger for those suffering from post-traumatic stress disorder. Any temporary odor impacts during construction would be directly related to the exhaust from diesel-fueled construction equipment. As such, many of the mitigation measures proposed in the Final EIS/EIR for the reduction of air quality emission impacts would also be effective in limiting odor impacts from the construction equipment.

One such mitigation measure is CON-8 (Monitoring and Recording of Hazardous Gases at Worksites). Consistent with this mitigation measure, Metro would investigate other potential measures, if practicable, to mitigate the impacts. Other mitigation measures identified in the Final EIS/EIR that would be effective in limiting odor impacts include CON-9 (No Idling of Heavy Equipment), CON-10 (Maintenance of Construction Equipment), CON-11 (Prohibit Tampering of Equipment), CON-12 (Use of Best Available Emissions Control Technologies), and CON-13 (Placement of Construction Equipment). Furthermore, the placement of temporary approximately 20-foot-high noise barrier walls as described in Section 3.11.2 could be optimized to break the line-of-sight from exhaust sources to sensitive receptors near construction areas, thereby deflecting direct exposure to any potential odorous emissions from

construction equipment. As described in the Final EIS/EIR, operation of the Project would not cause any objectionable odors. This impact conclusion in the Final EIS/EIR related to air quality remains unchanged during construction of the project refinements.

3.9.2.5 Historical Buildings

Air pollution can negatively impact the external facades of buildings over long periods of time. When acid rain and dry acidic particles fall to earth, the nitric and sulfuric acid that make the particles acidic can land on statues, buildings, and other manmade structures, and damage their surfaces. The acidic particles corrode metal and cause paint and stone to deteriorate more quickly. They also dirty the surfaces of buildings and other structures such as monuments (www.epa.gov/acidrain/effects-acid-rain#materials).

The tail track exit shaft is in the vicinity of several historical buildings, several of which also serve as living quarters at the VA WLA Campus. The potential for construction activities at the tail track exit shaft to contribute to the degradation or dirtying of the surfaces of these buildings, however, is minimal for the following reasons:

- The tail track exit shaft would contain scrubbers that would reduce particulate pollution from entering the surrounding atmosphere
- Construction activities are temporary and would not occur over a long period of time
- The relative contribution of the Project's construction emissions (Table 3-8) represents 5 percent or less of the already extremely high particulate matter background levels

As detailed above, the Project's emissions would be temporary in nature and mitigation measures such as CON-9, which limits idle time of equipment and CON-12 which encourages the use of Best Available Control Technology, would already be in place to minimize emissions from the tail track exit shaft. Furthermore, PM_{2.5} background levels in the Project Area currently exceed the NAAQS, and PM₁₀ background levels currently exceed the CAAQS. As such, the potential for long-term damage from the already high particulate matter background levels in the Project Area is far greater than the minimal short-term contribution from construction activities.

3.10 Greenhouse Gases

Long-term and construction-related impacts from greenhouse gases were evaluated in Chapter 4, Sections 4.5.3 and 4.15.3, respectively, of the Final EIS/EIR (note, this section was titled Climate Change in the Final EIS/EIR). The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to greenhouse gases. As demonstrated in the following sections, the project refinements would decrease emissions of greenhouse gases during operation of the Project compared to the No Build Alternative, consistent with the impact conclusions in the Final EIS/EIR. During construction, greenhouse gas emissions would lower than those presented in the Final EIS/EIR, which is an improvement in results compared to the Final EIS/EIR.

3.10.1 Long-Term Operational Evaluation

Greenhouse gases related to operations of the Project were evaluated in Chapter 4, Section 4.5 of the Final EIS/EIR. Operation of the Project is expected to decrease regional VMT, which would reduce energy

consumption and lower emissions of some air pollutants, including greenhouse gases. The project refinements described in Section 2.0 of this technical memorandum are minor changes and would not affect overall operations of the Project or VMT, which the Final EIS/EIR greenhouse gas emissions estimates were based upon. Therefore, the beneficial greenhouse gas effects identified in the Final EIS/EIR remain unchanged with implementation of the project refinements and there is no change to the conclusions presented in the Final EIS/EIR.

3.10.2 Construction Phase Evaluation

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that construction of the Project would increase carbon dioxide-equivalent emissions by less than 0.1 percent compared to existing conditions, which would not result in an adverse impact. Additionally, the Final EIS/EIR stated that construction of Section 3 of the Project would generate approximately 102 metric tons of carbon dioxide-equivalent (CO_{2e}) per day, which is approximately 66,000 metric tons of CO_{2e} over the construction duration for Section 3. In the long run, operation of the Project would reduce emissions of greenhouse gases, thereby offsetting the short-term increase during construction. The mitigation measures identified in Section 3.9.2 for air quality impacts during construction would also reduce climate change effects during construction.

The energy use and resulting greenhouse gas emission burdens associated with construction of all of Section 3 of the Project have been estimated based upon the latest construction schedule and equipment. Construction activities associated with all of Section 3 (including the Westwood/VA Hospital Station, Westwood/UCLA Station, and associated tunneling and hauling) would require approximately 289 billion British thermal units (Btus) of energy and result in approximately 96,000 metric tons of CO_{2e}. Therefore, construction of Section 3 of the Project would not result in significant impacts related to greenhouse gases during construction.

In the long run, operation of the Project would reduce energy use and emissions of greenhouse gases, thereby offsetting the short-term increases during construction. The mitigation measures identified in Section 3.9.2 for air quality impacts during construction would also reduce energy use and greenhouse gas emissions during construction.

3.11 Noise and Vibration

Long-term and construction-related impacts to noise and vibration were evaluated in Chapter 4, Sections 4.6.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to noise and vibration.

The operational groundborne vibration (GBV) and groundborne noise (GBN) was assessed using the Federal Transit Administration (FTA) criteria presented in the Transit Noise and Vibration Impact Assessment Report, FTA-VA-90-1003-06, May 2006. Building damage risk to historic buildings and monuments and cultural resources from construction vibration was assessed using the FTA thresholds and the assessment of groundborne noise is based on Metro Specification Section 01 56 19, Construction Noise and Vibration Control. For additional information on this updated analysis, refer to the *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements* (Metro 2018e) (included in Appendix B), which contains identification of historic and other noise- or vibration-sensitive receivers, additional sound measurements to characterize the existing sound environment, calculation of future operational noise

and vibration levels, calculation of construction noise and vibration levels, noise and vibration thresholds, and an assessment of whether, with implementation of the mitigation identified in the Final EIS/EIR, there would be new or worsened significant noise or vibration impacts that were not identified in the Final EIS/EIR. The results of this analysis are summarized in the following sections, which demonstrate that operations of the Project would not result in adverse noise or vibration impacts. During construction, there would not be adverse noise or vibration impacts with mitigation. In comparison, the Final EIS/EIR concluded that noise impacts during construction would remain adverse after mitigation.

3.11.1 Long-Term Operational Evaluation

Long-term operational noise and vibration could differ from the conditions evaluated in the Final EIS/EIR as a result of the refinements to the alignment at the VA Medical Center and Westwood/VA Hospital Station entrance (Section 2.2) and at the Westwood/UCLA Station entrances (Section 2.6). Regarding traffic noise associated with vehicular traffic utilizing the passenger drop-off area at the Westwood/VA Hospital Station (Section 2.3), traffic noise would be similar to the noise generated by the existing street network. No increase in noise levels is predicted. The other project refinements would not substantially alter the operational noise or vibration analysis included in the Final EIS/EIR. Noise from fixed sources, such as ventilation equipment and traction power, would meet City and County of Los Angeles requirements. As detailed in the *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements* (Metro 2018e), the FTA detailed vibration assessment procedure was used to estimate vibration levels and associated groundborne noise at sensitive receivers near the project refinements. Force density levels, which characterize the vibration forced from a moving train, for Metro Breda subway vehicles were used to predict vibration levels. The predicted levels were compared to the FTA vibration and groundborne noise impact criteria that were used in the Final EIS/EIR. The following sections present the long-term operational evaluation for the refinements with the potential to affect noise and vibration. Receivers are assessed for potential vibration effects during train operations and construction. As an example, the Wadsworth Chapel is considered by FTA as Vibration Category 3 institutional land use with a GBV threshold of 75 vibration decibels (VdB) and GBN threshold of 40 dBA for train operations and as a historic building a damage risk threshold of 0.12 in/sec peak particle velocity (PPV) for construction vibration. Noise- and vibration-sensitive receivers are shown in Figure 3-11.

3.11.1.1 Alignment at VA Medical Center and Westwood/VA Hospital Station Entrance

The predicted train vibration and groundborne noise related to the shift in the alignment and station box, which have been shifted south from Wilshire Boulevard 40 feet on the east end and 180 feet on the west end. This shift would not result in vibration or groundborne noise levels that exceed the FTA criterion of: 72 VdB or groundborne noise criterion of 35 dBA for Category 2 land uses and 75 VdB or 40 dBA for Category 3 land uses (Table 3-13). The receivers selected for assessment are occupied buildings that could be affected by train GBV and GBN. The FTA GBV and GBN thresholds for these receivers are based on the land use of the receiver:

- FTA Vibration Category 1 – Buildings where vibration would interfere with operations within the building that may be well below those associated with human annoyance
- FTA Vibration Category 2 – Residential land uses and any buildings where people sleep, such as hotels and hospitals

- FTA Vibration Category 3 – Institutional land uses that include schools, churches, and other institutions
- FTA Vibration Category Special Buildings – Buildings such as concert halls, TV and recording studios and theaters that can be very sensitive to vibration and noise but do not fit into categories 1, 2, and 3

The slant distance between the receivers in Table 3-13 and the tunnel are greater than the vibration propagation tests conducted at distances up to 150 feet. The train vibration and groundborne noise in Table 3-13 are presented as less than the levels that would be predicted at 150 feet. The exception is Receiver F (Building 91), which is at a slant distance of 127 feet.

No new or worsened significant operational vibration or groundborne noise impacts would occur in the vicinity of the Westwood/VA Hospital Station. Mitigation is not required.

The predicted vibration and groundborne noise from the new location of the East Crossover at VA Campus, located east of the Westwood/VA Hospital Station platform, which would be connected to the station platform, is predicted to be less than 58 VdB and 27 dBA at the VA Main Hospital (Building 500). These levels are below the FTA groundborne noise and vibration thresholds for a hospital. Mitigation is not required. In comparison, the predicted groundborne vibration and groundborne noise levels at this receiver presented in the Final EIS/EIR are 53 VdB and 20 dBA, respectively.

Table 3-13: Groundborne Vibration and Groundborne Noise Levels near Alignment at VA Medical Center and Westwood/VA Hospital Station—Predicted Train Passby

Site ID	Receiver	Predicted GBV (VdB)	Predicted GBN (dBA)	FTA Land Use Category	FTA GBV Threshold – VdB	FTA GBN Threshold – dBA
A	Wadsworth Theater	<61	<30	Special Buildings	72	35
B	Wadsworth Chapel	<61	<30	Category 3	75	40
E	Building 90	<61	<30	Category 2	72	35
F	Building 91	62	31	Category 2	72	35
I	Building 23 Quarters (unoccupied)	<61	<30	Category 2	72	35
1	VA Main Hospital (Building 500)	<61	<30	Category 2	72	35

Source: Metro 2018e

Notes: Predicted vibration levels include the No. 645R crossovers.

Predicted vibration levels are based on a future train speed of 75 mph to reflect conditions when Section 3 is extended west.

Refer to Figure 3-11 for the location of the receivers by Site ID.

< = less than; dBA = decibels; FTA = Federal Transit Administration; GBV = groundborne vibration; GBN = groundborne noise; VdB = vibration decibels

3.11.1.2 Westwood/UCLA Station Entrances

The Final EIS/EIR characterized operational vibration and groundborne noise in the vicinity of the Westwood/UCLA Station at the Armand Hammer Museum, a Category 3 noise- and vibration-sensitive receiver. The Final EIS/EIR predicted levels at this receiver of 63 VdB and 34 dBA, which would not change as a result of the project refinements and would not exceed the FTA thresholds of 75 VdB and 40 dBA. The Final EIS/EIR did not include the predicted vibration and groundborne noise at the Linde (Westwood) Medical

Plaza building. This building has a MRI machine on the second floor of the building, which is a Category 1 vibration-sensitive use with a vibration criterion of 65 VdB. The groundborne noise criterion for the MRI is 40 dBA, because vibration-sensitive equipment such as an MRI is not sensitive to noise.

Table 3-14 shows the FTA thresholds and the predicted vibration and groundborne noise levels for a train passby at the first and second floors of the Linde (Westwood) Medical Plaza and the Armand Hammer Museum. The first floor of the Linde (Westwood) Medical Plaza contains commercial spaces and the second floor contains medical offices, including the MRI. The first floor of the Armand Hammer Museum is public space. The predicted maximum operational vibration and groundborne noise levels at these receivers would be less than the FTA impact criteria; therefore, operational vibration and groundborne noise impacts would not occur at the Linde (Westwood) Medical Plaza, including to the MRI and the Armand Hammer Museum. Mitigation is not required.

Table 3-14: Predicted Train Passby Groundborne Vibration and Noise Levels near Westwood/UCLA Station (Site R)

Receiver	Predicted GBV (VdB)	Predicted GBN (dBA)	FTA Land Use Category	FTA GBV Threshold –VdB	FTA GBN Threshold –dBA
Ground-Floor Medical Tower Occupied Spaces	58	31	Category 3	75	40
Second-Floor Linde (Westwood) Medical Plaza MRI Facility	56	29	Category 1 for GBV, Category 3 for GBN	65	40
Armand Hammer Museum	63	34	Category 3	75	40

Source: FTA 2006, Metro 2018e

Notes: dBA = A-weighted decibels; FTA = Federal Transit Administration; GBN = groundborne noise; GBV = groundborne vibration; MRI = magnetic resonance imaging; VdB = vibration decibels

3.11.2 Construction Phase Evaluation

The Final EIS/EIR, Section 4.15, committed to meeting the construction noise limits for the County of Los Angeles and the City of Los Angeles during construction; therefore, detailed evaluation of noise and vibration associated with the construction approach and staging areas for Section 3 of the Project was not conducted. Additional and updated information is available to supplement the Final EIS/EIR construction plan for the Project and to incorporate the project refinements described in Section 2.0. The following sections evaluate the project refinements identified in Table 3-1 that have the potential generate construction-related noise and vibration that could impact sensitive receivers. Additionally, vibration generated by truck haul activity could affect the murals along the Bonsall Avenue underpass. Construction activities and the construction staging area at Lot 36 remain unchanged from the Final EIS/EIR; however, construction noise and vibration from this staging area is also evaluated because of the staging area’s proximity to the Los Angeles National Cemetery, which is a historic property.

As discussed in the Final EIS/EIR, City and County of Los Angeles noise ordinances are applicable for assessing construction noise impacts. The County of Los Angeles noise ordinance applies to the area between the centerline of Veteran Avenue and Federal Avenue; the VA WLA Campus is located within this area. The VA WLA Campus is under the jurisdiction of the Department of VA and the County of Los Angeles noise ordinance may not apply to the campus. It is understood that the VA applies construction noise limits, as defined in VA Specification 01 57 19 Temporary Environmental Controls, to work conducted by the VA on the campus. The VA Specification generally allows for higher construction noise

levels (70 dB continuous and 75 dB for up to 12 minutes per hour) than that allowed by the Los Angeles County criteria. In light of this information, the Los Angeles County criteria has been applied because it is more protective of noise-sensitive uses during construction.

The City of Los Angeles criteria apply to the other noise- and vibration-sensitive receivers located outside these limits. The Los Angeles County Code of Ordinance Title 12, Chapter 12.08 Noise Control, Part 4 Specific Noise Restrictions (§ 12.08.440. Construction Noise) lists specific levels for construction noise under different circumstances. A summary of the City and County of Los Angeles construction noise limits is presented in Table 3-15.

Table 3-15: Construction Noise Limits

Construction Activity	Noise Limit ¹ , dBA		
	SFR	MFR	SR/C
Receiver Type	SFR	MFR	SR/C
County of Los Angeles daytime (Saturday and weekdays from 7:00 a.m. to 8:00 p.m.) for mobile equipment (less than 10 days)	75 dBA	80 dBA	85 dBA
County of Los Angeles nighttime (Sunday and holidays all day and all times from 8:00 p.m. to 7:00 a.m.) for mobile equipment (less than 10 days)	60 dBA	64 dBA	70 dBA
County of Los Angeles daytime (Saturday and weekdays from 7:00 a.m. to 8:00 p.m.) for stationary equipment (more than 10 days)	60 dBA	65 dBA	70 dBA
County of Los Angeles nighttime (Sunday and holidays all day and all times from 8:00 p.m. to 7:00 a.m.) for stationary equipment (more than 10 days)	50 dBA	55 dBA	60 dBA
County of Los Angeles business structures, all times	85 dBA		
City of Los Angeles daytime (7:00 a.m. to 9:00 p.m.), general activities	75 dBA		
City of Los Angeles daytime (7:00 a.m. to 9:00 p.m.), steady high-pitch noise or repeated impulsive noises	70 dBA		
City of Los Angeles daytime (7:00 a.m. to 9:00 p.m.), less than 15-minute duration in a period of 60 consecutive minutes	80 dBA		
City of Los Angeles nighttime (9:00 p.m. to 7:00 a.m.), all activities	Nighttime Ambient Noise Levels + 5dB		

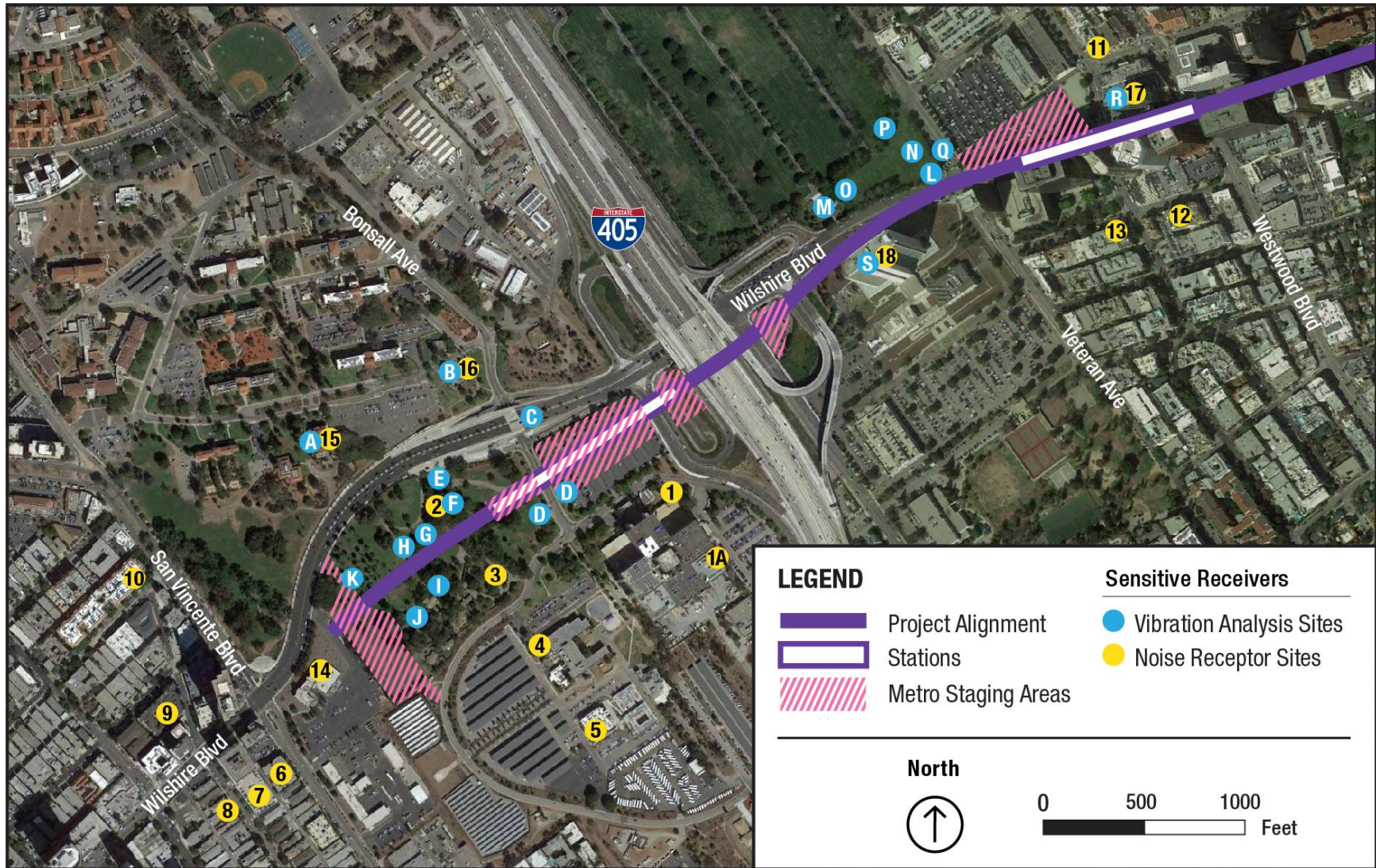
Source: Metro 2018e

Notes: dB = decibel; dBA = A-weighted decibel; SFR = single-family residence; MFR = multi-family residence; SR/C = semi-residential/commercial

¹Noise limit applies to the facade of the closest noise-sensitive property.

As detailed in the *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements* (Metro 2018e), construction noise and vibration levels were predicted following FTA guidance. Noise- and vibration-sensitive receivers, including residential uses, historic properties, medical facilities, and sensitive equipment and structures near the project refinements, were identified. These receivers are shown in Figure 3-11 and identified in Table 3-16. Noise levels for construction equipment, as documented in the *Federal Highway Administration (FHWA) Roadway Construction Noise Model* (FHWA 2006), were used along with information on anticipated construction activities and equipment to predict construction-period noise and vibration levels near the project refinements.

Figure 3-11: Noise- and Vibration-Sensitive Receivers



Source: Metro 2018e

Table 3-16: Noise- and Vibration-Sensitive Receivers

Site ID	Location and Description
1	VA Main Hospital (Wadsworth Building), Building 500
2	VA Buildings 90 and 91 (multi-family residences)
3	VA Buildings 307 through 312, 14, 23, 522, and 318 (includes single-family residences)
4	VA Medical Buildings 304 and 507
5	VA Medical Buildings 400, 401, and 402
6	SE 1223 Federal Ave
7	SE 11620 Wilshire Blvd
8	SW 11620 Wilshire Blvd
9	SE 11666 Goshen Ave
10	11500 San Vicente Blvd
11	Apartments at 1122 Gayley Ave
12	Apartments at 10916 Ashton Ave
13	Apartments at 1255 Midvale Ave
14	U.S. Army Reserve Center
15	Building 226: Wadsworth Theater
16	Building 20: Wadsworth Chapel
17	Linde (Westwood) Medical Plaza
18	(Westwood) Federal Building
A	Building 226: Wadsworth Theater
B	Building 20: Wadsworth Chapel
C	Bonsall Avenue Underpass Murals
D	Bonsall Palm Rows
E	Building 90: Duplex
F	Building 91: Duplex
G	Building 23: Landscape
H	Fence with Stone Piers
I	Building 23: Quarters and Outbuilding
J	Fireplace Structure
K	Palm Tree Grid
L	Spanish-American War Monument
M	Wilshire Boulevard Gatehouses
N	Burial Section with Markers
O	Cemetery Entrance Plaza
P	Roads/Curbs/Walkways
Q	Cemetery Perimeter Trees

Site ID	Location and Description
R	Linde (Westwood) Medical Plaza
S	(Westwood) Federal Building

Source: Metro 2018e

Notes: Numbered sites refer to noise receptor sites and lettered sites to vibration analysis sites.

Refer to Figure 3-11 for the locations of each site by Site ID.

VA = Veterans Affairs

3.11.2.1 Construction on and Adjacent to VA WLA Campus, including Los Angeles National Cemetery

Construction noise and vibration associated with the Western VA construction staging area (Section 2.1.1), construction staging area within Lot 43 for the parking structure (Section 2.1.5), alignment at the VA Medical Center and Westwood/VA Hospital Station (Section 2.2), and construction of the Westwood/VA Hospital Station west crossover (Section 2.5) is detailed in the *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements* (Metro 2018e). The technical memorandum includes the recommended mitigation measures, which are summarized below. However, it is the contractor’s responsibility to select mitigation measures, based on the means and methods of construction, that will meet the daytime and nighttime construction noise limits. This technical memorandum also evaluates the potential for truck haul activity to affect the murals along the Bonsall Avenue underpass. The results of the evaluation are summarized in the following sections.

Underground construction activities from operation of the TBM and the material handling trains are not predicted to exceed the FTA damage risk criteria or the Metro groundborne noise criteria or construction vibration annoyance criteria; therefore, there would not be noise or vibration impacts during underground tunneling. Refer to Section 7.2.7 of the *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements* (Metro 2018e) for additional information on the evaluation of construction-related noise and vibration from tunneling.

Noise

The predicted construction noise levels caused by the project refinements at noise-sensitive receivers nearest the construction work are presented in Table 3-17 for nighttime and daytime hours. These levels are the highest predicted levels for all types and major phases of work that would occur within the staging and station areas, inclusive of tunnel, station platform and entrance, and crossover construction. The analysis also included haul truck activity on Wilshire Boulevard. Without mitigation, the nighttime noise limits would be exceeded in the range of 1 to 6 dB at three locations:

- Site 1: VA Main Hospital (Building 500)
- Site 2: VA buildings 90 and 91, which are multi-family residences
- Site 3: VA buildings 307 through 312, 14, 23, 522, and 318, which include residences

There may be an overlap in construction activities that could result in higher noise levels at some receivers where the construction activities and distances are approximately the same. Predicting levels with overlap would be difficult to anticipate when the exact construction means and methods will be determined by the construction contractor. The distances to most receivers are such that one location would dominate and the other location would have negligible effect on the overall level.

Table 3-17: Maximum Predicted Construction Noise Levels—All Construction Activities

Site ID	Noise Prediction Location	Nighttime Predicted Level Leq, dBA	Nighttime Noise Limit, dBA	Nighttime Noise Exceedance, dBA	Daytime Predicted Level Leq, dBA	Daytime Noise Limit, dBA	Daytime Noise Exceedance, dBA
1	VA Main Hospital (Wadsworth Building), Building 500	61	60	1	63	70	-7
2	VA Buildings 90 and 91 (multi-family residences)	66 ¹	60	6	64	65	0
3	VA Buildings 307 through 312, 14, 23, 522, and 318 (includes single-family residences)	61	55	6	61	60	1
4	VA Medical Buildings 304 and 507	56	60	2	56	60	-10
5	VA Medical Buildings 400, 401, and 402	59	60	-6	59	70	-11
6	SE 1223 Federal Ave	53	64	-11	53	75	-22
7	SE 11620 Wilshire Blvd	40	59	-19	40	75	-35
8	SW 11620 Wilshire Blvd	39	61	-22	39	70	-36
9	SE 11666 Goshen Ave	39	64	-25	39	75	-36
10	11500 San Vicente Blvd	53	67	-14	53	75	-22
11	Apartments at 1122 Gayley Ave	57	73	-16	59	75	-16
12	Apartments at 10916 Ashton Ave	35	61	-26	37	75	-38
13	Apartments at 1255 Midvale Ave	39	63	-24	41	75	-34
14	U.S. Army Reserve Center	61	N/A	N/A	61	70	-9
15	Building 226: Wadsworth Theater	56	N/A	N/A	56	65	-9
16	Building 20: Wadsworth Chapel	62	N/A	N/A	62	65	-1

Source: Metro 2018e

Notes: ¹ Site 2 reports the noise level predicted at building 90, which is nearer to construction than building 91. Nighttime noise levels at building 91 are predicted not to exceed the nighttime limit.

Noise levels in red indicate an exceedance of the Los Angeles County nighttime noise limit.

dBA = decibels; Leq = equivalent noise level; VA = Veterans Affairs

N/A – There are no nighttime activities at this receiver.

Refer to Figure 3-11 for the locations of each site.

The Final EIS/EIR documented existing ambient daytime peak noise-hour levels of 64 dBA Leq south of Wilshire Boulevard in the grassy area west of Bonsall Avenue. The maximum predicted construction noise levels in this area are in the range of 61 to 64 dBA Leq, which is the same as or lower than the peak hour existing ambient noise levels presented in the Final EIS/EIR.

To offset the loss of parking during construction, Metro would construct a replacement parking structure in Lot 43, located east of the VA Main Hospital (Building 500) (Site 1); the location of this replacement structure is consistent with the Final EIS/EIR. Noise levels at each floor of the Main Hospital (Building 500) were predicted during the different phases of construction of the parking structure, as shown in Table 3-18. During demolition of asphalt in Lot 43, noise levels on the fourth through sixth floors of the hospital would exceed the Los Angeles County daytime construction noise limit of 70 dBA by 4dBA on the fourth and fifth floors and 3 dBA on the sixth floor. Demolition is expected to occur for about one month and measures can be provided to reduce the noise to acceptable levels, such as the addition of localized sound curtains to the area, consistent with Final EIS/EIR Mitigation Measure CON-34 (Use of Temporary Noise Barriers and Sound-Control Curtains). Construction of the parking structure would be limited to the daytime hours of 8:00 a.m. to 5:00 p.m. but may be extended from 7:00 a.m. to 8:00 p.m. as a result of scheduling constraints. These expanded hours of construction would still be considered as daytime by Los Angeles County.

Table 3-18: Predicted Construction Noise at VA Main Hospital (Building 500)

VA Hospital Building Noise Prediction Location	Demolition		Construction and Restoration		Los Angeles County Daytime Construction Noise Limit, dBA
	Daytime Predicted Level - Leq, dBA	Daytime Predicted Level with Approximately 20-Foot-Noise Barrier Leq, dBA	Daytime Predicted Level - Leq, dBA	Daytime Predicted Level with Approximately 20-Foot Noise Barrier Leq, dBA	
Ground Floor	72	60	68	56	70
Second Floor	74	64	70	60	70
Third Floor	74	69	70	65	70
Fourth Floor	74	74 (+ 4 over limit)	70	70	70
Fifth Floor	74	74 (+ 4 over limit)	70	70	70
Sixth Floor	73	73 (+ 3 over limit)	70	70	70

Source: Metro 2018e

Notes: Noise levels in red indicate an exceedance of the Los Angeles County daytime noise limit.
dBA = A-weighted decibels; Leq = equivalent noise level; VA = Veterans Affairs

In addition to the construction staging areas identified previously, the construction staging area in UCLA Lot 36 associated with the Westwood/UCLA Station is the closest construction staging area to the Los Angeles National Cemetery, which is part of the WLA VA Historic District. Predicted noise from construction at UCLA Lot 36 at the Los Angeles National Cemetery historic receiver locations are presented in Table 3-19. The Los Angeles County daytime construction noise limits are predicted not to be exceeded at these sites. Because there are no activities after 9:00 p.m. and before 7:00 a.m. at the Los Angeles National Cemetery, the effects of nighttime construction noise are not considered.

Table 3-19: Predicted Construction Noise – UCLA Lot 36, Leq (dBA)

Site ID	Receiver	Daytime Predicted Level with Approximately 20-foot Noise Barrier Wall Leq, dBA	Los Angeles County Daytime Noise Level Limit, dBA	Daytime Noise Exceedance, dB
L	Spanish-American War Monument	58	70 ¹	-12
M	Wilshire Boulevard Gatehouses	56	70 ¹	-14
N	Burial Section with Markers	58	70 ¹	-12
O	Cemetery Entrance Plaza	56	70 ¹	-14
P	Roads/Curbs/Walkways	58	70 ¹	-12
Q	Cemetery Perimeter Trees	58	70 ¹	-12
S	(Westwood) Federal Building	56	70	-14

Source: Metro 2018e

¹ Cemeteries are classified as commercial receivers

Leq = equivalent sound level; dBA = A-weighted decibels

Consistent with Mitigation Measure CON-27 (Noise Barriers for Nighttime Construction) from the Final EIS/EIR, an approximately 20-foot-high perimeter noise barrier wall would be constructed at the following construction staging areas and work areas (a gate of the same construction and design as the noise barrier wall would be used at access roads into the staging area):

- Western VA construction staging area
- Westwood/VA Hospital Station work sites, which include construction staging areas in the Caltrans infiltration basin located west of I-405 and south of Wilshire Boulevard, Lot 42, and in the grassy area west of Bonsall Avenue
- Lot 43
- Lot 36 on UCLA Campus (located east of the Los Angeles National Cemetery)

Nighttime construction is not anticipated at the surface of the Westwood/VA Hospital Station site and for the Westwood/VA Hospital Station west crossover; however, if nighttime construction occurs, mitigation measures in addition to the noise barrier wall would be required to reduce the noise levels by between 1 and 6 dBA to meet the Los Angeles County Noise Limits at the VA Main Hospital (Building 500) and VA buildings 14, 23, 90, 91, 307 through 312, 318, and 522. This can be achieved by implementation the following mitigation measures from the Final EIS/EIR:

- Moveable noise barriers at the source of the construction noise, consistent with Final EIS/EIR Mitigation Measure CON-34 (Use of Temporary Noise Barriers and Sound-Control Curtains)
- Changes in equipment or operating procedures, consistent with Final EIS/EIR Mitigation Measure 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), and CON-37 (Requirements on Project Equipment)
- Increasing the height of the approximately 20-foot noise barrier wall (CON-27) around the construction site

Short-term noise monitoring, consisting of weekly (1 hour or more) daytime and nighttime measurements to verify that noise levels during construction do not exceed the Los Angeles County and City of Los Angeles noise level limits, would also occur.

With implementation of the committed mitigation measures from the Final EIS/EIR of CON-27 and CON-34 and use of CON-31, 32, 33, and 37 as needed, construction noise from the construction staging areas and work areas would not cause noise impacts or increase the severity of impacts and the impact conclusions in the Final EIS/EIR remain unchanged.

Vibration

The predicted vibration levels from the construction activities at the construction staging areas at UCLA Lot 36 and at the VA WLA Campus, including the work in Lot 43 for the replacement parking structure, are presented in Table 3-20 through Table 3-22. These levels are the highest predicted levels for all types and phases of work that would occur within the construction staging and work areas, inclusive of tunnel, station platform and entrance, and crossover construction. The predicted vibration levels from construction do not exceed the damage risk criteria for the evaluated structures.

Vibration levels from haul truck activity along Wilshire Boulevard are presented in Table 3-23. Proposed haul truck activity along Wilshire Boulevard is closest to the Wadsworth Chapel (Site B) and Wadsworth Theater (Site A). Vibration levels from haul truck activity along Wilshire Boulevard at these receivers and the other historic receiver sites, presented in Table 3-23, are substantially lower than the damage risk criteria.

The construction staging area on the UCLA Lot 36 remains unchanged since the Final EIS/EIR; however, as this staging area is in proximity to the Los Angeles National Cemetery, which is a historic property, a consideration of vibration during construction is included in this memorandum. Predicted vibration levels from activities at the UCLA Lot 36 on the historic properties of the Los Angeles National Cemetery (Figure 3-11) are presented in Table 3-20. The maximum vibration levels are predicted to be less than .01 in/sec PPV, which are substantially lower than damage risk thresholds of 0.50 in/sec PPV and 1.0 in/sec PPV.

Table 3-20: Predicted Vibration from UCLA Lot 36 Construction Staging Area

Site ID	Receiver	Damage Risk Criteria, in/sec PPV	Distance to Historic Receivers, feet	Predicted GBV, in/sec PPV
L	Spanish American War Memorial	0.5	440	0.00121
M	Wilshire Boulevard Gatehouses (2)	0.5	1000	0.00035
N	Burial Section with Markers	0.5	460	0.00113
O	Cemetery Entrance Plaza	0.5	990	0.00036
P	Roads/Curbs/Walkways	0.5	650	0.00067
Q	Cemetery Perimeter and Trees	1.0	420	0.00129

Source: Metro 2018e

Notes: GBV = groundborne vibration; PPV = peak particle velocity; UCLA = University of California, Los Angeles

Table 3-21: Predicted Maximum Vibration Levels from Western VA Construction Staging Area Construction Activities – PPV in/sec

Site ID	Location	Damage Risk Criteria ¹	Maximum Vibration Level
A	Building 226: Wadsworth Theater	0.12	0.0027
B	Building 20: Wadsworth Chapel	0.12	0.0009
C	Bonsall Avenue Underpass Murals	0.5	0.0012
D	Bonsall Palm Rows	1.0	0.0011
E	Building 90: Duplex	0.2	0.0019
F	Building 91: Duplex	0.2	0.0025
G	Building 23: Landscape	1.0	0.0029
H	Fence with Stone Piers	1.0	0.0055
I	Building 23: Quarters and Outbuilding	0.12	0.0135
J	Fireplace Structure	0.12	0.0148
K	Palm Tree Grid	1.0	0.2400

Source: Metro 2018e

¹ Damage risk criteria for buildings are based on the FTA Construction Damage Risk Criteria for buildings extremely susceptible to vibration (0.12 in/sec PPV), and non-engineered timber and masonry buildings (0.20 in/sec). Damage risk criteria for palm trees, fences, stone piers, and other structures are estimated based on their condition.

Notes: PPV = peak particle velocity; VA = Veterans Affairs

Refer to Figure 3-11 for the locations of each site.

Table 3-22: Predicted Maximum Vibration Levels from Westwood/VA Hospital Station and Lot 43 Parking Structure Construction Activities – PPV in/sec

Site ID	Location	Damage Risk Criteria ¹	Maximum Vibration Level
A	Building 226: Wadsworth Theater	0.12	0.00127
B	Building 20: Wadsworth Chapel	0.12	0.00233
C	Bonsall Avenue Underpass Murals	0.5	0.00555
D	Bonsall Palm Rows	1.0	0.94868
E	Building 90: Duplex	0.2	0.01000
F	Building 91: Duplex	0.2	0.01077
G	Building 23: Landscape	1.0	0.00527
H	Fence with Stone Piers	1.0	0.00524
I	Building 23: Quarters and Outbuilding	0.12	0.00299
J	Fireplace Structure	0.12	0.00209
K	Palm Tree Grid	1.0	0.00253

Source: Metro 2018e

Notes: ¹ Damage risk criteria for buildings are based on the FTA Construction Damage Risk Criteria for buildings extremely susceptible to vibration (0.12 in/sec PPV), and non-engineered timber and masonry buildings (0.20 in/sec). Damage risk criteria for palm trees, fences, stone piers, and other structures are estimated based on their condition.

PPV = peak particle velocity; VA = Veterans Affairs

Refer to Figure 3-11 for the locations of each site.

Table 3-23: Predicted Maximum Vibration Levels from Haul Vehicles on Wilshire Boulevard – PPV in/sec

Site ID	Location	Damage Risk Criteria ¹	Maximum Vibration Level
A	Building 226: Wadsworth Theater	0.12	0.005
B	Building 20: Wadsworth Chapel	0.12	0.008
C	Bonsall Avenue Underpass Murals	0.5	0.32 to 0.89
D	Bonsall Palm Rows	1.0	0.00326
E	Building 90: Duplex	0.2	0.00943
F	Building 91: Duplex	0.2	0.00289
G	Building 23: Landscape	1.0	0.00114
H	Fence with Stone Piers	1.0	0.00114
I	Building 23: Quarters and Outbuilding	0.12	0.00070
J	Fireplace Structure	0.12	0.00073
K	Palm Tree Grid	1.0	0.02828
L	Spanish American War Memorial	0.5	0.02600
M	Wilshire Boulevard Gatehouses	0.5	0.00500
N	Burial Section with Markers	0.5	0.04000
O	Cemetery Entrance Plaza	0.5	0.00900
P	Roads/Curbs/Walkways	0.5	0.02600
Q	Cemetery Perimeter and Trees	1.0	0.02600

Source: Metro 2018e

Notes: ¹ Damage risk criteria for buildings are based on the FTA Construction Damage Risk Criteria for buildings extremely susceptible to vibration (0.12 in/sec PPV), and non-engineered timber and masonry buildings (0.20 in/sec). Damage risk criteria for palm trees, fences, stone piers, and other structures are estimated based on their condition.

Vibration levels in red indicate a possible exceedance of the damage risk criteria.

PPV = peak particle velocity

Refer to Figure 3-11 for the locations of each site.

Construction specifications for the project require that short-term vibration measurements be conducted at the historic buildings and resources closest to the haul truck routes and construction activities during periods of construction when equipment that generate a substantial amount of groundborne vibration are in use. Vibration levels at the VA Main Hospital (Building 500) during construction within Lot 43 was also evaluated and it was determined that these activities would not exceed the 0.5 in/sec PPV damage risk criteria for this building. Construction activities in Lot 43 are approximately 300 feet from the Radiology Department located in the ground floor of the VA Main Hospital (Building 500). At this distance, the predicted groundborne vibration levels for construction equipment such as dozers, front-end loaders, graders, excavators, and drillers is predicted to be 54 VdB. The use of a roller compactor could result in levels of 63 VdB. These levels would not exceed the recommended FTA Category 1 groundborne vibration level of 65 VdB for sensitive equipment, such as MRIs. Therefore, there would not be an effect to MRIs during construction. Construction vibration from the construction staging areas and exit shaft would not result in significant construction vibration impacts and the impact conclusions in the Final EIS/EIR remain unchanged.

3.11.2.2 Underground Conduits

Temporary power for construction, including power required to operate the TBMs and for station construction, would require installation of new power cables from the existing Southern California Edison Sawtelle substation to the Western VA construction staging area via Ohio Avenue, Federal Avenue, and Wilshire Boulevard (Section 2.9 and Figure 2-16). The highest levels of construction noise along this route would occur from the pavement sawing and trenching for the underground conduits. These activities would occur from 9:00 a.m. to 3:30 p.m. along Ohio and Federal Avenues. This work area is a total of 3,300 feet of construction and work would advance at the rate of 10 to 20 feet per day.

The work along Wilshire Boulevard would occur during the nighttime hours after the p.m. peak traffic hour and before the a.m. peak traffic hour. This work area is a total of 2,000 feet of construction and work would advance at the rate of 10 to 20 feet per night.

Daytime noise of the trenching construction was modeled at Receiver 6, apartments on the west side of Federal Avenue, which is representative of the residential receivers along Federal and Ohio Avenues. The closest receiver locations to the nighttime underground conduit construction activities on Wilshire Boulevard are Receiver 2, VA Buildings 90 and 91, and Receiver 14, U.S. Army Reserve Center. Nighttime construction noise was modeled at the closest VA buildings to Wilshire Boulevard—VA Building 90, which is a multi-family residence (Receiver 2)—but not at the U.S. Army Reserve Center (Receiver 14), which has no nighttime uses. The predicted nighttime and daytime construction noise levels are presented in Table 3-24. At VA Building 90 (Receiver 2), the predicted nighttime construction noise would exceed the Los Angeles County noise limit by 6 dB; therefore, mitigation would be required. The predicted daytime construction noise level at the residences on Federal and Ohio Avenues would not exceed the City of Los Angeles daytime noise limit of 75 dBA.

Table 3-24: Construction Noise at Receivers along Underground Conduit Route

Site ID	Noise Prediction Location	Average Distance to Receiver from Construction Activities (feet)	Nighttime Predicted Level Leq, dBA	Nighttime Noise Limit, dBA	Nighttime Noise Exceedance, dB	Daytime Predicted Level Leq, dBA	Daytime Noise Limit, dBA	Daytime Noise Exceedance, dB
	VA Building 90 (multi-family residence)			60 ¹				
6	Apartments on west side of Federal Avenue	60	NA	NA	NA	66	75	-9
14	U.S. Army Reserve Center, Sadao Munemori Hall	140	No nighttime uses at this receiver after 8:00 p.m. and before 7:00 am.			NA	NA	NA

Source: Metro 2018e

Notes: NA – Construction activities do not occur during these time periods.

¹ The measured ambient noise is higher than the Los Angeles County single-family nighttime limit of 50 dBA. Therefore, the measured ambient noise is assumed to be the nighttime noise limit.

Receivers 2 and 14 are in Los Angeles County and receiver 6 is in the City of Los Angeles

dB = decibels; dBA = decibels; Leq = equivalent noise level; VA = Veterans Affairs

The locations of the receivers are shown in Figure 3-11.

Movable noise barriers or sound-control curtains consistent with Mitigation Measure CON-34 (Use of Temporary Noise Barriers and Sound-Control Curtains) from the Final EIS/EIR would be required to shield VA Building 90 from the noise from nighttime construction of underground conduits on Wilshire Boulevard. With mitigation, there would not be adverse construction-related noise impacts associated with the underground conduits.

Groundborne vibration from breaking pavement as part of the construction of underground conduits is predicted to be 0.012 in/sec PPV at VA Building 90, the closest receiver to these activities, which does not exceed the damage risk threshold of 0.20 in/sec PPV and would not exceed Metro's annoyance threshold of 80 VdB.

3.11.2.3 Murals

Construction haul truck traffic could generate vibration levels that exceed the vibration risk threshold at the murals along the Bonsall Avenue underpass. Vibration levels from haul trucks on Wilshire Boulevard are predicted to occur in the range of 0.32 in/sec PPV to 0.89 in/sec PPV, which may exceed the threshold of 0.50 in/sec PPV (Table 3-23). This is not a change in impact intensity relative to the Final EIS/EIR.

Consistent with Mitigation Measure CON-46, vibration monitoring would be conducted at the Bonsall Avenue underpass to determine vibration levels at the locations of the murals. If the monitored levels from the haul truck movements on Bonsall Avenue exceed the 0.5 in/sec PPV threshold, Metro would take necessary action to avoid damage to the murals (Mitigation Measure Con-46 (Metro Ground-Born Noise and Ground-Born Vibration Limits)). This action could include reducing haul truck speeds and/or filling in potholes.

3.11.2.4 (Westwood) Federal Building

Construction activities at the staging areas in the Caltrans infiltration basin located east of I-405 and south of Wilshire Boulevard are closest to the (Westwood) Federal Building (Site 18). The predicted construction noise levels at this building with an approximately 20-foot noise barrier wall around the staging area is presented in Table 3-25 at each floor. The predicted noise levels do not exceed the City of Los Angeles daytime noise limit of 75 dBA. Groundborne vibration levels from these activities are predicted to be 0.00143 in/sec PPV, which is substantially lower than the building damage risk threshold of 0.20 in/sec PPV this type of building.

Table 3-25: Predicted Construction Noise Levels at (Westwood) Federal Building (Site 18)

Floor	Daytime Construction Noise Level w/ Approximately 20-Foot Noise Barrier, dBA	City of Los Angeles Daytime Noise Limit, dBA	Noise Limit Exceedance, dBA
Floor 1	61	75	-14
Floor 2	62	75	-13
Floor 3	64	75	-11
Floor 4	65	75	-10
Floor 5	65	75	-10
Floor 6	66	75	-9
Floor 7	68	75	-7
Floor 8	68	75	-7
Floor 9	69	75	-6
Floor 10	69	75	-6
Floor 11	70	75	-5
Floor 12	70	75	-6
Floor 13	70	75	-6
Floor 14	69	75	-6
Floor 15	69	75	-6
Floor 16	69	75	-6
Floor 17	69	75	-6

Source: Metro 2018e

Note: dBA = A-weighted decibels

3.11.2.5 Westwood/UCLA Station Entrances

The following sections summarize noise and vibration during construction of the Westwood/UCLA Station entrances.

Noise

The construction noise that would affect the Linde (Westwood) Medical Plaza would be generated from activities and equipment located at the northeast station staging and laydown area on the northwest corner of Wilshire and Westwood Boulevards. The range of predicted construction noise levels for major construction phases is presented in Table 3-26 with and without an approximately 20-foot-high noise barrier wall between the construction site and the Linde (Westwood) Medical Plaza building.

Without a barrier wall, noise from construction activities adjacent to the Linde (Westwood) Medical Plaza would exceed the daytime Los Angeles construction noise limit of 75 dBA. Therefore, consistent with Mitigation Measure CON-27 (Noise Barrier Walls for Nighttime Construction), an approximately 20-foot-high noise barrier wall would be included around this construction site. If nighttime construction activity occurs at this construction area, Metro would be required to obtain and comply with a noise variance as specified in CON-24 (Comply with the Provisions of the Nighttime Noise Variance) of the Final EIS/EIR.

Table 3-26: Predicted Construction Noise at Linde (Westwood) Medical Plaza (Site 17)

Construction Phase	Range of Predicted Noise Level	Range of Predicted Noise Level with an Approximately 20-Foot-High Noise Barrier Wall	Los Angeles City Daytime Noise Limit, dBA	Noise Limit Exceedance, dBA
Deconstruction of Chase Bank Building	81 dBA to 85 dBA	66 dBA to 70 dBA	75	-9 to -5
Excavation	85 dBA to 89 dBA	70 dBA to 74 dBA	75	-5 to -1
Restoration	85 dBA to 89 dBA	70 dBA to 74 dBA	75	-5 to -1

Source: Metro 2018e
Note: dBA = A-weighted decibels

The construction staging area on UCLA Lot 36 remains unchanged since the Final EIS/EIR; however, construction noise has been evaluated as this staging area is in proximity to the Los Angeles National Cemetery, which is a historic property. As described in Section 3.11.2.1, an approximately 20-foot-high noise barrier wall, consistent with Final EIS/EIR Mitigation Measure CON-27, would also be included around the perimeter of this construction staging area. With this wall, there would not be exceedance of the City of Los Angeles nighttime or daytime construction noise limits and therefore construction noise from the Westwood/UCLA Station would not result in significant construction noise impacts and the impact conclusions in the Final EIS/EIR remain unchanged.

Vibration

An assessment of potential effects from tunneling activities and surface construction activities has been prepared to evaluate potential impacts to the Linde (Westwood) Medical Plaza as well as to the MRI located on the second floor of the building. This analysis is detailed in the *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements* (Metro 2018e). There would not be exceedances of the thresholds during TBM mining and haul/supply train activities.

Vibration-generating equipment and activities would be used during the deconstruction of the Chase Bank building, excavation, reconstruction, and restoration of the Westwood/UCLA Station site. Except for roller compactors, none of the equipment would exceed the damage risk criteria of 0.2 in/sec PPV at distances of 15 feet or greater from the Linde (Westwood) Medical Plaza building. If a roller compactor is operated closer than 30 feet from the building, vibration monitoring would be conducted at the closest façade of the building to determine if the damage risk vibration criteria of 0.20 in/sec PPV would be exceeded, consistent with Mitigation Measure CON-46 (Metro Ground-Borne Noise and Ground-Borne Vibration Limits). If exceeded, the contractor will be required to use an alternative method of compacting with lower ground vibration levels.

Temporary construction vibration levels could exceed operating criteria for the MRI equipment on the second floor of the Linde (Westwood) Medical Plaza building. There would be no long-term effect on the MRI equipment as a result of construction and recalibration is unlikely to be needed because the equipment sensitivity is related to active imaging and when not in use the vibration sensitivity is similar to other electronic equipment. If the MRI is not relocated as part of the real estate agreement (as described in Section 3.7.2), the office operating the MRI would be notified of planned high-vibration activities so that MRI use can be scheduled appropriately. Based on coordination conducted with the

property owner, the MRI is generally used Monday through Saturday, from 6:30 a.m. to 8:00 p.m., with hours varying on Sunday. Consistent with mitigation measure CON-46, construction vibration levels from activities associated with deconstruction of the existing Chase Bank building and the installation of the piling for the support of excavation within the Chase Bank site will be monitored at the closest face of the Linde (Westwood) Medical Plaza building to the construction activities to verify that the 65 VdB threshold is not exceeded. Coordination with the building owner and MRI operator will be conducted during construction to minimize impacts to the MRI operation. If exceedance of the vibration threshold occurs, this will be discussed with the building owner and MRI operator to determine the impacts and work schedule.

Therefore, construction vibration from the Westwood/UCLA Station would not result in significant construction vibration impacts or increase the severity of impacts, and the impact conclusions in the Final EIS/EIR remain unchanged.

3.12 Energy

Long-term and construction-related impacts to energy were evaluated in Chapter 4, Sections 4.7.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to energy. As stated in the following sections, the impact conclusions in the Final EIS/EIR remain unchanged during operation of the Project and the construction-related energy requirements have decreased from those identified in the Final EIS/EIR.

3.12.1 Long-Term Operational Evaluation

Energy consumption during operations of the Project was evaluated in Chapter 4, Section 4.7 of the Final EIS/EIR. Operation of the Project was expected to decrease regional VMT, which would reduce energy consumption. The project refinements described in Section 2.0 are minor changes and would not affect overall operations of the Project or VMT in the region or Project Area. Additionally, the project refinements would not increase energy demands for the Project. Therefore, the energy beneficial effects remain and there is no change to the impact conclusions presented in the Final EIS/EIR.

3.12.2 Construction Phase Evaluation

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that approximately 2,309 billion Btus would be used to construct the Project's tunnels, stations, and ancillary facilities, which is approximately 0.03 percent of the total energy consumed per year in the State of California. Of this, approximately 671 billion Btus would be required for construction of Section 3 of the Project. In the long-run, operation of the Project would reduce regional mobile source energy consumption, offsetting short-term increases during construction. The contractor would be required to implement energy conserving best management practices (BMPs), including but not limited to, using energy-efficient equipment and maintaining equipment and machinery in good working condition. The Final EIS/EIR concluded construction of the Project would not result in wasteful, inefficient, or unnecessary usage of fuel or energy during construction and, therefore, would not result in adverse impacts during construction.

With the construction refinements described in Section 2.0, the overall construction methods, approach, and schedule remain consistent with those analyzed in Section 4.15.3 of the Final EIS/EIR in terms of energy demand. An updated energy analysis was conducted for construction activities associated with Section 3 of the Project, including with implementation of the project refinements. The analysis was

based on the construction schedule presented in Figure 2-1 and summarized in the introduction of Section 2.0. Based on the latest construction information, it is estimated that 289 billion Btus of energy would be required, which is a decrease from the energy requirements reported in the Final EIS/EIR.

As stated in Section 2.1.1, Metro proposes shifting major construction activity as far west from the Main Hospital (Building 500) as feasible. The alternate construction staging area identified in the Final EIS/EIR would have resulted in the loss of solar panels that had been added to the VA WLA Campus since the Final EIS/EIR. In coordination with the VA, Metro revised the footprint of the Western VA construction staging area to avoid displacing the solar farm. It should be noted that the construction staging area in Lot 42 would displace the solar panels located in the parking lot, which were also added subsequent to the Final EIS/EIR. Metro is coordinating with the VA regarding the displacement of the solar panels as part of the real estate agreement.

Therefore, construction of the Project would not lead to a wasteful, inefficient, or unnecessary use of energy and the impacts conclusions presented in the Final EIS/EIR remain unchanged.

3.13 Geologic Hazards

Long-term and construction-related impacts to geologic hazards were evaluated in Chapter 4, Sections 4.8.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to geologic hazards. As demonstrated in the following sections, the project refinements would not result in adverse impacts related to geologic hazards during operation or construction and the impact conclusions in the Final EIS/EIR remain unchanged.

3.13.1 Long-Term Operational Evaluation

Chapter 4, Section 4.8 of the Final EIS/EIR evaluated geotechnical and seismic conditions, including fault rupture and seismic ground shaking; liquefaction, lateral spreading, and seismic settlement; unsuitable soils; subsidence; and subsurface gas and oil fields. The Project has continued geotechnical investigations since the Record of Decision and the design has been revised as needed.

3.13.1.1 Fault Rupture and Seismic Ground Shaking

The Final EIS/EIR did not identify known active fault zones that cross the Section 3 stations (Westwood/UCLA or Westwood/VA Hospital). In regard to seismic ground shaking, the Final EIS/EIR stated that most sites in Southern California are susceptible to strong ground shaking generated during earthquakes on nearby faults. The structural elements of the Project would be designed and constructed to conform to Metro's Design Standards for the Operating and Maximum Design Earthquakes. With this design for anticipated earthquake loads, ground shaking does not present a significant impact to the LPA, including all station, alignment, and station entrance options still under consideration.

Subsequent to publication of the Final EIS/EIR, further explorations were conducted to refine the fault zone locations specific to the selected tunnel alignment. The conclusions of this analysis are documented in the *Westside Purple Line Extension Santa Monica Fault Investigation Report, Tunnel Reach 6* (Metro 2017a), included in Appendix B. With implementation of design requirements, hazards from surface fault rupture along the tunnel will be minimized, including with the larger tunnel size. The refinements near the Westwood/VA Hospital and Westwood/UCLA Stations are not in the vicinity of

known active faults. Even with the refinement of the location of the Westwood/VA Hospital station box and the station entrances for the Westwood/UCLA Station (Section 2.2), no known active fault zones cross the stations. Therefore, none of the project refinements described in Section 2.0 change the impact conclusions of the Final EIS/EIR related to fault rupture risk.

3.13.1.2 Liquefaction, Lateral Spreading, and Seismic Settlement

The Final EIS/EIR concluded that because of the presence of shallow groundwater and young surficial alluvial deposits, there may be potential liquefaction adjacent to the upper portions of some station walls in the Westwood/UCLA and Westwood/VA Hospital Stations. Lateral spreading is not anticipated in the vicinity of Section 3 of the Project. Based on the magnitude of evaluated liquefaction, either structural design or ground improvement techniques or deep foundations to minimize these hazards would be selected. Although the Westwood/VA Hospital station box and the station entrances of the Westwood/UCLA Station have shifted slightly, these refinements do not result in increased liquefaction or seismic settlement risk because the entrances, refined alignment, and tail tracks would be in similar soil conditions (Metro 2017d, Metro 2017e). The mitigation measures included in the Final EIS/EIR would also apply to the project refinements. Consistent with the Final EIS/EIR design, the tail tracks would be below the potentially liquefiable zone with implementation of the project refinements. Therefore, the conclusions in the Final EIS/EIR related to liquefaction and seismic settlement do not change.

3.13.1.3 Unsuitable Soils

The Final EIS/EIR stated that where corrosive soils are identified, appropriate protection measures such as the use of corrosion-resistant cements would be incorporated into design. This is a standard method for construction of Metro projects and therefore unsuitable soils are not considered a significant impact for the WPLE Project. Soils throughout Section 3 of the Project, including in the vicinity of the project refinements, have been identified as being corrosive or highly corrosive (Metro 2017d, Metro 2017e). Therefore, consistent with the Final EIS/EIR, the contractor is required to use sulfide-resistant cements. With implementation of this measure, the impact conclusions in the Final EIS/EIR remain unchanged.

3.13.1.4 Subsidence

The Final EIS/EIR stated that no current substantial subsidence problems related to petroleum or ground water extraction by other projects have been identified in the vicinity of the WPLE Project and, therefore, subsidence was not considered a hazard to the Project. The project refinements are proposed in locations that were evaluated as part of the Final EIS/EIR. Further geotechnical studies completed since the Final EIS/EIR have not identified new risks related to subsidence, including for locations where project refinements are proposed; therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

3.13.1.5 Subsurface Gas and Oil Fields

The Final EIS/EIR concluded that subsurface gases (methane and hydrogen sulfide) pose a hazard during construction and operation of Section 3 of the Project. With small exceptions, the entire Project, including the refinements, would be constructed in the City of Los Angeles' Methane Zone. Tunnels and stations would be designed to provide a redundant protection system against gas intrusion hazard. The project refinements described in Section 2.0 would continue to be designed in a similar manner to

protect against gas intrusion hazard. Therefore, implementation of the project refinements would not change the impact conclusions of the Final EIS/EIR related to subsurface gases.

The Final EIS/EIR included the following mitigation measures to minimize impacts related to geologic hazards; these measures would apply to the project refinements: GEO-1 (Seismic Ground Shaking), GEO-2 (Fault Crossing Tunnel, Fault Rupture, Tunnel Crossing), GEO-3 (Operational Procedures during Earthquake), GEO-4 (Liquefaction and Seismic Settlement), GEO-5 (Hazardous Subsurface Gas Operations), GEO-6 (Hazardous Subsurface Gas Structural Design), and GEO-7 (Tunnel Advisory Panel Design Review).

Based on the information provided above, the impact conclusions in the Final EIS/EIR related to geologic hazards remain unchanged with implementation of the project refinements.

3.13.2 Construction Phase Evaluation

Chapter 4, Section 4.15 of the Final EIS/EIR evaluated the potential for construction-related activities to encounter geological hazards and subsurface hazardous substances. The Final EIS/EIR stated that construction would be susceptible to surface fault rupture and seismic ground shaking. Construction would be performed in accordance with Metro Design Criteria that include national standards and codes to protect the workers and the work under construction.

Existing and abandoned oil wells have been mapped in the Project Area. Given the age of some wells and the accuracy of mapping, California's Department of Oil Gas and Geothermal Resources suggests a mapping accuracy of 100 to 200 feet. However, there are no mapped oil wells located within 200 feet of the project refinements, including the alignment on the VA WLA Campus. Therefore, there would not be adverse impacts from existing oil wells during construction. In accordance with CON-53 (Oil Well Locations and Abandonment), the Project is required to undertake research and testing to detect oil wells. There are also directions on well abandonment in the event that one is discovered in the path of the TBM during the construction.

Regarding subsidence and settlement due to tunneling and station and exit shaft construction, the Final EIS/EIR stated that ground settlement may occur from these construction activities along the full length of the project alignment. However, settlement is not expected to have an adverse impact.

As described in Chapter 4, Section 4.15 of the Final EIS/EIR, dewatering is usually not necessary when tunneling with pressure-face TBMs, which creates a "hole" that is continuously supported by the TBM pressurized face, shield, and pre-cast concrete tunnel liners that are installed as the machine progresses. This method creates a tunnel with little or no disruption and reduces risk of settlement. However, the groundwater table and/or perched groundwater would be encountered during construction of the station and exit shaft. Dewatering may be required to complete the cut-and-cover construction in some areas. Dewatering of the excavations made during construction could result in damaging subsidence adjacent to the construction area. However, experience in much of the corridor is that the soils have previously undergone numerous cycles of ground-water fluctuation and therefore have previously experienced the settlements associated with lowering of the ground. Analysis conducted during Preliminary Engineering of Section 3 of the Project, including the refinements, confirms that impacts to adjacent property due to dewatering would not be adverse.

The potential for settlement resulting from the enlarged tunnel diameter (Section 2.7) was studied in the *Westside Purple Line Extension Project Section 3, Building, Utility and Adjacent Structure Protection – Tunnels* (Metro 2017b), which concluded that with use of pressure-face TBM technology (earth pressure balance or slurry shield), ground loss and associated settlement can be controlled to meet Metro's criteria. Exceptions were identified for the area under Sepulveda Boulevard where multiple utilities exist above the tunnels and the area near the Westfield Mall. Grout injection has been specified in these areas to further reduce settlement related to tunneling, as described in Section 2.8.

The Final EIS/EIR stated that hazardous subsurface gases would pose a significant hazard for construction of the Project. The contractor would have to comply with specific requirements for underground construction in areas classified "Gassy" by the California Occupational Safety and Health Administration (California Code of Regulations, Title 8, Tunnel Safety Orders).

The Final EIS/EIR included the following mitigation measures to address impacts from geologic hazards:

- To address subsidence and settlement due to tunneling: CON-47 (Use of Pressurized-face TBMs for Tunnel Construction), CON-48 (Preconstruction Survey, Instrumentation, and Monitoring), CON-49 (Additional Geotechnical Exploration), and CON-50 (Additional Methods to Reduce Settlement)
- To address hazardous subsurface gas: CON-51 (Techniques to Lower the Risk of Exposure to Hydrogen Sulfide), CON-52 (Measures to Reduce Gas Inflows), CON-53 (Oil Well Locations and Abandonment), and CON-54 (Worker Safety for Gassy Tunnels)

The Final EIS/EIR concluded that with mitigation, there would not be adverse geological hazard impacts during construction.

Geotechnical investigations have continued since the Record of Decision and design has been revised as needed. Construction of the project refinements described in Section 2.0 would still be performed in accordance with Metro Design Criteria. The project refinements do not change the construction means and methods. Metro will continue to implement the mitigation measures identified in the Final EIS/EIR as applicable during construction of the project refinements. Therefore, the impact conclusions of the Final EIS/EIR related to geologic hazards remain unchanged.

3.14 Hazardous Waste and Materials

Long-term and construction-related impacts to hazardous waste and materials were evaluated in Chapter 4, Sections 4.9.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to hazardous waste and materials. As demonstrated in the following sections, the project refinements would not result in adverse impacts related to hazardous waste and materials during operation or construction and the impact conclusions in the Final EIS/EIR remain unchanged.

3.14.1 Long-Term Operational Evaluation

Chapter 4, Section 4.9 of the Final EIS/EIR evaluated the risk presented by hazardous wastes and materials during operation of the Project. The potential exists for hazardous materials/waste spills to occur during operation of the Project; however, it is assumed that the storage and disposal of hazardous materials/waste would be conducted in accordance with applicable federal and state regulatory

requirements that are intended to prevent or manage hazards and that if a spill does occur, it would be remediated. The project refinements described in Section 2.0 would not increase the risk for hazardous materials/waste spills or require the transport of hazardous materials during operation of the Project. Therefore, the impact conclusions of the Final EIS/EIR related to hazardous waste and materials remain unchanged with implementation of the project refinements and no long-term hazardous materials impacts are anticipated during operations of Section 3 of the Project.

3.14.2 Construction Phase Evaluation

Section 4.15.3 of the Final EIS/EIR evaluated the risk presented by hazardous wastes and materials during construction. The Final EIS/EIR stated that the tunnel would be under the lowest point of most contaminated soils, although risks could result from hazardous materials extracted by the TBMs and at station sites. Construction activity would involve routine transport, use, or disposal of hazardous materials, namely contaminated soils and ground water; however, these materials are not expected to be acutely hazardous⁴. All hazardous materials would be removed and disposed of in accordance with state and federal regulatory guidelines. The following mitigation measures were identified to minimize construction-related impacts related to hazardous materials: CON-55 (Site Assessments), CON-56 (Soil Reuse), CON-57 (Sampling during Construction), CON-58 (Soil Testing), CON-59 (Personal Protection), CON-60 (Contaminated Ground Water), CON-61 (Health and Safety Plan), CON-62 (Storage of Contaminated Materials), CON-63 (Monitoring the Environment), CON-64 (Equipment Repair and Maintenance), and CON-65 (Removal of Chemical Residue). With implementation of mitigation, there would not be adverse impacts related to hazardous materials during construction.

The project refinements described in Section 2.0 do not require the use of hazardous materials during construction that were not previously considered in the Final EIS/EIR. Geotechnical investigations and hazardous materials sampling undertaken for the project refinements indicate that the general soil conditions in the areas of excavation remain consistent with those identified in the Final EIS/EIR. Further, soil samples taken within the project footprint did not identify hazardous materials where samples were taken (Metro 2018g and Metro 2018h). There is no history of known contaminated soils near the project refinements (the study area for the Final EIS/EIR was approximately 200 feet from the centerline of the alignment and/or station). The mitigation measures identified in the Final EIS/EIR would continue to apply to construction of the refinements. Therefore, the impact conclusions in the Final EIS/EIR related to hazardous materials remain unchanged during construction of the project refinements.

3.15 Ecosystems/Biological Resources

Long-term and construction-related impacts to ecosystems and biological resources were evaluated in Chapter 4, Sections 4.10.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to ecosystems and biological resources. As demonstrated in the following sections, the project refinements would not

⁴ The California Department of Toxic Substances Control has a hazardous waste classification for acutely and extremely hazardous waste. According to http://ccelearn.csus.edu/waste/class/mod7/mod7_04.html, acutely and extremely hazardous wastes are wastes that would cause death, disabling personal injury, or serious illness. These wastes are more hazardous than ordinary hazardous wastes.

result in adverse impacts related to ecosystems/biological resources during operation or construction and the impact conclusions in the Final EIS/EIR remain unchanged.

3.15.1 Long-Term Operational Evaluation

Chapter 4, Section 4.10 of the Final EIS/EIR assessed the long-term impacts of operations of the Project on ecosystems and biological resources. As stated in this section, the Project is located in a densely developed urban land area with limited ecosystem/biological resources. No special status species, sensitive vegetation communities, significant wildlife habitats or corridors, or wetlands were observed within the Study Area. Consistent with the Final EIS/EIR, the project refinements would be located in a densely developed urban area and are not located near sensitive ecosystems or biological resources. As stated in Section 3.15.2, it is anticipated that trees and palms removed at the VA WLA Campus would be replaced upon the completion of construction and, therefore, there would not be a long-term impact to biological resources at the VA WLA Campus. The palms and other vegetation adjacent to the Chase Bank that would be removed during construction would not be replaced when construction is complete (Section 2.6). These trees are not protected under the Native Tree Protection Ordinance. Other trees that would provide suitable habitat would remain on the Linde (Westwood) Medical Plaza property and adjacent properties. Consistent with Mitigation Measure CON-66 (Biological Survey), Metro would conduct biological surveys prior to the removal of trees on the Linde (Westwood) Medical Center property. Therefore, the impact conclusions of the Final EIS/EIR remain unchanged.

3.15.2 Construction Phase Evaluation

Chapter 4, Section 4.15.3 of the Final EIS/EIR evaluated the impacts of construction on ecosystems and biological resources. Construction of Section 3 of the Project may require the removal or disturbance (including trimming) of mature trees located at the construction sites. An adverse effect could occur if an active migratory bird nest located in any of these trees is disturbed during construction. Because the majority of the Study Area provides only low quality habitat for migratory birds, indirect impacts are not expected to be substantial, as only a small number of migratory birds would be displaced, if any. Tree removal would require compliance with all applicable local tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance, to ensure impacts are reduced. The Final EIS/EIR identified the following measures to mitigate impacts related to biological resources during construction: CON-66 (Biological Survey), CON-67 (Compliance with City Regulations), CON-68 (Tree Pruning), and CON-69 (Avoidance of Migratory Bird Nesting Season). With implementation of these measures, there would not be adverse impacts to ecosystems or biological resources during construction.

The project refinements associated with construction staging areas (Section 2.1) and the construction method for the Westwood/VA Hospital Station west crossover (Section 2.5), would result in the temporary removal of trees and palms on the VA WLA Campus. However, no trees protected under the Native Tree Protection Ordinance were identified in these areas. An arborist has identified a nest in a Canary Island palm that would need to be removed to accommodate the Western VA construction staging area. Other Canary Island palms would remain in this location, and it is anticipated that a nest could be built in one of the remaining trees. The Canary Island palm with the nest would not be removed while the nest is active. The mitigation measures identified in the Final EIS/EIR and listed above would be implemented during construction of the refinements. Metro is coordinating with representatives of the VA to determine requirements for the replacement of these trees when construction is complete. It is anticipated that the trees and palms removed during construction would

be replaced when construction is complete. The impact conclusion of the Final EIS/EIR related to ecosystems and biological resources remain unchanged during construction of the project refinements.

3.16 Water Resources

Long-term and construction-related impacts to water resources were evaluated in Chapter 4, Sections 4.11.3 and 4.15.3, respectively, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to water resources. As demonstrated in the following sections, the project refinements would not result in adverse impacts related to water resources during operation or construction and the impact conclusions in the Final EIS/EIR remain unchanged.

3.16.1 Long-Term Operational Evaluation

Chapter 4, Section 4.11 of the Final EIS/EIR evaluated the long-term impacts of operations of the Project on water resources. The Final EIS/EIR concluded that operation of Section 3 of the Project would not result in adverse impacts and would comply with Title III and Title IV of the Clean Water Act and National Pollutant Discharge Elimination Standards. The project refinements described in Section 2.0 do not change the impacts conclusions of the Final EIS/EIR related to water resources. The project refinements do not add additional impervious areas. The passenger drop-off area (Section 2.3) would be located in a portion of parking Lot 42, which is an existing impervious area. The Western VA construction staging area (Section 2.1.1) and cut-and-cover construction area for the Westwood/VA Hospital west crossover (Sections 2.1.4 and 2.5) would be located in a grassy area. Upon completion of construction, the area would be restored to existing conditions or as otherwise approved by the VA; therefore, the drainage pattern on the site would not be affected. In addition, in accordance with a City of Los Angeles BMP, new construction, including Metro entrance portals and the passenger drop-off area, is required to incorporate water management control to prevent all initial runoff from discharging into the public storm drain system. Therefore, the impact conclusions in the Final EIS/EIR related to water resources remain unchanged.

3.16.2 Construction Phase Evaluation

Chapter 4, Section 4.15.3 of the Final EIS/EIR evaluated the potential impacts of construction of Section 3 of the WPLE Project on water resources in terms of water supply, ground water, drainage, and water quality. During construction, water is required for various activities, including the TBM, and associated cooling towers. The Final EIS/EIR stated that water use would not adversely affect the municipal water supply. In terms of ground water, the Final EIS/EIR stated that construction would require dewatering during station construction. If contaminated ground water is encountered, it would be managed in compliance with applicable permits and regulations. The Final EIS/EIR identified the following mitigation measures to avoid and minimize impacts to ground water: CON-70 (Methods to Control Contaminated Ground Water) and CON-71 (Plan if Contaminated Ground Water is Encountered). With mitigation, there would not be adverse impacts to ground water during construction.

The Final EIS/EIR also evaluated whether construction of the Project would contribute to runoff that would exceed the capacity of existing or planned stormwater drainage systems or alter the existing drainage pattern of the site or area. The Final EIS/EIR stated that tunnel construction is deep enough to avoid impacts to existing drainage structures; however, construction of the stations would affect

drainage structures. Structures would be resized or relocated to prevent flooding or ponding. The Final EIS/EIR also included the following mitigation measures related to drainage: CON-72 (Erosion and Sediment Control Plan), CON-73 (Landscape and Construction Debris), CON-74 (Use of Non-Toxic Herbicides or Fertilizers), CON-75 (Use of Temporary Detention Basins), CON-76 (Water Quality Monitoring), CON-77 (Use of Stormwater Runoff BMPs), CON-78 (Measures to Reduce the Tracking of Sediment and Debris), CON-79 (Cleaning of Equipment), CON-80 (Construction Site Water Collection), and CON-81 (Soil and Building Material Storage). With implementation of these measures, there would not be adverse impacts to drainage during construction.

In terms of water quality, the Final EIS/EIR stated that the Project is not near surface water and construction would be conducted in accordance with applicable regulatory requirements and permits. BMPs would be implemented to minimize impacts to water quality. Therefore, there would not be adverse impacts to surface water hydrology or water quality.

The project refinements described in Section 2.0 would not change water needs compared to the construction means and methods evaluated in the Final EIS/EIR. As stated in Section 2.1, a Caltrans infiltration basin located north of Wilshire Boulevard and west of I-405 would be modified to replace the water quantity volume displaced by construction within the south basin. This modification would offset potential impacts to drainage that could result from construction in the south infiltration basin. BMPs would continue to be implemented to minimize impacts to water quality, including for the staging area associated with the Westwood/VA Hospital Station west crossover (Sections 2.1.4 and 2.5) and the Western VA construction staging area (Section 2.1.1). The tail track exit shaft at the Western VA construction staging area would be constructed with water-tight walls; however, some temporary dewatering may be required at the shaft bottom. The mitigation measures identified in the Final EIS/EIR related to ground water, dewatering, and drainage would also be implemented during the construction of the project refinements, as applicable. Therefore, the impact conclusions in the Final EIS/EIR related to water resources remain unchanged during construction of the refinements.

3.17 Safety and Security

Long-term and construction-related impacts to safety and security were evaluated in Chapter 4, Section 4.12.3, of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to safety and security. As demonstrated in the following sections, the project refinements would not result in adverse impacts related to safety and security during operation or construction and the impact conclusions in the Final EIS/EIR remain unchanged. Rather, the refinements to pedestrian features at the Westwood/UCLA and Westwood/VA Hospital Stations and the removal of the GSA crossover and corresponding construction staging area would provide safety and security benefits compared to the Final EIS/EIR.

3.17.1 Long-Term Operational Evaluation

Chapter 4, Section 4.12 of the Final EIS/EIR evaluated the long-term safety and security impacts during operations of the Project in terms of employee safety, fire protection safety, pedestrian and bicycle safety at stations, suicide prevention at stations, crime prevention and security, security to prevent terrorist attacks, and emergency response. The following mitigation measures were identified to minimize impacts to safety and security: SS-1 (Implement Public Safety Awareness and Employee Training Program), SS-2 (Develop and Implement a Project-specific Safety Certification Plan that would

Result in Safety Certification of all Certifiable Project Elements), SS-4 (Design in Accordance with Metro Fire/Life Safety Criteria, CBC, and other Applicable Federal, State, and Local Rules and Regulations), SS-5 (Design in Accordance with Metro Fire/Life Safety Criteria, Metro Ventilation Criteria, Findings in the *Westside Subway Extension Geotechnical and Hazardous Materials Technical Report* (Metro 2010b) and with Special Design, Construction, and Operational Attention to the Gassy Ground Tunnels and Stations), SS-6 (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), SS-7 (Implement 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), and SS-8 (Develop and Implement a Comprehensive Emergency Preparedness Plan, Employee and Emergency Responders Training, and System Design Features). The Final EIS/EIR concluded that with mitigation, the Project would not result in adverse impacts to safety and security.

The project refinements described in Section 2.0 do not introduce new project elements that would pose a new (previously unidentified) risk to safety or security. An ADA-accessible pedestrian bridge between the Westwood/VA Hospital Station entrance and an existing bus stop on eastbound Wilshire Boulevard has been proposed in place of the circuitous pedestrian path that was included in the Final EIS/EIR (Section 2.2 and Figure 2-5). This bridge provides improved pedestrian safety compared to the pedestrian circulation features evaluated in the Final EIS/EIR. Further, the new traffic signals added in support of the passenger drop-off area (Section 2.3) would include pedestrian crossing signals and restriped crosswalks, improving the safety of crossing in this area beyond the benefits that were already provided through Mitigation Measure T-8 (Install High-Visibility Crosswalk), which would continue to apply to this location. These features would be designed in compliance with applicable codes and regulations. Additionally, coordination is ongoing with representatives of the VA to address safety and security concerns of the VA related to the introduction of a station on the VA WLA Campus. The VA has expressed concerns about the potential for safety and security to arise as a result of transit patrons utilizing the VA WLA Campus to access the transit system. Mitigation Measure SS-6 requires inclusion of security features and law enforcement at stations; with this measure, safety and security issues would not arise at the VA WLA Campus. The mitigation measures identified in the Final EIS/EIR would continue to be applicable to the project refinements. Therefore, the impact conclusions of the Final EIS/EIR related to safety and security remain unchanged with implementation of the project refinements.

3.17.2 Construction Phase Evaluation

Chapter 4, Section 4.12.3 the Final EIS/EIR evaluated the potential safety and security impacts of construction of Section 3. This section stated that the safety of construction workers and the general public would be a key element of construction activities. Construction would comply with applicable federal and state policies and regulations. A Construction Safety and Security Plan (referred to as Mitigation Measure SS-3) would be implemented for each section of construction to minimize impacts related to construction safety. As a result, there would not be adverse impacts to safety and security during construction.

The project refinements described in Section 2.0 would not introduce new safety concerns during construction. Rather, the elimination of the GSA crossover (Section 2.2) would reduce the construction activities adjacent to the Federal Building (GSA Building), which would provide benefits in terms of

construction safety. Metro would continue to follow the risk assessment processes performed by federal agencies for federal sites for the tunneling work required in this location.

Construction of the project refinements would still be in accordance with applicable federal and state policies and regulations, and the Construction Safety and Security Plan (Mitigation Measure SS-3) would be implemented prior to the start of work in this location. Therefore, the impact conclusions of the Final EIS/EIR related to safety and security remain unchanged during construction of the project refinements.

3.18 Parklands and Community Services and Facilities

Long-term and construction-related impacts to parklands and community services and facilities were evaluated in Chapter 4, Sections 4.13.3 and 4.15.3, respectively, of the Final EIS/EIR. As demonstrated in the following sections, operation and construction of the project refinements would not result in adverse impacts to parklands or community services and facilities.

Chapter 4, Section 4.13.3 of the Final EIS/EIR focused on parks, recreation centers, and museums; police services; fire services; schools (public and private, all levels of education); libraries; and medical facilities. A number of vital community assets, including Wadsworth Chapel, are also located in Section 3 of the Project. The evaluation of impacts to community assets is summarized in Section 3.6 of this technical memorandum.

Chapter 4, Figure 4-53 in the Final EIS/EIR identified the medical facilities, religious institutions, police and fire stations, schools, libraries, social services, and parks and other recreational facilities within 0.25 mile of the project alignment and stations. The following community services and facilities were identified near the Section 3 project stations:

- Westwood Recreation Center at 1350 S. Sepulveda Boulevard, located 0.22 mile from Westwood/UCLA Station
- Armand Hammer Museum at 10899 Wilshire Boulevard, located 0.02 mile from Westwood/UCLA Station
- Los Angeles Police Department West Los Angeles Community Police Station at 1663 Butler Avenue, located 0.98 mile from Westwood/UCLA Station
- Los Angeles Sheriff's Department West Hollywood Sheriff's Station at 780 N. San Vicente Boulevard, located 4.50 miles from Westwood/VA Hospital Station
- Los Angeles Fire Department Fire Station 37 at 1090 Veteran Avenue, located 0.02 mile from the from Westwood/UCLA Station
- Los Angeles County Fire Department Fire Station 7 at 864 N. San Vicente Boulevard, located 2.3 miles from Westwood/VA Hospital Station
- UCLA Extension Lindbrook Center at 10920 Lindbrook Drive, located 0.04 mile from Westwood/UCLA Station
- UCLA Campus Lot 36, Kinross Building South at 1100 Veteran Avenue, located above Westwood/UCLA Station
- Italian Cultural Institute of Los Angeles at 1023 Hilgard Avenue, located 0.25 mile from Westwood/UCLA Station

- Bessie Pregerson Child Development Center at 1341 S. Sepulveda Boulevard, located 0.22 mile from GSA crossover
- Concord University School of Law at 10866 Wilshire Boulevard, #1200, located adjacent to Westwood/UCLA Station
- Chicago School of Psychology at 1145 Gayley Avenue, #322, located 0.06 mile from Westwood/UCLA Station
- California Graduate Institute Counseling Center at 1145 Gayley Avenue, #322, located 0.06 mile from Westwood/UCLA Station
- Westwood Branch Library at 1246 Glendon Avenue, located 0.14 mile from Westwood/UCLA Station
- VA WLA Campus at 11301 Wilshire Boulevard, located adjacent to Westwood/VA Hospital Station
- University Bible Church at 10801 Wilshire Boulevard, located 0.24 mile from Westwood/UCLA Station
- Westwood Presbyterian Church at 10822 Wilshire Boulevard, located 0.18 mile from Westwood/UCLA Station
- 28th Church Christ-Scientist at 10806 Weyburn Avenue, located 0.19 mile from Westwood/UCLA Station
- Westwood Memorial Park at 1218 Glendon Avenue, located 0.14 mile from Westwood/UCLA Station
- Los Angeles National Cemetery at 950 S. Sepulveda Boulevard, located adjacent to Westwood/UCLA Station
- Salvation Army Westwood Village at 1401 S. Sepulveda Boulevard, located 0.22 mile from GSA crossover
- VA Police Station (not identified in the Final EIS/EIR)

The project refinements may have the potential to affect the VA WLA Campus (identified as a medical facility in Chapter 4, Table 4-55 of the Final EIS/EIR) and the UCLA Campus Lot 36, Kinross Building South (identified as a school in Chapter 4, Table 4-53 in the Final EIS/EIR) during the operation and/or construction phases. The VA WLA Campus includes both medical services and other park and recreational facilities for veterans. The Los Angeles National Cemetery is also associated with the VA WLA Campus. The Linde (Westwood) Medical Plaza was not identified as a medical facility in Chapter 4, Sections 4.13 or 4.15 of the Final EIS/EIR; however, it does provide medical services and is added as a community resource within this technical memorandum. Similarly, the Los Angeles National Veterans Park located north of Wilshire Boulevard on the VA WLA Campus was not identified as a parkland in the Final EIS/EIR; however, it is evaluated as such in this section of the technical memorandum. The evaluation of impacts to these facilities, are described in the following sections for long-term (operational) impacts followed by construction-related impacts.

The project refinements do not have the potential to affect the other parklands and community services and facilities identified in the Final EIS/EIR and identified above, either long-term or during construction. This is because the refinements would not result in noise and vibration levels that exceed limits, displace the facilities, remove parking, or affect access during operation or construction. Further, the project refinements would not result in impacts to emergency services, including police, fire, or hospital

services, during operation or construction because the refinements would not change impacts to the roadway network compared to the evaluation in the Final EIS/EIR (refer to Section 3.2). Therefore, the impact conclusions in the Final EIS/EIR related to those parklands, community services, and facilities remain unchanged.

3.18.1 Long-Term Operational Evaluation

The refinements identified in Table 3-1 with the potential to affect parklands and community services and facilities are evaluated in the following sections, which are organized by community facility. Long term, the project refinements associated with tunnel size (Section 2.7), grouting (Section 2.8), and underground conduits (Section 2.9) would not affect parklands or other community services and facilities identified in Chapter 4, Section 4.13 of the Final EIS/EIR because long term, these elements would be underground and would not affect community facilities aboveground.

3.18.1.1 VA WLA Campus

As stated previously, the VA WLA Campus was identified as a medical facility in Chapter 4, Section 4.13 of the Final EIS/EIR. The Los Angeles National Cemetery and Los Angeles National Veterans Park are also associated with the VA WLA Campus. The entrance at Bonsall Avenue is posted with a sign stating that "This Medical Center is for Patients, Employees, and Official Business Only... Not a Public Thoroughfare VA Regulation 1.218(a) C F.R.-8". Because the grassy area on the south side of the VA WLA Campus west of Bonsall Avenue is not open to the public, it is not considered a public park or recreation center and therefore the project refinements on the VA Hospital Campus would not affect public parklands (for further information, refer to Section 3.22 for the Section 4(f) analysis and a discussion of parks). It is acknowledged that this area is an important resource to the VA WLA Campus and veteran community and long term operation of the Project would not result in adverse impacts to this area.

A portion of the VA WLA Campus north of Wilshire Boulevard and bordering San Vicente Boulevard is designated as the Los Angeles National Veterans Park. The Los Angeles National Veterans Park is identified in the GLA DMP. The GLA DMP provides a context of veteran-focused land use activities within the VA WLA Campus, which is a concept to focus on serving veterans and their families rather than of benefit to the public at large. Within this context, the potential effects resulting from project operation were considered, focusing on veteran and family-member users of the Los Angeles National Veterans Park.

Impacts to the VA WLA Campus associated with the project refinements identified Table 3-1 were evaluated in terms of traffic (Section 3.2), parking (Section 3.3), pedestrian and bicycle facilities (Section 3.4), land use (Section 3.5), communities and neighborhoods (Section 3.6), acquisitions and displacements (Section 3.7), visual (Section 3.8), air quality (Section 3.9), noise and vibration (Section 3.11), geologic hazards (Section 3.13), historic and archaeological resources (Section 3.19), and environmental justice (Section 3.23). Based on the evaluation conducted for each topic, the project refinements would not result in adverse impacts to the VA WLA Campus during operation of the Project, including with implementation of the project refinements. The analysis considered the VA WLA Campus in total as well as impacts to individual resources within the campus, including the Main Hospital (Building 500), the Los Angeles National Cemetery, the Los Angeles National Veterans Park, and the grassy area west of Bonsall Avenue.

Implementation of the project refinements would also benefit the VA WLA Campus compared to the Project as evaluated in the Final EIS/EIR. Specifically, relocating the station entrance 100 feet closer to

the Main Hospital (Building 500), as described in Section 2.2, would provide a benefit for transit passengers with destinations at the Main Hospital (Building 500), including veterans.

3.18.1.2 UCLA Campus Lot 36, Kinross Building South

The refinement to the entrance for the Westwood/UCLA Station located in Lot 36 is being coordinated with UCLA. Lot 36 is one of several areas used for UCLA campus parking and it also provides parking for the Kinross Building South. As described in Section 3.3.1.1, based on current design, a net increase in parking would occur in Lot 36 upon the completion of construction. As disclosed in Chapter 4, Section 4.13.3 of the Final EIS/EIR, prior to construction, the occupants of Kinross Building South would be relocated to another building on the UCLA campus.

3.18.1.3 Linde (Westwood) Medical Plaza

As stated previously, the Linde (Westwood) Medical Plaza was not identified as a community facility in the Final EIS/EIR even though medical services are provided. The design of the Westwood/UCLA Station entrance as evaluated in the Final EIS/EIR required substantial structural underpinning and mining beneath this building. The underpinning was likely to impact a gym located in the basement of the building, the operation of Chase Bank (which would be directly above the mined portion of the work), and substantial structural reframing of the parking garage as well as loss of parking spaces. As described in Section 2.6, the refinement to this entrance would reduce the structural underpinning of the Linde (Westwood) Medical Plaza and would not require mining beneath the building, structural reframing, or loss of parking. The reduction in the underpinning would provide a benefit to the building and would minimize impacts to the gym. The refinement to this station entrance would require the displacement of the Chase Bank. As stated in Section 3.7.1, based on coordination with the property owner, Chase Bank has expressed interest in relocating to a currently vacant space within the Linde (Westwood) Medical Plaza that was previously occupied by a bank. The noise and vibration evaluation conducted for the operational phase of the Project did not identify long-term noise or vibration impacts to the building, including to an MRI located on the second floor of the building (Section 3.11.1). The project refinements would also not result in adverse impacts related to land use (Section 3.5.1), community and neighborhoods (Section 3.6.1.4), or visual resources (Section 3.8.1.3). Therefore, implementation of the project refinements would not result in adverse impacts to the Linde (Westwood) Medical Plaza.

3.18.2 Construction Phase Evaluation

The refinements identified in Table 3-1 with the potential to affect parklands and community services and facilities during construction are evaluated in the following sections, which are organized by community facility.

Chapter 4, Section 4.15.3 of the Final EIS/EIR evaluated the construction impacts of the Project on parklands and community facilities. The Final EIS/EIR stated that because Metro's construction policy is to ensure that streets and alleys remain accessible to residences, businesses, and other uses, access to parks, recreation centers, and museums would be maintained during construction. Construction of the project refinements related to the Westwood/UCLA Station entrances and grouting would be consistent with the conclusions of the Final EIS/EIR. Construction of the project refinements also would not affect access to police and fire stations because none are adjacent to these activities. Police and fire emergency response routes could be disrupted; however, to minimize disruptions, the Los Angeles County Sheriff's Department, Beverly Hills Police Department, and the Los Angeles Police Department

will be informed of lane closures and detours prior to construction so that emergency routes can be adjusted accordingly.

The following measures that were included in the Final EIS/EIR to mitigate impacts to parks and community facilities would continue to comply with construction of the project refinements: CON-82 (Soil and Building Material Storage), CON-83 (Work with Transportation, Police, Public Works, and Community Service Departments), CON-84 (Instructional Rail Safety Programs for Schools), CON-85 (Informational Program to Enhance Safety), CON-86 (Traffic Control), and CON-87 (Designation of Safe Emergency Vehicle Routes). With implementation of mitigation, construction of the project refinements would not result in adverse impacts to parks or community facilities and the impact conclusions in the Final EIS/EIR remain unchanged.

3.18.2.1 VA WLA Campus

As stated above, the VA WLA Campus was identified as a medical facility in Chapter 4, Section 4.13 of the Final EIS/EIR. Impacts to the VA WLA Campus associated with the project refinements identified in Table 3-1 were evaluated in terms of traffic (Section 3.2), parking (Section 3.3), pedestrian and bicycle facilities (Section 3.4), land use (Section 3.5), communities and neighborhoods (Section 3.6), acquisitions and displacements (Section 3.7), visual (Section 3.8), air quality (Section 3.9), noise and vibration (Section 3.11), geologic hazards (Section 3.13), historic and archaeological resources (Section 3.19), and environmental justice (Section 3.23) during both operation and construction of the Project. Based on the evaluation conducted for each topic, the project refinements would not result in adverse impacts to the VA WLA Campus during operation or construction of the Project. The analysis considered the VA WLA Campus in total as well as impacts to individual resources within the campus, including the Main Hospital (Building 500), the Los Angeles National Cemetery, the Los Angeles National Veterans Park, and the grassy area west of Bonsall Avenue.

During construction, a portion of the grassy area south of Wilshire Boulevard and west of Bonsall Avenue would be unavailable in the location of the Western VA construction staging area (Section 2.1.1) and cut-and-cover construction area for the Westwood/VA Hospital Station west crossover (Sections 2.1.4 and 2.5). However, the majority of the grassy area would remain open and available during construction. Tunneling would occur underneath the park but would not result in impacts aboveground. Further information on evaluation for effects to this community asset are provided in Section 3.6.2; the analysis concluded there would not be adverse impacts to this area during construction. A conceptual site plan provided by VA in support of the updates to the GLA DMP (adopted in 2016) indicates a community green located west of the VA Main Hospital (Building 500) and south of Dowlen Drive. This site plan did not specifically identify proposed development within the area that would be occupied by the cut-and-cover construction area for the Westwood/VA Hospital Station west crossover. As stated previously, the Los Angeles National Veterans Park focuses on serving veterans and their families rather than of benefit to the public at large. Within this context, the potential effects resulting from project construction were considered, focusing on veteran and family-member users of the Los Angeles National Veterans Park.

Metro continues to work with representatives of the VA to address various issues related to construction of the Project and potential impacts to the VA WLA Campus community, specifically segments of the veteran population with physical and mental disabilities. Although construction activities would be similar to those analyzed in the Final EIS/EIR and would not result in adverse construction-related effects to the community with the implementation of mitigation measures,

construction activities may result in negative reactions or “triggers” to the most sensitive veteran population. Construction activities that may result in triggers include, but are not limited to, the following:

- Loss of familiar parking locations
- Changes to familiar pedestrian access routes
- Changes to sidewalk and roadway grades affecting ADA accessibility
- Presence of heavy equipment
- Truck hauling activities
- Construction equipment noise
- Single event accidental construction noise (crashes, bangs, etc.)
- Construction site lighting levels
- Construction noise and light levels during nighttime construction
- Diesel fumes from construction equipment
- Temporary loss of open space areas of serenity and refuge

The project refinements would provide benefits to the VA WLA Campus compared to the construction approach identified in the Final EIS/EIR. For instance, a substantial portion of heavy construction activities, such as support of the TBMs, has been shifted from the construction staging area in Lot 42, located in front of the Main Hospital (Building 500) to the Western VA construction staging area. Shifting heavy construction activities to this more westerly location would reduce impacts to the hospital and its patrons, including veterans and caregivers, particularly in terms of reducing noise, dust, and spillover lighting compared to the construction scenario included in the Final EIS/EIR. Construction contract specifications would require that access to the Western VA construction staging area occur via Wilshire Boulevard, thereby reducing truck trips on roads within the VA WLA Campus. In addition, Mitigation Measures CON-1 (Signage), TCON-1 (Traffic Control Plans), TCON-2 (Designated Haul Routes), TCON-3 (Emergency Vehicle Access), TCON-4 (Transportation Management Plan), TCON-7 (Parking Management), TCON-8 (Parking Monitoring and Community Outreach), TCON-10 (Pedestrian Routes and Access), and TCON-11 (Bicycle Paths and Access) identified in the Final EIS/EIR would be implemented with the project refinements to minimize potential adverse construction-related effects to the VA WLA Campus, as well as the surrounding community. Mitigation Measures CON-85 (Informational Program to Enhance Safety) and CON-86 (Traffic Control), as identified in Chapter 4, Section 4.15.3 of the Final EIS/EIR, would also continue to reduce construction-related adverse effects to community facilities.

Construction contract specifications also require that the contractor develop a VA Hospital Access Plan that considers patient, employee, and vendor access, and include the means by which access to streets and sidewalks are maintained to the hospital at all hours of the day, at all times, along Bonsall Avenue. It is anticipated that the VA would participate in the preparation and review of this document. Further, the construction contract specifications would prohibit the parking of construction vehicles on Bonsall Avenue. The specifications would also limit the use of the construction staging area within the WLA VA Historic District, preventing storage of diesel-fueled equipment and vehicles during the tunneling

contract. Therefore, no diesel equipment will be allowed to park in the area for long durations, although diesel-fueled equipment will need to access the site periodically to undertake work activities.

Based on coordination with representatives of the VA, success in minimizing adverse impacts to the VA WLA Campus population is dependent upon actively engaging and informing the population, including the type and nature of construction, the location of construction activities (including haul routes) and their duration, alternate parking, and access routes/paths. To achieve this end, and consistent with Mitigation Measure CON-83 (Work with Transportation, Police, Public Works, and Community Service Departments) from the Final EIS/EIR, Metro would implement a community outreach plan to provide notification prior to construction. Such notifications would be provided to those persons associated with the VA WLA Campus and the veteran community and would include information regarding construction schedules, road and sidewalk closures, and detours. These notifications would seek to target patients, caregivers, staff, service providers, and campus clinicians at a minimum, as well as veteran advocacy groups and organizations on and off campus. This outreach would seek to provide sufficient information to maximize awareness of the construction activities throughout the VA campus community.

3.18.2.2 Linde (Westwood) Medical Plaza

As stated previously, the Linde (Westwood) Medical Plaza was not identified as a community facility in the Final EIS/EIR even though medical services are provided. The design of the Westwood/UCLA Station entrance as evaluated in the Final EIS/EIR required substantial structural underpinning of this building. The underpinning was likely to impact a gym located in the basement of the building. As described in Section 2.6, the refinement to this entrance would reduce the structural underpinning of the Linde (Westwood) Medical Plaza. The reduction in the underpinning would provide a benefit to the building and would minimize impacts to the gym. The refinement to this station entrance would require the displacement of the Chase Bank. However, Chase Bank has two other locations serving the Westwood area and it is anticipated that Chase Bank would be relocated within the community; therefore, this displacement would not result in an adverse impact.

3.18.2.3 UCLA Campus Lot 36, Kinross Building South

As stated in Chapter 4, Section 4.13.3 of the Final EIS/EIR, prior to construction, occupants of Kinross Building South would be relocated to another building on the UCLA Campus. The project refinements described in Section 2.0 do not change the requirement to relocate occupants of the building prior to the start of construction.

3.19 Historic and Archaeological 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 Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to historic and archaeological resources. For additional information on this updated analysis, refer to the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) (included in Appendix B), which contains the detailed findings of the analysis summarized in the following sections. The evaluation concludes that the project refinements would have No Adverse Effect on archaeological resources or six built historic properties: Linde (Westwood) Medical Plaza, (Westwood) Federal Building, WLA VA Historic District, Wadsworth Chapel (Catholic-Protestant Chapels,

Veterans Administration Center), News Stand (Streetcar Depot), and Los Angeles National Cemetery. The chapel, news stand, and cemetery are also contributing resources to the WLA VA Historic District.

The project refinements identified in Table 3-1 have the potential to affect historic properties. An analysis for these refinements is included in the following sections. It should be noted that the murals (Section 2.4) are not a historic resource because they are not 50 years of age and they do not have the exceptional importance required for assessing and listing properties less than 50 years of age. The murals are assessed as a community resource in Section 3.6.1.3 and as a visual resource in Section 3.8.1.2. The replacement of the northeast mural wall as a mosaic is evaluated in this section as it may be visible from portions of the WLA VA Historic District. The conduits (Section 2.9) would be confined to the right-of-way only. Given the limited duration and scope of the work, there is no potential for flanking buildings to be affected by this routine work.

Effects to two historic properties previously assessed in the Final EIS/EIR require a reassessment pursuant to Section 106 of the National Historic Preservation Act (NHPA) at 36 CFR 800 because of the proposed refinements. These properties include the Linde (Westwood) Medical Plaza (10901-10921 Wilshire Boulevard) and the WLA VA Historic District (referred to as the VA Medical Center Historic District in the Final EIS/EIR). Within the WLA VA Historic District, the Los Angeles National Cemetery is individually eligible for listing in the National Register of Historic Places (NRHP), and the Wadsworth Chapel (Catholic-Protestant Chapels, Veterans Administration Center) and News Stand (Streetcar Depot) are individually listed in the NRHP. Additionally, the (Westwood) Federal Building was determined eligible by the GSA in 2016 and received California State Historic Preservation Officer (SHPO) concurrence on that determination. The *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) includes individual effects assessments for contributing elements within the district, taking into consideration project activities in the vicinity of each element as well as consultation with VA staff. These individual effects assessments for contributing elements have been used to determine an overall assessment of effects for the WLA VA Historic District. The *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) is included in Appendix B. Consulting parties have been contacted regarding the project refinements, expanded Area of Potential Effects (APE), the potential for unknown archaeological properties, and the reassessments of effects on historic properties. Refer to Section 4.5 for a discussion of the Section 106 consultation conducted in support of the project refinements.

3.19.1 Revised Area of Potential Effects

An APE is defined by 36 CFR Part 800.16(d) as “the geographic area or areas which an undertaking may directly or indirectly cause alterations in the character of use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” While an undertaking has a single APE, earlier iterations of this Project distinguished between the areas where direct and indirect effects would occur. The area that was subject to direct effects only was referred to as the archaeological APE, while the area that encompassed both direct and indirect effects was referred to as the architectural APE.

The APE includes consideration of architectural resources (including built resources and historic and cultural landscapes) and archaeological resources. The APE encompasses all areas that could be directly or indirectly affected by the WPLE Project. Direct effects include physical changes to architectural resources. Indirect effects include visual effects or effects caused by noise or vibration.

As described in Chapter 4, Section 4.14.2 of the Final EIS/EIR, for architectural resources, the APE extended one parcel beyond the limits of the aboveground project features for stations and other aboveground facilities to incorporate areas that could be directly or indirectly affected by construction or operation of the Project. The APE for architectural resources therefore included areas where property acquisitions (temporary or permanent) would be required and areas that could be affected by noise, vibration, visual effects, or settlement during construction or operation of the Project. For areas between stations where the Project would be below grade, the APE did not consider adjacent properties and was limited to the existing roadway.

For archaeological resources, the APE was defined as a 200-foot-wide buffer extending 100 feet from the centerline of the alignment. The APE also included a 200-foot-wide buffer around staging and laydown areas and a 500-foot buffer around all station locations. The vertical archaeological APE extended approximately 100 feet from the existing ground surface to accommodate the potential depth of disturbance required for project implementation. All portions of the APE delineated to accommodate direct effects related to potential archaeological resources were within the APE delineated to accommodate both direct and indirect effects related to architectural resources. The APE delineations were included in a Section 106 initiation letter sent to the SHPO on August 13, 2010, and the SHPO staff concurred with the APE on September 27, 2010.

The APE was subsequently refined in response to project changes for all sections of the Project, but the same methodology was applied. SHPO was notified of the refinement to the APE on September 16, 2011, and SHPO concurrence on the revised APE was received on November 1, 2011.

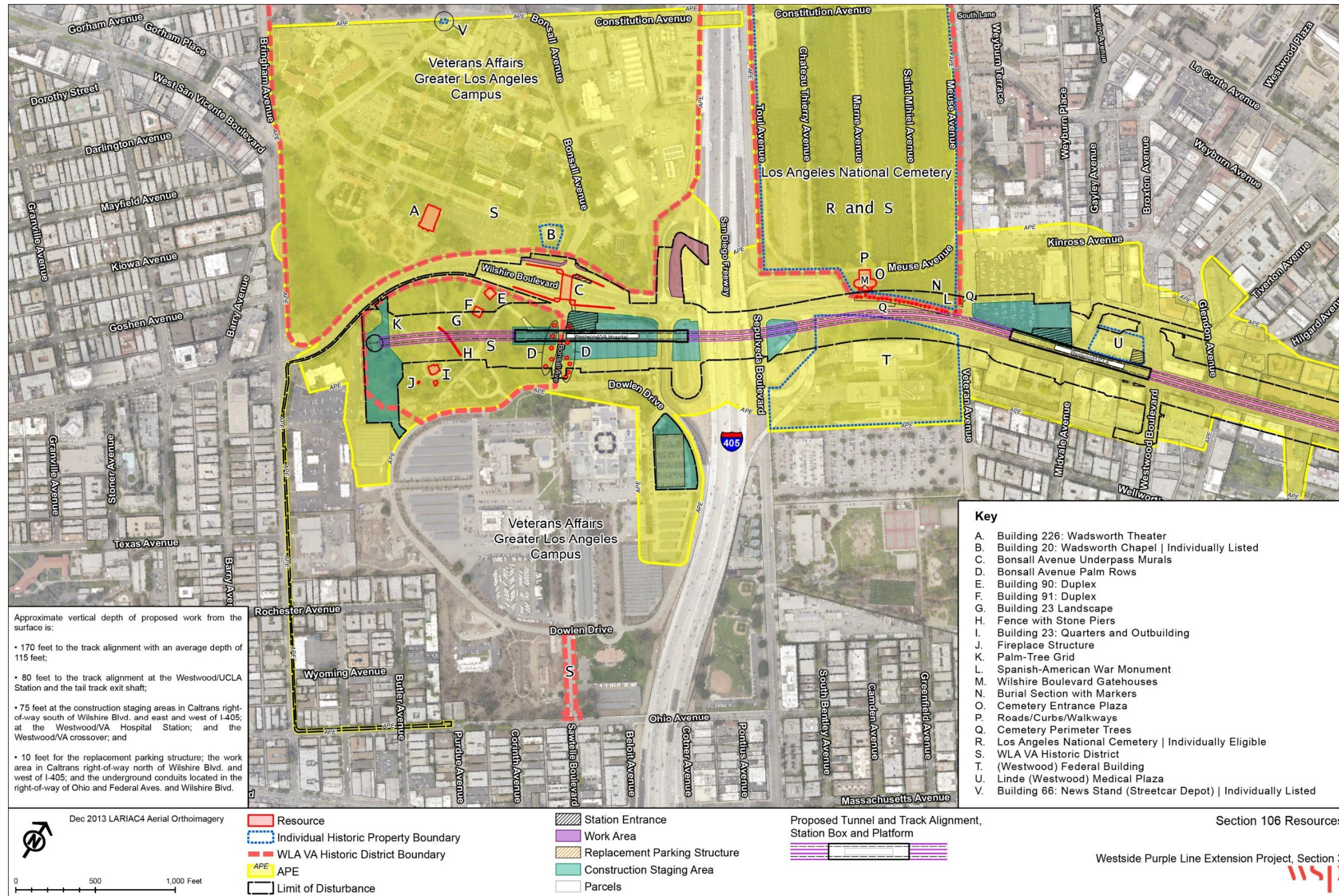
The project refinements would be located within the horizontal extent of the 2011 APE, which included both architectural and archaeological considerations as described above, with the exception of the underground conduits, which would be located within the street right-of-way of Ohio and Federal Avenues and Wilshire Boulevard. The underground conduits would be required to provide power from the Sawtelle substation to the construction staging area on the VA WLA Campus and to the Westwood/VA Hospital Station location. The APE has been expanded to include the alignment of the conduits. The installation of the conduit would be limited to the road right-of-way. Because of the proposed nature of the work, there is no potential to affect flanking properties and, thus, the adjacent parcels are not included in the revised APE, which considers both direct and indirect effects. The revised APE is limited to the right-of-way required for construction and the subsurface easement. The updated APE map for Section 3 of the WPLE Project is shown in Figure 3-12. The proposed revised APE includes considerations for archaeological resources and the areas that could be affected by the maximum extent of project-related ground disturbance. The types of ground disturbance activities include excavation, backfill, and grading. The project limits of disturbance are indicated on the revised APE map. The maximum vertical APE from the ground surface extends as follows:

- Approximately 170 feet for the alignment (average depth is approximately 115 feet)
- Approximately 80 feet for the Westwood/UCLA Station and tail track exit shaft (where the TBM is launched)
- Approximately 75 feet for the two construction staging areas located in Caltrans right-of-way south of Wilshire Boulevard and east and west of I-405, for the Westwood/VA Hospital Station, and for the Westwood/VA Hospital Station west crossover

- Approximately 10 feet for the replacement parking structure located in Lot 43 on the VA WLA Campus and for the work area in the Caltrans right-of-way located north of Wilshire Boulevard and west of I-405
- Approximately 10 feet for the underground conduits located in the public right-of-way of Ohio and Federal Avenues and Wilshire Boulevard

FTA and Metro provided the revised APE to consulting parties via the U.S. Postal Service and email on June 22, 2018 for comment. In a letter dated September 17, 2018, FTA provided the revised APE to SHPO for concurrence. In a letter dated October 15, 2018, SHPO stated that the expanded APE is sufficient for the undertaking, per 36 CFR Section 800.4(a)(1).

Figure 3-12: Revised APE



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3.19.2 Historic Resources

The following sections summarize the assessment of refinements that may affect historic properties located within the project architectural APE. The evaluation is organized by historic property. Refer to the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c), included in Appendix B) for a description of the Section 106 process, as well as additional information related to each historic property.

3.19.2.1 WLA VA Historic District/VA Medical Center Historic District

The VA Medical Center Historic District was determined eligible for listing in the NRHP in 1981 as a collection of multiple, discrete historic districts comprising buildings, landscapes, and burials. In 2014, the districts were reevaluated as a single historic district and listed as the WLA VA Historic District. The property is listed under NRHP Criterion A⁵ for its association with Second Generation Veterans Hospital national context for the period 1923-1952. Contributing to the historic district are four buildings from the National Home for Disabled Volunteer Soldiers (NHDVS) period (1888-1930), two of which are separately and individually listed in the NRHP (Wadsworth Chapel and News Stand (Streetcar Depot)), as well as the Los Angeles National Cemetery, which is individually eligible for listing in the NRHP. The WLA VA Historic District is also listed in the NRHP under Criterion C for its collection of historic buildings. The historic district was also listed under Criteria Consideration D⁶ and Criteria Consideration G for its association with the Los Angeles National Cemetery and contributing properties that have achieved significance but are less than 50 years of age. The property encompasses 400 acres in a developed, urban area and is bisected by major thoroughfares, including I-405 (the San Diego Freeway), Sepulveda Boulevard, and Wilshire Boulevard. Barrington Avenue, Bringham Avenue, San Vicente Boulevard, and Federal Avenue on the west; Ohio Avenue on the south; and Veteran Avenue on the east, which delineate the property boundaries. Overall, the historic district's integrated landscapes, open spaces, and streetscapes provide a pastoral environment in an otherwise dense urban setting, and the historic district conveys a strong sense of time and place from its period of significance.

⁵ The National Register Criteria for Evaluation (36 CFR 60.4) states that “[t]he quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded or may be likely to yield information important in prehistory or history.”

⁶ Additionally, the National Register Criteria for Evaluation states that “[o]rordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- a. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- b. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- c. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his or her productive life; or
- d. A cemetery which derives its primary significance from graves or persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- e. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

Within the district are 64 contributing elements and 44 noncontributing elements. Through consultation with the VA, 16 of the 64 contributing elements were determined to be located within the Project's APE and are proximate to the proposed Westwood/VA Hospital Station, Westwood/UCLA Station, underground alignment, and construction staging areas. Each of the 16 identified contributing elements was reassessed for effects pursuant to NHPA Section 106 regulations to include project refinements described in Section 2.0 of this technical memorandum and determine if minimization or mitigation efforts would be required for select elements. The elements are shown in Figure 3-13.

Building 66: News Stand (Streetcar Depot)

Building 66: News Stand (Streetcar Depot) is a Queen Anne-style former streetcar depot and newsstand constructed in 1893 and moved to its present location in 1908. It is individually listed in the NRHP as the "News Stand/Streetcar Depot (Building No. 66)" (National Register #72000232). The property is listed under Criteria A and C. It is located at Dewey and Pershing Avenues, away from project activities and approximately 1,540 feet northwest from the proposed bus layover area for the Westwood/VA Hospital Station access refinement and the pedestrian elements associated with the alignment at the VA Medical Center and Westwood/VA Hospital Station entrance refinement. The building is also approximately 1,740 feet north-northwest of the Western VA construction staging area, which will be enclosed by a temporary 20-foot-high wall and include an approximately 120-foot-high crane with a 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo. Views from the building toward these refinements are completely screened by intervening large buildings and vegetation.

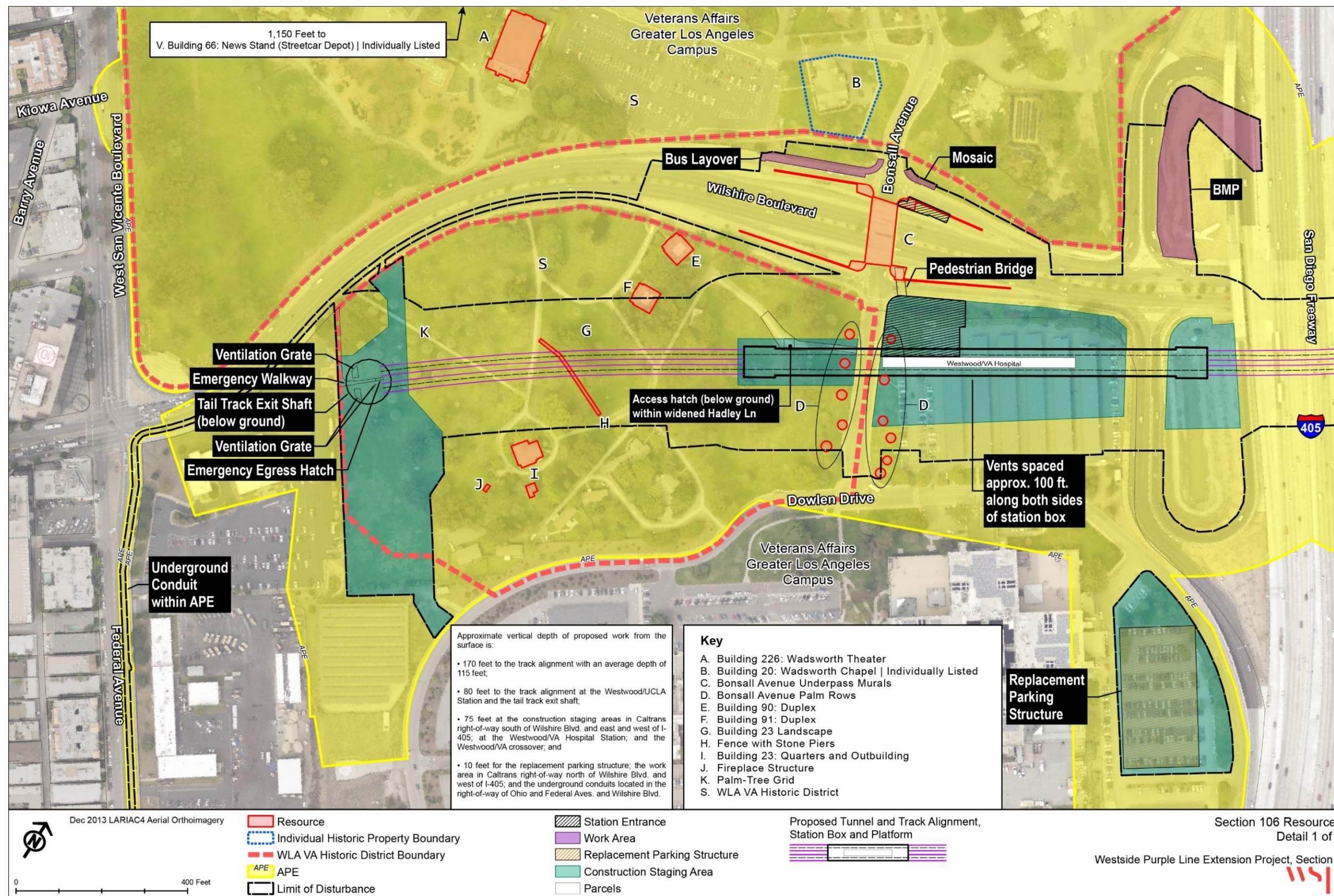
The building is not proximate to the project refinements or built project components, and there would be no direct or indirect effects to the building from project work. No indirect effects from noise, vibration, or visual effects would occur due to distance from project activities and intervening buildings and vegetation. The Project would have no effect on the building's integrity of location, design, setting, materials, workmanship, feeling, or association. Therefore, the Project would have No Effect on the News Stand (Streetcar Depot).

Building 226: Wadsworth Theater

The Wadsworth Theater is a Mission-style theater building constructed in 1940. It is located on the north side and oriented away from the multi-lane, elevated Wilshire Boulevard and separated from the majority of project refinements. The theater is approximately 575 feet west of a proposed bus layover area for the Westwood/VA Hospital Station access refinement and the pedestrian elements associated with the alignment at the VA Medical Center and Westwood/VA Hospital Station entrance refinement. The theater is also approximately 975 feet west of a pedestrian bridge connecting the station entrance in Lot 42 to an existing bus stop on eastbound Wilshire Boulevard. Located approximately 475 feet south, the Western VA construction staging area would be enclosed by an approximately 20-foot-high temporary noise barrier wall and include an approximately 120-foot-high crane with 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo. Views toward these refinements are partially screened by vegetation.

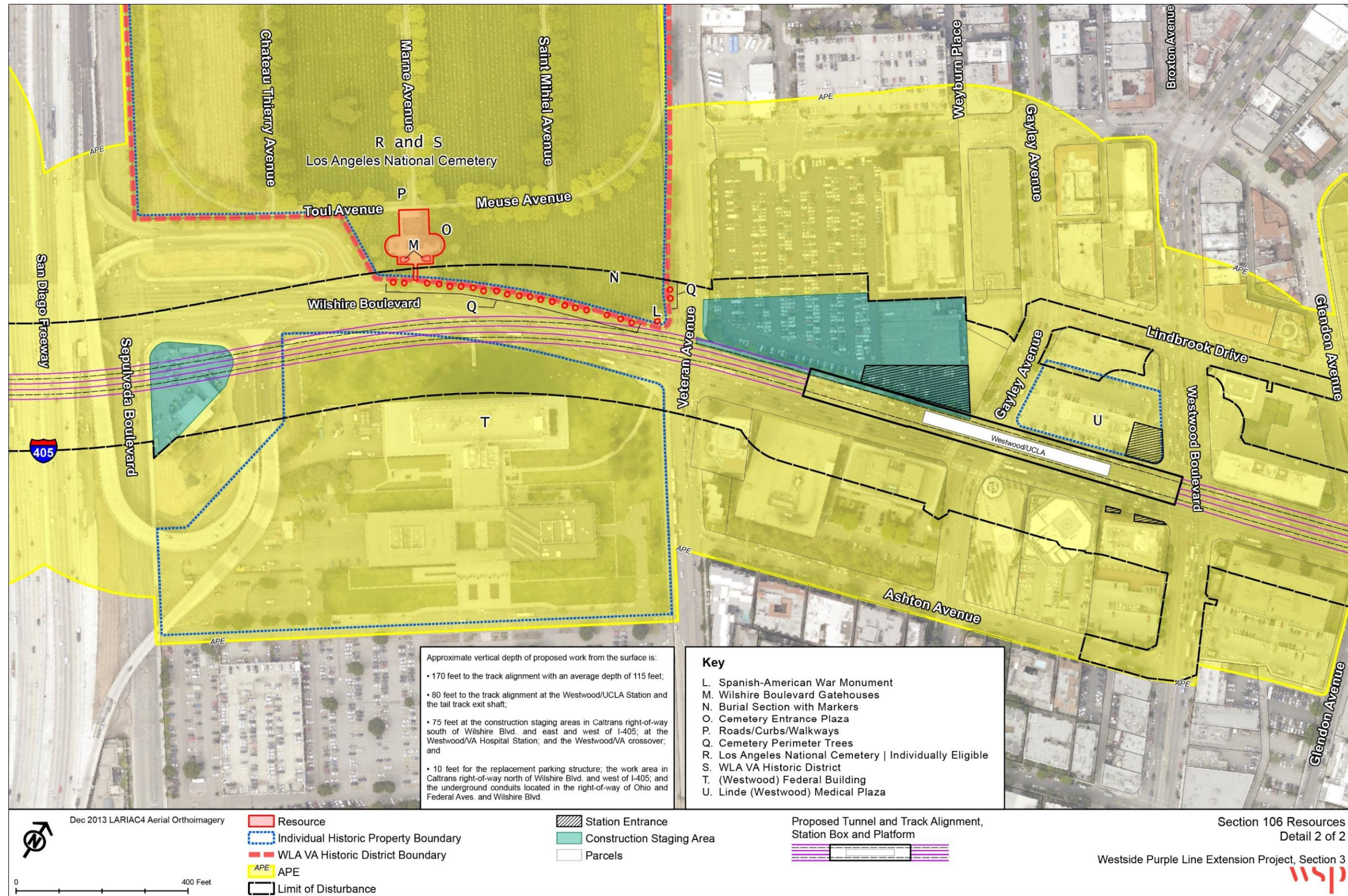
-
- f. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
 - g. A property achieving significance within the past 50 years if it is of exceptional importance."

Figure 3-13: Revised APE and Contributing Elements at the WLA VA Historic District in Proximity to the WPLE Project: Detailed Map 1 of 2



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Figure 3-13 (Continued) Detailed Map 2 of 2



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The Wadsworth Theater is not proximate to the project components and there would be no direct effects to the building from project work. The project refinements are located in areas that do not retain integrity of setting. Other permanent project elements are not visible from the Wadsworth Theater. Noise and vibration levels associated with station access, construction staging areas, and the construction method for the Westwood/VA Hospital Station west crossover refinements would not exceed the impact or damage risk criteria during construction or operation of the Project. TBM tunneling activities and haul train groundborne vibration levels associated with construction of the alignment or tunnel size refinements would not exceed the established risk thresholds or Metro construction criteria. The theater is located approximately 300 feet northwest of proposed haul routes; vibration or noise associated with the haul routes would have no effect on the theater. There are no direct or adverse indirect effects to the Wadsworth Theater as a result of the Project, and the Project would not diminish the theater's integrity of location, design, materials, workmanship, feeling, or association. Effects to the Wadsworth Theater's integrity of setting due to construction are minor and temporary. Therefore, project refinements would result in No Adverse Effect to the Wadsworth Theater.

Building 20: Wadsworth Chapel

The Wadsworth Chapel is a Shingle-style building constructed in ca. 1900 and is individually listed in the NRHP as the "Catholic-Protestant Chapels, Veterans Administration Center" (National Register #72000229). The property is listed under Criterion C. It is located on the north side of the multi-lane, elevated Wilshire Boulevard away from permanent project elements. The chapel is also near I-405, resulting in a diminished level of integrity to the property's setting. The chapel is approximately 110 feet north of a proposed bus layover area for the Westwood/VA Hospital Station access refinement. Additionally, station circulation elements to an existing bus stop on westbound Wilshire Boulevard would be located on the north side of and adjacent to Wilshire Boulevard, approximately 260 feet southeast of the chapel in a location currently displaying the non-historic mural. The mural would be removed and the story of the mural would be reconveyed in a mosaic that would be placed on an embankment adjacent to the Wilshire Boulevard off-ramp in County of Los Angeles property. The mosaic would be obscured by the existing topography and would only be partially visible from the chapel. Views toward the other murals would remain unchanged. The chapel is also approximately 395 feet north of a pedestrian bridge connecting the station entrance in Lot 42 to an existing bus stop on eastbound Wilshire Boulevard. During construction activities, the Western VA construction staging area, located approximately 1,030 feet southwest and across Wilshire Boulevard, would be enclosed by an approximately 20-foot-high temporary noise barrier wall and include an approximately 120-foot-high crane with 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo. These refinements are partially screened by vegetation. Additionally, these refinements are located in an area with diminished integrity of setting.

Noise and surface vibration levels associated with station access, construction staging areas and the construction method for the Westwood/VA Hospital Station west crossover refinements would not exceed the impact or damage risk criteria during construction or operation of the Project. TBM tunneling activities and haul train groundborne vibration levels associated with construction of the alignment or tunnel size refinements would not exceed the established risk thresholds or Metro construction criteria. Vibration or noise associated with haul routes would have no effect on the chapel. Indirect effects associated with construction noise, vibration, or visual effects are temporary. Permanent visual elements from the Project, including the bus layover area, pedestrian circulation elements, mosaic on an embankment in Los Angeles County property, and the Westwood/VA Hospital Station, would be

partially screened by existing vegetation. While some station elements would be visible on the north side of Wilshire Boulevard, they would not constitute an adverse effect in an area with diminished integrity of setting due to numerous recent intrusions. Views toward the mosaic would be obscured by the existing topography and would only be partially visible from the chapel; views toward the murals that remain in place would remain unchanged. No direct or adverse indirect effects would occur to the Wadsworth Chapel. The Project would not diminish the chapel's integrity of location, design, materials, workmanship, feeling, or association. Effects to the chapel's integrity of setting due to construction are minor and temporary or are in locations where the integrity of setting has been compromised by recent intrusions. Therefore, project refinements would have No Adverse Effect to Wadsworth Chapel.

Bonsall Avenue Palm Rows

The Bonsall Avenue Palm Rows are rows of palm trees flanking Bonsall Avenue. The trees date to the historic district's 1888-1930 period and are a contributing landscape feature and form an allée (an alleyway or walkway lined with trees or shrubs). Although only a subset of the palm rows is included in the historic district boundary (those on the west side of Bonsall Avenue), at the VA's request, Metro is treating the collection of trees on the east side of Bonsall Avenue within the palm rows as a single contributing landscape feature. A construction staging area and cut-and-cover cavern for the Westwood/VA Hospital west crossover and station box would be located on both sides of Bonsall Avenue, proximate to the palm rows. An approximately 20-foot-high temporary perimeter noise barrier wall would be constructed around these construction areas. The alignment at the VA Medical Center and Westwood/VA Hospital Station entrance, and Westwood/VA Hospital Station access refinements are also located in the vicinity of the palm rows. The most recent engineering plan indicates that two palm trees on each side of Bonsall Avenue forming the allée would be directly affected. Specifically, these palms would be removed and stored during construction or replanted with a substitute species as agreed upon through consultation with the VA and SHPO. These actions are temporary and the majority of the vegetation within this historic landscape element would remain intact. The trees are shown in red on Figure 3-14 and only include those flanking Bonsall Avenue.

As part of the project planning for the Bonsall Avenue Palm Rows, Metro retained a certified arborist to investigate the palms. The arborist report is included as Appendix B to this memorandum. Prior to construction commencing, and in consultation with the VA, Metro plans to assess the health of the trees proposed for moving and will apply treatments as appropriate to prepare them for the move. The trees would then be removed and stored, which includes being temporarily planted in proposed locations along Bonsall Avenue south of project activities to continue the appearance of the allée and minimize damage by moving them elsewhere on the VA property. Upon the conclusion of construction, the trees would be replanted in their original locations to maintain the current flanking configurations and the consistency of the design. If any trees are determined to be in a condition that would not be conducive to moving, storing, and/or replanting, Metro would replace them with mature Canary Island palm trees when construction is complete. Although FTA, VA, and Metro agreed on this plan, all agencies acknowledge that there is potential that an alternative plan may need to be implemented once the trees' health is assessed in detail. As an alternative to the tree storage and replanting program, a substitute tree variety may be planted as agreed upon with the VA and the SHPO through consultation. In all cases, FTA will maintain the row pattern of the trees and attempt to identify a tree variety with a similar appearance to the existing Canary Island palm (i.e., tall, slender, and lacking a lush, leafed lower trunk) that will thrive in this location. All decisions will be made in consultation with the VA and SHPO and will attempt to not only maintain the appearance of the rows, but also identify tree varieties that will align with VA maintenance plans and budget. All remaining trees in the Bonsall Avenue Palm Rows will not

be affected as part of the minimization measures to avoid contributing elements. Therefore, temporary removal and storage of this landscape element would have no adverse effect.

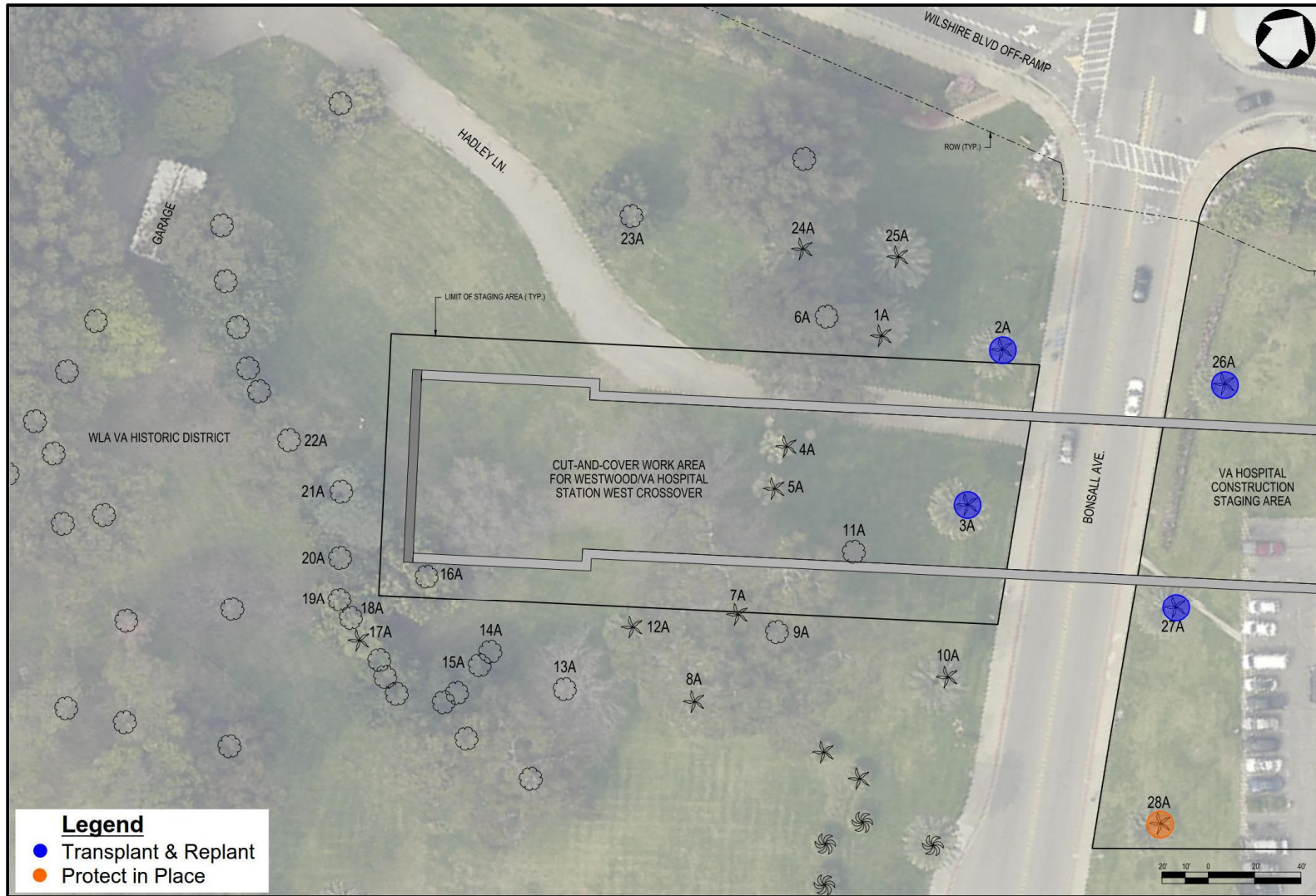
The proposed station entrance, pedestrian bridge, and passenger drop-off area are located adjacent to the elevated Wilshire Boulevard; the entrance and passenger drop-off area are in an area currently occupied by a parking lot (Lot 42) covered by solar panels, indicating an already compromised setting; the pedestrian bridge is adjacent to an existing bridge where Wilshire Boulevard crosses over Bonsall Avenue. No significant views from the palms are present. Ground vibration levels associated with these refinements would not exceed the damage risk criteria. TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for the alignment or tunnel size refinement. The Project would not diminish the Bonsall Avenue Palm Rows' integrity of location, design, workmanship, or association. A small portion of the overall plant material would be altered, but it would be replaced and the design would be retained. Effects to the integrity of setting, materials, and feeling of the Bonsall Avenue Palm Rows due to project construction are minor and temporary. Therefore, project refinements would have No Adverse Effect to the Bonsall Avenue Palm Rows.

Building 90: Duplex and Building 91: Duplex

Building 90 is a residential duplex building with modest Colonial Revival stylistic elements constructed in 1927. Building 91 is located directly south of Building 90, is similar in size and style, and also dates to 1927.

Building 90 is located approximately 225 feet west of the temporary cut-and-cover activities associated with the construction method for the Westwood/VA Hospital Station west crossover refinement as well as its related temporary construction staging area, which would be surrounded by an approximately 20-foot-high temporary perimeter noise barrier wall, while Building 91 is located approximately 210 feet west of these activities. The Western VA construction staging area with the tail track exit shaft is approximately 600 feet southwest of Building 90 and 525 feet southwest of Building 91. The staging area would be enclosed by an approximately 20-foot-high temporary noise barrier wall and include an approximately 120-foot-high crane with 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo. Vegetation would also partially screen views of construction from the duplex toward the cut-and-cover crossover and the temporary project construction activities occurring at the Western VA construction staging area and tail track exit shaft. The construction area would be returned to its prior condition, restoring the setting and the landscaped quality of the far surroundings. The VA would be consulted on landscape restoration in the area around the duplex. Some landscape features could be replaced in kind, and the VA would be consulted on potential replacement plants if different planting materials may be preferable.

Figure 3-14: Tree Removal Plan near Bonsall Avenue



Source: Arborgate Consulting Inc., 2018

Air pollution can negatively impact the external facades of buildings over long periods of time, including corrosion and deterioration of paint, metal, and masonry. Although project activities are in the vicinity of Buildings 90 and 91, the potential for the Project to contribute to the degradation or dirtying of the building's surfaces is minimal: the tail track exit shaft would contain scrubbers that reduce particulate pollution from entering the atmosphere; construction activities are temporary; and the relative contribution of the Project's emissions would represent 5 percent or less of the existing high particulate levels that already exceed the National and California Ambient Air Quality Standards. Potential damage due to the area's existing and persistent conditions is greater than the short-term contribution from construction activities.

Trucks would be covered to control dust during transport of spoils as required by the Mitigation Monitoring and Reporting Program. To control fugitive dust, wind fencing and phase grading operations, where appropriate, would be implemented along with the use of water trucks for stabilization of surfaces under windy conditions. Surrounding streets at construction sites would be watered by trucks as needed to eliminate airborne dust.

Across a lawn and Bonsall Avenue is the proposed Westwood/VA Hospital Station. The permanent visual effects from the alignment at the VA Medical Center and Westwood/VA Hospital Station entrances refinement would not be adverse, as Building 90 and Building 91 have a diminished integrity of setting in the direction of the station because of the presence of the elevated Wilshire Boulevard and an existing parking area covered by large solar panels (Lot 42). Additionally, existing vegetation would obscure views from Building 90 and Building 91 toward the station area. Similarly, vegetation would obscure views toward the permanent project features to the west that are adjacent to the U.S. Army Reserve site—an emergency egress hatch, ventilation grates, and a gravel path. These features would be flush with the ground and would not be visible. The permanent access hatch within Hadley Lane to the east of the duplexes would be covered, and the series of small ventilation surface grates would be located at ground level in a noncontributing landscape portion of the WLA VA Historic District and would not be visible from the duplexes.

With committed construction noise mitigation measures, noise and vibration levels associated with these refinements would not exceed the damage risk or noise impact criteria. TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for construction of the associated tunnel size refinement. No direct effects would occur to Building 90 or Building 91, and no adverse indirect effects from noise or vibrations would occur based on technical analyses provided by qualified noise and vibration experts. The Project would not diminish the buildings' integrity of location, design, materials, workmanship, or association. Effects to Building 90 and Building 91's integrity of setting and feeling due to construction are minor and temporary. Therefore, the refinements would have No Adverse Effect to Building 90 and Building 91.

Building 23 Landscape

The Building 23 Landscape is a loosely defined wide lawn with mature trees that fronts Building 23: Quarters, a Shingle-style building constructed in 1900. No project work would occur within Building 23's landscape and no permanent project features would be located there. Near Building 23's landscape, the tunnel would be underground at an approximate depth of 60 feet. Building 23's landscape is located between the cut-and-cover site for the Westwood/VA Hospital Station west crossover and the Western VA construction staging area. These temporary project construction sites are located approximately 320 feet northeast and 350 feet southwest, respectively. During construction activities, the construction

staging areas would be enclosed by an approximately 20-foot-high temporary noise barrier wall. The Western VA construction staging area would include an approximately 120-foot-high crane with 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo. Due to distance, these areas are largely screened by vegetation.

Permanent project elements associated with the alignment at the VA Medical Center and Westwood/VA Hospital Station entrance and Westwood/VA Hospital Station access refinements would not generally be visible from the Building 23 Landscape. The permanent aboveground features on the westernmost portion of the campus and near Hadley Lane would be at ground level and would not be visible from the Building 23 Landscape. Vibration levels associated with these refinements would not exceed the damage risk criteria, nor would activities associated with the temporary construction staging areas and construction method for the Westwood/VA Hospital Station west crossover. TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for construction of the associated alignment and tunnel size refinement. No character-defining features of the landscape would be adversely affected by the Project; there are no direct effects to the landscape. The Project would not diminish the landscape's integrity of location, design, materials, workmanship, or association. Effects to the landscape's integrity of setting and feeling due to project construction are minor and temporary. Therefore, the refinements would have No Adverse Effect to the Building 23 Landscape.

Fence with Stone Piers

A fence with stone piers, a contributing landscape element to the historic district, is situated in a grass lawn and flanked by roadways behind Building 23. Although no construction date for the fence was provided in the historic district's NRHP nomination, it may date to New Deal-era improvements to the VA property. Over time, the fence has been altered with replacement metal rails between the stone piers, resulting in diminished integrity due to the use of an incompatible material.

Project work in the vicinity of the fence would be underground and associated with tunneling activities approximately 60 feet below ground. There would be no aboveground work near the fence. The fence is located between the Western VA construction staging area and the cut-and-cover site for the Westwood/VA Hospital Station west crossover. These temporary project features would be located approximately 300 feet southwest and 325 feet northeast from the fence, respectively, and both areas would be largely screened by vegetation. During construction activities, the construction staging areas would be enclosed by an approximately 20-foot-high temporary noise barrier wall. The Western VA construction staging area would include an approximately 120-foot-high crane with 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo. TBM tunneling activities and haul train groundborne vibration levels would not exceed the established damage risk thresholds. Surface vibration from construction activities at the Western VA construction staging area and cut-and-cover for the Westwood/VA Hospital Station crossover site would not exceed the damage risk criteria. Construction-related noise levels are not applicable to the fence, which is not sensitive to noise.

Permanent aboveground project features associated with the tail track exit shaft site, including three ventilation grates, an emergency egress hatch, and gravel path to Wilshire Boulevard, would be located at ground level and would not be visible from the fence. Similarly, the cut-and-cover site for the crossover would include an access hatch within Hadley Lane that would be covered and a series of small ventilation surface grates at ground level. These features would not be visible from the fence. The tunnel below the fence would be at a depth where it would not adversely affect any of the fence's

features, and ground settlement, if any, would not exceed one-half inch. The fence's design is such that any minor ground settlement of approximately one-half inch would have no discernible effect on the fence. Long term, revenue train operations would not exceed the FTA groundborne vibration criteria. Noise from revenue train operations are not applicable to outdoor resources. There are no direct or indirect adverse effects to the fence. No character-defining features of the fence would be adversely affected by the Project and the Project would not diminish the fence's integrity of location, design, materials, workmanship, or association. Effects to the fence's integrity of setting and feeling due to construction are minor and temporary. Therefore, the refinements would have No Adverse Effect to the fence with stone piers.

Building 23: Quarters and Outbuilding

The Building 23: Quarters and Outbuilding is a three-story, Shingle-style building constructed in 1900 with an accompanying nonhistoric garage and carport. The buildings are located south of the Building 23 Landscape and near the fence with stone piers, approximately 485 feet southwest of the temporary cut-and-cover activities associated with the construction method for the Westwood/VA Hospital Station west crossover and associated temporary construction staging area refinements and 160 feet east of the Western VA construction staging area and the tail track exit shaft. During construction activities, the construction staging areas would be enclosed by an approximately 20-foot-high temporary noise barrier wall. The Western VA construction staging area would include an approximately 120-foot-high crane with 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo. The Western VA construction staging area would have no direct effect to Building 23 or its outbuilding. Because of intervening vegetation, the Western VA construction staging area's temporary wall, crane, conveyor belt towers, and storage silo would only be partially visible from Building 23 and all work would be temporary. The permanent aboveground project features on the westernmost portion of the VA WLA Campus (three ventilation grates, an emergency egress hatch, and gravel path to Wilshire Boulevard) would be located at ground level and would not be visible from Building 23 or its outbuilding due to intervening tall and lush vegetation that blocks views toward these features. This vegetation appears to be of a height and density that it would obscure the permanent features from various vantage points throughout the house and its second story, as well as the associated outbuilding.

Although project activities are in the vicinity of Building 23: Quarters and Outbuilding, the potential for the Project to contribute to the degradation or dirtying of the building's surfaces is minimal: the tail track exit shaft would contain scrubbers that reduce particulate pollution from entering the atmosphere; construction activities are temporary; and the relative contribution of the Project's emissions would represent 5 percent or less of the existing high particulate levels that already exceed the National and California Ambient Air Quality Standards. Potential damage due to the area's existing and persistent conditions is greater than the short-term contribution from construction activities.

No direct effects would occur to Building 23 or its outbuilding; no work would involve the residence directly. Noise and vibration levels associated with the refinements would not exceed the noise impact or damage risk criteria with committed construction noise minimization measures, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for construction of the associated alignment and tunnel size refinement. The buildings retain a high degree of integrity to their immediate setting and would not be altered by the Project. The Project would have no direct or adverse indirect effects on Building 23: Quarters and Outbuilding and would not diminish the buildings' integrity of location, design, materials, workmanship, or association. Effects to Building 23's integrity of setting and feeling due to construction are minor and

temporary. Therefore, project refinements would have No Adverse Effect to Building 23: Quarters and Outbuilding.

Fireplace Structure

A fireplace structure with adjacent stone-base benches and brick pavers located south of Building 23 is a contributing element to the historic district. Its date of construction is unknown. While not listed in the NRHP nomination, the structure is being considered as a contributing element to the historic district in response to a request from VA staff. The fireplace is approximately 95 feet to the east of the Western VA construction staging area. During construction activities, the Western VA construction staging area would be enclosed by an approximately 20-foot-high temporary noise barrier wall and include an approximately 120-foot-high crane with 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo. The construction staging area would be screened from the fireplace by existing vegetation, including dense tree growth. The only permanent aboveground project features would include three ventilation grates, a small emergency egress hatch, and a gravel path leading to Wilshire Boulevard, which would be located at the westernmost portion of the VA WLA Campus. All features would be located at ground level and would not be visible from the fireplace.

Additionally, vibration levels associated with these refinements would not exceed the damage risk criteria, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for construction of the associated alignment and tunnel size refinement. No character-defining features of the fireplace would be affected by the Project. The Project would have no direct or adverse indirect effects to the fire place structure, and would not diminish the fireplace's integrity of location, design, materials, workmanship, or association. Effects to the fireplace structure's integrity of setting and feeling due to construction are minor and temporary. Therefore, project refinements would have No Adverse Effect to the fireplace structure.

Palm-Tree Grid

A contributing landscape feature, the Palm-Tree Grid comprising approximately 50 mature Canary Island palm trees planted before 1930, is located near the intersection of Wilshire Boulevard and Federal Avenue to the southwest of Building 90 and Building 91.

The temporary Western VA construction staging area with the tail track exit shaft would be present within the historic district and within a portion of the Palm-Tree Grid's south and southwest sides. During construction activities, an approximately 20-foot-high temporary noise barrier wall would surround the Western VA construction staging area; the staging area would include an approximately 120-foot-high crane with 160-foot-long boom, 100-foot-high conveyor belt towers, and a 50-foot-high storage silo.

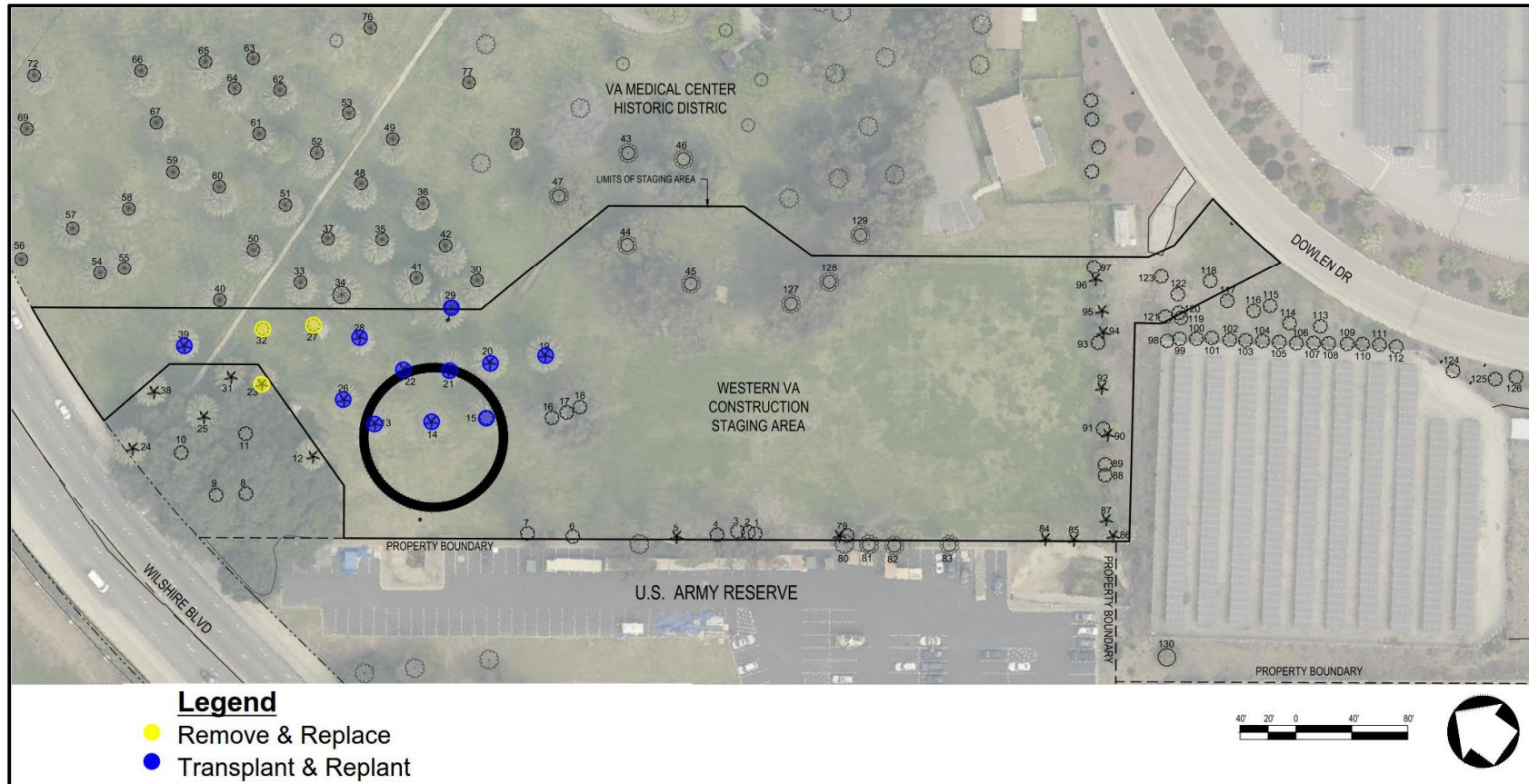
The Project would have no adverse effect on the Palm-Tree Grid. Current project plans for the Western VA construction staging area include the removal of 14 Canary Island palm trees, of which 3 are currently deceased. Figure 3-15 indicates the location of the tail track exit shaft, construction staging area, and trees to be removed. As part of the project planning for the Palm-Tree Grid, Metro retained a certified arborist to investigate the palms. The arborist report is included as Appendix B to this memorandum. Prior to construction commencing and through consultation with the VA, the trees proposed for moving would be assessed for health and treated as appropriate to prepare them for the move. The trees would then be removed and stored, which includes being temporarily planted in areas within and adjacent to the Palm-Tree Grid to avoid disruption of existing landscape features elsewhere on site. Upon the completion of construction, the trees would be replanted in their original locations to maintain the current grid configuration and the consistency of the design. If any trees are determined to be in a condition that would not be conducive to moving, storing, and/or replanting, Metro would replace them with mature Canary Island palm trees when construction is complete.

Although FTA, VA, and Metro agreed on this plan, all agencies acknowledge that there is a potential that an alternative plan may need to be implemented once the trees' health and soil suitability is assessed in detail. As an alternative to the tree storage and replanting program, a substitute tree variety may be planted as agreed upon with the VA and the SHPO through consultation. In all cases, FTA will maintain the grid pattern of the trees and attempt to identify a tree variety with a similar appearance to the existing Canary Island palms (i.e., tall, slender, and lacking a lush, leafed lower trunk) that will thrive in this location. All decisions will be made in consultation with VA and SHPO and will attempt to not only maintain the appearance of the grid, but also identify tree varieties that will align with VA maintenance plans and budget.

Although project work would temporarily disrupt the pattern of the Palm-Tree Grid, the landscape would be restored to its prior design. The trees would be replaced with healthy trees in the same locations to maintain the current spacing, configurations, and the consistency of the grid. Alternatively, a substitute tree species may be planted as agreed upon by Metro and the VA through consultation. All other trees within the Palm-Tree Grid would not be affected by the Project. The majority of this historic landscape element would remain intact, and the treatment and maintenance of ephemeral historic landscapes allows for plant material change that supports continuity. The setting of the palms that are closest to the construction staging area are already compromised by the proximity to Wilshire Boulevard and the U.S. Army Reserve site and its parking lot; no significant views from the palms are present.

In the long term, the tail track exit shaft would be subsurface within the grid. Permanent aboveground project features would include three surface ventilation grates, an emergency egress hatch, and a gravel path leading to Wilshire Boulevard. All of these permanent project features would be located at ground level. The ventilation grates would be elevated 6 inches above grade to allow for rainwater runoff. To minimize the raised profile within the landscape, the surrounding grass-covered ground would be gently sloped to meet the top of the grate. These features would not be visible from pedestrian locations within the Palm-Tree Grid, including the paved walkway from Wilshire Boulevard toward Building 23 (Figure 3-16). The short gravel path would extend southwest from the access hatch before turning northwest along a fence bordering the U.S. Army Reserve site's parking lot and ending at Wilshire Boulevard. It is in an area where integrity of setting has already been compromised and where its introduction into the landscape would not detract from the setting within the Palm-Tree Grid.

Figure 3-15: Proposed Tree Removal at Western VA Construction Staging Area



Source: Arbogate Consulting Inc., 2018

Figure 3-16: Visual Simulation of Permanent Project Features in the Vicinity of the Palm-Tree Grid, view to the west



Source: WSP 2018

As stated above, there would be a direct effect to the Palm-Tree Grid as trees are removed and temporarily stored nearby within and adjacent to the Palm-Tree Grid during construction. Alternatively, the Canary Island palms may be replaced with a substitute species as agreed upon with the VA through consultation and coordination with the SHPO. Following construction, the Project would replant the palm trees in their current locations or replace them with new trees if deceased or unhealthy in order to ensure longevity. This would allow for continuity of a historic landscape element. As a result, no adverse effect to the Palm-Tree Grid is anticipated as the Project would maintain the current grid configuration and consistency of design when construction concludes. Additionally, the footprint of the construction staging area was designed to avoid impacting four approximately 100-year-old mature Morton Bay fig trees (*Ficus macrophylla*) along Wilshire Boulevard. These trees would screen project work in the area and provide a sense of historic continuity to the WLA VA Historic District's landscape elements.

Vibration levels associated with these refinements would not exceed the damage risk criteria, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for construction of the associated alignment and tunnel size refinement. None of the Palm-Tree Grid's character-defining features would be adversely affected by project work. The Project would not diminish the Palm-Tree Grid's integrity of location, design, workmanship, or association. A small portion of the overall plant material would be altered, but it would be replaced and the design would be maintained. Effects to the Palm-Tree Grid's integrity of setting and feeling due to construction are minor and temporary. Therefore, the refinements would result in No Adverse Effect to the Palm-Tree Grid.

Spanish-American War Monument

The Spanish-American War Monument located within the Los Angeles National Cemetery is a 1950 marble monument that was reconstructed in 1973 following earthquake damage. The monument is located in an urban setting along busy Wilshire Boulevard and is separated from most of the project refinements by Wilshire Boulevard and the elevated I-405. Approximately 90 feet east of the monument would be a temporary construction staging areas associated with the Westwood/UCLA Station entrances refinement, which would be surrounded by an approximately 20-foot high temporary noise barrier wall. Permanent project elements associated with the Westwood/UCLA Station would be located approximately 365 feet east of the monument. Noise and vibration levels associated with this refinement would not exceed the noise impact or damage risk criteria, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for construction of the project alignment and tunnel size refinement. The Project would not diminish the monument's integrity of location, design, materials, workmanship, feeling or association. Effects to the monument's integrity of setting due to construction activities are minor and temporary. Therefore, the refinements would result in No Adverse Effect to the Spanish-American War Monument.

Wilshire Boulevard Gatehouses (2)

Two single-story, brick-clad, Spanish Colonial Revival-style gatehouses flank the pedestrian entrance to the Los Angeles National Cemetery. Originally constructed as men's and women's comfort stations, the identical gatehouses now serve as storage facilities. The gatehouses are located in an urban setting separated from most project refinements by Wilshire Boulevard and the elevated I-405. Significant project activities nearest the gatehouses include a temporary construction staging area in Lot 36 associated with the Westwood/UCLA Station and surrounded by an approximately 20-foot-high

temporary perimeter noise barrier wall located approximately 640 feet to the east. Permanent project elements associated with the Project would not be visible because of the distance, the intervening urban environment, and perimeter trees. Vibration levels associated with project refinements would not exceed the damage risk criteria, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for construction of the project alignment and tunnel size refinement. Visual effects from the construction staging area would be temporary and minimal due to the distance from the gatehouses. The project would not diminish the gatehouses' integrity of location, design, setting, materials, workmanship, feeling, or association. Therefore, the refinements would result in No Adverse Effect to the Wilshire Boulevard Gatehouses.

Los Angeles National Cemetery Burial Section with Markers

Burials located within the Los Angeles National Cemetery are marked with rectangular granite slabs that contain the name, rank, conflict, and dates of the military personnel being memorialized. The markers are set at regular intervals throughout the cemetery and flush with the ground. The burials are located in an urban setting separated from most project refinements by Wilshire Boulevard and the elevated I-405. Project activities nearest the burial markers include a temporary construction staging area in Lot 36 associated with the Westwood/UCLA Station and surrounded by an approximately 20-foot-high temporary perimeter noise barrier wall located approximately 385 feet to the east. Vibration levels associated with project refinements would not exceed the damage risk criteria, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for construction of the project alignment and tunnel size refinement. For the markers, Metro recommended the same damage risk criteria as that used for a reinforced concrete building: 0.5 in/sec PPV. Visual effects from the construction staging area's noise walls are temporary. The Project would not diminish burial markers' integrity of location, design, materials, workmanship, feeling, or association. Effects to the burial markers' integrity of setting due to construction activities are minor and temporary. Therefore, the refinements would result in No Adverse Effect to the Los Angeles National Cemetery Burial Section with Markers.

Los Angeles National Cemetery Entrance Plaza

The Los Angeles National Cemetery's entrance plaza serves as the pedestrian access point from Wilshire Boulevard and is flanked by the two gatehouses previously described. The plaza has been altered since its original construction, including conversion of original pools and fountains into flower beds, construction of new gates and boundary fencing, and the addition of concrete paving. The plaza is located in an urban setting separated from most project refinements by Wilshire Boulevard and the elevated I-405. Significant project activities nearest the plaza include a temporary construction staging area surrounded by an approximately 20-foot-high temporary perimeter noise barrier wall associated with the Westwood/UCLA Station located approximately 615 feet to the east. Permanent and temporary elements associated with the Project would not be visible because of distance, the intervening urban environment, and perimeter trees. Noise and vibration levels associated with project refinements would not exceed the noise impact or damage risk criteria, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for the project alignment and tunnel size refinement. Temporary visual effects from the construction staging area's noise walls are minor and temporary. The Project would not diminish the entrance plaza's integrity of location, design, setting, materials, workmanship, feeling, or association. Therefore, the refinements would result in No Adverse Effect to the Cemetery Entrance Plaza.

Los Angeles National Cemetery Roads/Curbs/Walkways

The Los Angeles National Cemetery includes roads, curbs, and walkways forming a historic circulation pattern within and outside the cemetery and historic district boundaries. Many of these patterns are original, while others have been altered through the use of modern materials during cemetery maintenance activities. These circulation patterns are separated by most project refinements by Wilshire Boulevard and the elevated I-405. Project activities nearest the cemetery's roads, curbs, and walkways include a temporary construction staging area surrounded by an approximately 20-foot-high temporary perimeter noise barrier wall associated with the Westwood/UCLA Station entrances refinement located approximately 350 feet to the east. Vibration levels associated with project refinements would not exceed the damage risk criteria, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for the project alignment and tunnel size refinement. Visual effects from the construction staging area's noise walls are temporary. The Project would not diminish the integrity of location, design, materials, workmanship, feeling, or association for the cemetery's roads, curbs, or walkways. Effects to the roads, curbs, and walkways' integrity of setting due to construction are minor and temporary. Therefore, the refinements would result in No Adverse Effect to the Westwood/VA Roads/Curbs/Walkways.

Los Angeles National Cemetery Perimeter Trees

The Los Angeles National Cemetery is separated from Wilshire Boulevard by a series of evergreen and deciduous street trees located within and outside the cemetery and historic district boundaries. These perimeter trees act as a buffer between the cemetery and the developed, urban area along Wilshire Boulevard; there are no historic views to or from the trees themselves and no trees would be directly affected by the Project. Project activities nearest the perimeter trees include a temporary construction staging area surrounded by an approximately 20-foot-high temporary perimeter noise barrier wall associated with the Westwood/UCLA Station located approximately 75 to 410 feet to the east. Vibration levels associated with project refinements would not exceed the damage risk criteria, and TBM tunneling activities and haul train groundborne vibration levels would not exceed the established risk thresholds or Metro construction criteria for the project alignment and tunnel size refinement. The Project would not diminish the perimeter trees' integrity of location, design, materials, workmanship, feeling, or association. Effects to the perimeter trees' integrity of setting due to construction are minor and temporary. Therefore, the refinements would result in No Adverse Effect to the Cemetery Perimeter Trees.

Los Angeles National Cemetery

The Los Angeles National Cemetery contains many of the individual features described in this memorandum. Dedicated in 1889, the cemetery currently encompasses more than 114 acres. The cemetery is listed in the NRHP as part of the WLA VA Historic District and it is also individually eligible for listing in the NRHP. It is being evaluated individually here in its entirety because of its individual determination of eligibility. In the vicinity of the Los Angeles National Cemetery, the Project's tunnel would be approximately 60 feet below ground; the tunnel does not extend directly beneath the cemetery. The cemetery covers a broad area and is between 80 and 415 feet from the nearest proposed project work, including both proposed stations to the east and west and a temporary construction staging area for the Westwood/UCLA Station that would be surrounded by an approximately 20-foot-high temporary perimeter noise barrier wall.

No direct effects would occur to the Los Angeles National Cemetery; no work would involve the cemetery directly. TBM tunneling activities and haul train groundborne vibration levels would not exceed the established damage risk thresholds. Long term, revenue train operations would not exceed the FTA groundborne vibration criteria. Visual effects from the construction staging area's noise walls are temporary and would be minimized by the surrounding trees. The trees serve as a buffer to both construction-related visual effects and permanent project features. No direct or adverse indirect effects would occur to the Los Angeles National Cemetery, and no proposed work would adversely affect the cemetery's urban setting, which includes numerous busy roadways. The Project would not diminish the cemetery's integrity of location, design, materials, workmanship, feeling, or association. Effects to the cemetery's integrity of setting due to construction are minor and temporary. Therefore, the refinements would result in No Adverse Effect to the Los Angeles National Cemetery.

Finding of Effect: West Los Angeles Veterans Affairs Historic District

As discussed in the sections above, the WLA VA Historic District is the historic property that may be affected. Contributing elements within the historic district were individually assessed to determine how these elements could be affected by project refinements; however, the WLA VA Historic District in its entirety is the historic property for purposes of Section 106. Of the historic district's 400 acres, 226 acres are located within the APE.

Temporary Project-Related Features and Effects

Nearly all project-related effects are temporary. On a temporary basis, only approximately 4.1 acres (1.025 percent) of the historic district would be required for construction staging: the construction staging area on the west side of Bonsall Avenue for the Westwood/VA Hospital Station west crossover would require 1 acre, and the Western VA construction staging area would require 3.1 acres. No permanent effects would occur as a result of temporary construction easements used for construction staging areas. Construction staging areas within the WLA VA Historic District would be surrounded by an approximately 20-foot-high temporary noise barrier walls during construction and would be restored to their prior condition when construction is complete or as otherwise determined through coordination with the VA. Temporary visual effects would include the following:

- Approximately 20-foot-high-noise barrier walls.
- Electric tower crane that would be approximately 120 feet high with a horizontal boom length of approximately 160 feet.
- Vertical conveyor that would be approximately 30 feet above the ground surface, as would the transfer conveyors.
- Two vertical conveyor belt storage towers that would be erected adjacent to the tail track exit shaft. These towers would be 90 to 100 feet high and approximately 10 feet wide by 20 feet in length. The vertical conveyor belt storage towers would be enclosed to control noise and dust.
- The tail track exit shaft that would be approximately 90 feet in internal diameter and is the location from which the TBMs would be launched.
- Storage silos, approximately 40 to 50 feet in height, that would be located on the site. These would be enclosed structures, storing grouting materials for the TBM.

- Tree relocation and storage in areas along Bonsall Avenue and within and adjacent to the Palm-Tree Grid in order to minimize temporary disruption of the landscape features.

This construction-related equipment is temporary and construction staging areas would be restored to their prior appearance when construction is completed, or as otherwise determined through coordination with the VA. The tail track exit shaft would be entirely subsurface when construction is complete. It is anticipated that the equipment described above would be present for approximately three years. Vegetation would partially screen this construction activity, depending on the vantage point of the viewer. Visual simulations of the staging area are included as Figure 3-8 and Figure 3-9 in Section 3.8.2 of this memorandum. Other minimization measures, such as noise walls and measures to minimize potential atmospheric effects, are described above as they are related to the closest contributing element or important feature. None of these temporary construction-related activities would adversely affect character-defining features or affect the integrity of the WLA VA Historic District. The historic district would continue to convey its historic location, design, materials, feeling, association, and workmanship, and effects to the district's integrity of setting and feeling due to construction are minor and temporary.

Overall, the setting of the WLA VA Historic District has changed substantially in the vicinity of project construction activities and has diminished integrity. Busy elevated Wilshire Boulevard is located to the north, substantially bisecting this area of the medical center campus from the north campus. Additionally, I-405 is adjacent to the cemetery on its western edge. The roadways visually and audibly intrude on the historic district. To the east of the proposed cut-and-cover station box area, an expansive modern parking lot covered by solar panels occupies the area where the station entrance would be placed. Directly south of this area is the modern multi-story hospital facility. These areas have diminished integrity and would not be affected by the Project. Furthermore, they diminish the integrity of setting of the area to the east of Buildings 90 and 91 where station box construction would occur. The southwest side of the WLA VA Historic District includes the U.S. Army Reserve building and its large parking lot, which are located near the tail track exit shaft at the Western VA construction staging area. This area also has a diminished integrity of setting due to the prominence of this contemporary building and its proximity to the historic district. The historic district area comprising the temporary cut-and-cover construction method for the Westwood/VA Hospital Station west crossover and station box cavern activities previously included buildings according to historic mapping included in the district's 2014 NRHP nomination and has only appeared in its current state as a green space since the 1990s. As a result, the area has diminished integrity.

The areas where much of the proposed temporary project-related ground disturbance would occur include the cut-and-cover construction site for the station box and crossover as well as the location of the trail track exit shaft within the Western VA construction staging area. Project work at the cut-and-cover site would require Hadley Lane to be temporarily relocated slightly north of its current location. This area is currently landscaped in a random manner with a variety of plantings of varying types and ages. At this time, construction plans indicate that up to nine trees at the cut-and-cover site for the crossover and Westwood/VA Hospital Station may be affected by construction; they would be removed and replaced with either similar trees or trees selected by VA staff. The area comprising a majority of the temporary Western VA construction staging area for the tail track exit shaft is also landscaped in a random manner with a variety of plantings of varying types and ages. This area outside the Palm-Tree Grid was not identified as a contributing landscape feature and similarly is part of the WLA VA Historic District's setting that provides a natural, bucolic feel to the campus. The Western VA construction

staging area would require 14 palms within the Palm-Tree Grid to be temporarily removed, stored nearby within and adjacent to the grid, and replanted following construction or replanted with a substitute tree species as determined through consultation with the VA and SHPO. Of these, three are deceased and will be replaced with new palms of the same species. An additional 35 trees, mostly located along fences surrounding the VA WLA Campus, would be removed for the Western VA construction staging area. To ensure the appearance of an established landscape, construction activities would avoid impacting the four approximately 100-year-old mature Morton Bay fig trees (*Ficus macrophylla*) located along Wilshire Boulevard. Metro is working with VA staff to develop a plan to properly store and replant trees where able or to determine the location and species of trees to be replanted. After construction is complete, the landscape would be improved with healthy plantings in carefully selected locations.

Permanent Project-Related Features and Effects

Permanent surface easements within the WLA VA Historic District would be limited to 0.12 acre. This includes the area for the vents, access hatch within Hadley Lane, emergency exit hatch, and emergency egress walkway. Permanent subsurface easements, which would not be visible within the WLA VA Historic District, would be limited to 2.17 acres and include the Westwood/VA Hospital Station box, tunnel, and tail track exit shaft. Therefore, the total permanent features, both aboveground and below ground, would constitute 0.57 percent of the WLA VA Historic District.

Permanent aboveground features of the Project, including the station and pedestrian bridge, are located outside of the historic property boundary as defined in the 2014 NRHP documentation. The majority of work within the historic district boundary is temporary and areas disturbed would be returned to the prior or an improved condition as determined through consultation with the VA, with the exception of ground-level hatches and grates required for emergency egress and ventilation as well as a short gravel path leading to Wilshire Boulevard from the emergency exit hatch near the Palm-Tree Grid. One subsurface access hatch that would be covered would be located within Hadley Lane, which would be widened slightly, while an emergency exit hatch with an accompanying gravel path would be located just within the Palm-Tree Grid on the western edge of the WLA VA Historic District.

Additionally, a series of approximately six small ventilation grates (three on each side) would be placed approximately 100 feet apart outside of the station box area south of Hadley Lane. These grates are required because the station is in a methane-dense area. Metro originally planned to place these grates on the sidewalk at the edge of the historic district; however, during consultation, VA asked that the vents be placed within the grassy area rather than the sidewalk to avoid an accessibility issue to disabled veterans who may use the sidewalk. Three additional ventilation grates would be located near the historic district's western boundary adjacent to the U.S. Army Reserve site's parking lot and at the former location of the tail track exit shaft. These permanent project features within the WLA VA Historic District, although raised 6 inches above grade to prevent water intrusion, would be encircled by a sloped grassy berm to minimize their visual effect despite their location at the edge of the historic district in an area adjacent to the modern U.S. Army Reserve property. Their low profiles would be unobtrusive to the district's setting (Figure 3-16). Metro considered placing the three ventilation grates and emergency exit hatch in the sidewalk along Wilshire Boulevard; however, doing so would have required removal of the four 100-year-old mature Morton Bay fig trees (*Ficus macrophylla*) and further diminished an already compromised integrity of setting within the historic district.

The proposed project work would not affect the character-defining features of any contributing resources and would not diminish the district's integrity of location, design, materials, workmanship, or association. Effects to the district's integrity of setting and feeling due to construction are minor and temporary. Therefore, the Project would have No Adverse Effect on the WLA VA Historic District.

Cumulative Effects

The Section 106 regulations at 36 CFR 800.5 note that "Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative." While there have been prior changes to the WLA VA Historic District unrelated to the WPLE Project, the project refinements would not result in a cumulative adverse effect. Most of the effects to the historic district would be temporary, and affected areas would be restored or improved at the completion of construction.

For this undertaking, all prominent project elements would be located outside the historic district within an existing, approximately 5-acre parking lot that currently contains large solar arrays. This location was chosen due to its proximity to the existing VA Medical Center facilities, development potential, and ability to avoid adverse effects to the WLA VA Historic District. Smaller permanent project elements, including grates, a gravel walkway, and hatches, would be located within the WLA VA Historic District but would be at ground-level and unobtrusive to the district's setting.

A reasonably foreseeable future and separate undertaking, the VA *Greater Los Angeles Campus Draft Master Plan* (GLA DMP) (VA 2016), proposes changes within a minimum 50-acre area that occurs adjacent to and outside the historic district property boundary. These GLA DMP changes include alterations to pedestrian and vehicular circulation patterns, new buildings, and increased green space. In general, these alterations occur outside the WLA VA Historic District and APE boundaries in areas where the WPLE Project has no effects and where the setting has been altered continuously since the campus' development through new building construction and parking, circulation, and power infrastructure. While the WPLE Project would likely bring more visitors to the VA WLA Campus, most visitors would not be receiving services within areas of the WLA VA Historic District that are affected by the Project. The creation of transit service would not result in an adverse effect.

Because FTA has no role in developing or evaluating the GLA DMP, the VA may determine during its Section 106 review the plan's effects on the WLA VA Historic District and whether the existing circulation patterns and buildings within the GLA DMP area are significant and warrant inclusion in an expanded NRHP historic district that includes resources comprising the Third Generation Veterans Hospital era (1946-1958). These buildings, landscapes, and circulation patterns are outside the project APE and were not assessed as part of this undertaking. The GLA DMP was developed independent of the current undertaking and its contents are not a "reasonably foreseeable effect" caused by the Project. FTA cannot otherwise avoid, minimize, or mitigate effects to historic properties pursuant to 36 CFR 800 due to the VA's future plans for its own property, and it is assumed the GLA DMP would be implemented with or without completion of the WPLE Project. As a result, the WPLE Project would have no adverse cumulative effect on historic properties. It is recommended that the VA consider cumulative effects during its Section 106 review for the GLA DMP and avoid, minimize, or mitigate the undertaking's effects as necessary due to plans proposing substantial changes to the area's setting and feeling through construction of new facilities, parking structures, and buildings, including a new multi-story hospital.

The work associated with the WPLE Project would not affect the character-defining features of any contributing elements and would not diminish the district's integrity of location, design, materials, workmanship, or association. Effects to the district's integrity of setting and feeling due to construction are temporary. Therefore, the Project would have No Adverse Effect on the WLA VA Historic District.

3.19.2.2 Linde (Westwood) Medical Plaza

Built in 1960-61, the International-style Linde (Westwood) Medical Plaza at 10901-10921 Wilshire Boulevard is a single complex located on the northwest corner of the Westwood Boulevard–Wilshire Boulevard intersection. Designed by Paul Revere Williams, the complex comprises five distinct design components: a 12-story tower (comprising approximately 85,000 square feet); a single-story, curved-glass section on the southwest corner of the tower (comprising approximately 28,800 square feet); a single-story glass box form comprising the Chase Bank retail space attached to the tower's east side (comprising approximately 6,500 square feet); a three-story parking garage; and a landscaped plaza. The Linde (Westwood) Medical Plaza was determined eligible for listing in the NRHP under Criterion C and in the California Register of Historic Places under Criterion 3.

The complex has undergone multiple interior, exterior, and landscape alterations in the time since its construction based on a permit and records search. In particular, the complex's retail Chase Bank space and landscaped plaza with trees have been substantially altered so much so that they no longer retain integrity of design, materials, workmanship, feeling, or association and retain only a moderate degree of integrity of setting. The California Department of Parks and Recreation form for the Linde (Westwood) Medical Plaza was updated to reflect the additional information regarding the property's alterations and remaining integrity. This form is located in the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) included in Appendix B.

Project refinements in the vicinity of the Linde (Westwood) Medical Plaza include the Westwood/UCLA Station entrances and were developed through Section 106 consultation. The northeastern entrance of the Westwood/UCLA Station would be located in the space currently occupied by Chase Bank, requiring reconstruction of the one-story space while retaining and reinstalling original materials where feasible. The proposed station entrance would be of similar dimensions and massing compared to the footprint currently occupied by the Chase Bank. Additionally, the station entrance design would replicate and replace the building's original design characteristics and details removed since the building's construction in 1960-61 to the extent feasible. Four raised planters containing trees and located within the altered landscaped plaza fronting the Chase Bank retail space would be permanently removed. The planters have been altered since they were originally installed. These landscaped elements were determined to no longer contribute to the property due to a loss of integrity resulting from numerous alterations. Although the mature palm trees are original plantings, a recently completed inspection by a certified arborist indicated these large trees are nearing the end of their lifespan (Arborgate Consulting Inc. 2017b). While the palm trees along Wilshire Boulevard are a prominent feature, the majority of street trees along this roadway are significantly shorter and of a more human scale. Therefore, the palm trees are not consistent with the overall setting and feeling of the roadway and removing them would have no adverse effect.

When the lack of integrity of the Chase Bank retail space is considered, a careful design for the station entrance located within the Chase Bank retail space that does not detract from the greater complex and respects Paul Williams' original design intent results in a refinement with No Adverse Effect to the Linde (Westwood) Medical Plaza.

3.19.2.3 (Westwood) Federal Building

Built in 1968-1969, the Formalist-style (Westwood) Federal Building at 11000 Wilshire Boulevard is a federal office complex designed by Charles Luckman and Associates comprising an 18-story tower along Wilshire Boulevard; a central, single-story lobby on the tower's south-facing facade elevation; and two single-story buildings joined by covered walkways that form a courtyard in front of the lobby. The complex was determined eligible for listing in the NRHP under Criteria A and C. For a detailed property description, consult the California Department of Parks and Recreation series 523 forms #19-189274 (Update) contained in Appendix B of the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c).

The tunnel would be approximately 60 feet below ground in this area and cross into the (Westwood) Federal Building complex's historic property boundary on its northwest corner; however, none of the complex's built elements are located above the tunnel and the nearest complex built element, the 18-story tower, is approximately 115 feet from the Project at its closest point. No aboveground project components are in its immediate vicinity. The complex is located between the Westwood/VA Hospital Station, which is approximately 1,030 feet to the west and the Westwood/UCLA Station, which is approximately 550 feet to the east. In addition to the tunnel, a construction staging area and grouting activities located between the I-405 on-ramp and Sepulveda Boulevard would be approximately 110 feet west of the complex's historic property boundary and 365 feet west of the complex buildings. The complex buildings are also located approximately 325 feet southwest from the construction staging area at Wilshire Boulevard and Veteran Avenue located within Lot 36.

No direct effects would occur to the (Westwood) Federal Building complex; no work would involve the complex directly and project activities within the historic property boundary are limited to tunneling activities. Because of the distance and the intervening urban environment and roadway system, the aboveground components of the Westwood/VA Hospital and Westwood/UCLA Station entrances would not be prominent visual features and would not be visible at all from most vantage points from the (Westwood) Federal Building complex. Construction-related visual effects and permanent project components would not be visible from the complex because of the distances of the proposed work. Views toward construction staging and grouting activities located between the I-405 ramp and Sepulveda Boulevard are completely screened by the ramp and existing vegetation.

TBM tunneling activities and haul train groundborne vibration levels would not exceed the established damage risk thresholds. Long term, revenue train operations would not exceed the FTA groundborne vibration criteria. The complex does not have a use that makes it sensitive to groundborne noise from either construction or operations. Construction-related noise would not exceed Los Angeles County construction noise limit of 75 dBA. As a result, no adverse indirect effects from visual, noise, or vibration effects would occur. There would be no change to the complex's integrity of location, design, setting, materials, workmanship, feeling, or association. Therefore, the refinements would result in No Adverse Effect to the (Westwood) Federal Building.

3.19.2.4 Summary

When evaluating project effects to the three historic properties within the APE—the WLA VA Historic District/VA Medical Center Historic District (which includes the Wadsworth Chapel and News Stand (Streetcar Depot), which are individually listed in the NRHP, and the Los Angeles National Cemetery, which is individually eligible for listing), the Linde (Westwood) Medical Plaza, and the (Westwood)

Federal Building— FTA and Metro have determined that the project refinements would have No Adverse Effect on historic properties.

3.19.3 Archaeological Resources

The following sections summarize the archaeological research and field work conducted in support of the project refinements. Detailed information is included in the *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f) included in Appendix B.

Construction of the underground conduits (Section 2.9) would require trenches that are a maximum of 10 feet in depth within existing roadway right-of-way. These conduits would be within the depth of disturbance for prior roadway construction activities, such as construction of utilities. If archaeological resources had been present in this location, they would have been identified during prior construction activities. Therefore, the underground conduits do not have the potential to affect archaeological resources.

3.19.3.1 Record Searches, Review of Historical Data, and Consultation

In support of the Draft and Final EIS/EIR, qualified archaeologists conducted records searches on May 14, 2008, April 20, 2009, and April 21 and 28, 2011, at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. The SCCIC is a branch of the California Historical Resources Information System. No archaeological resources were identified within the APE during these searches. A supplemental records search for the revised APE was conducted at the SCCIC by a qualified archaeologist on January 26, 2017, to determine if any newly identified resources had been recorded since the record search completed for the Draft and Final EIS/EIR. The supplemental record searches were negative for previously recorded archaeological resources within the expanded archaeological APE. However, a portion of the expanded archaeological APE is located within Subarea 2 of the WLA VA Historic District, a NRHP listed property. The National Register nomination for the WLA VA Historic District is included as Appendix G to this memorandum; refer to “Additional Documentation” Page 73 for a map of the subareas associated with the WLA VA Historic District.

On November 3, 2017, the Native American Heritage Commission (NAHC) responded to a search request that the Sacred Lands file indicated that a sacred land had been recorded within the expanded APE. The NAHC suggested contacting Chief Anthony Morales of the Gabrieleno Tongva San Gabriel Band of Mission Indians regarding the sacred land. On November 15, 2017, Chief Morales reported that he did not know of any sacred lands within the APE but did indicate the presence of sacred village site Kuruvungna (also known as Serra Springs), located outside the APE. He also stated that the project footprint may be sensitive for cultural resources since Wilshire Boulevard was used as a tribal trading route. Chief Morales requested Native American monitoring for any excavation conducted during any extended archaeological identification and during project construction.

Since Chief Morales did not recall submitting a sacred land to the NAHC that was within the expanded APE, a supplemental cultural resources records search was conducted at the SCCIC on December 14, 2017, to obtain additional information about the sacred land. No new sacred lands were identified. On January 2, 2018, the NAHC indicated since Chief Morales had no concerns regarding potential impacts to the sacred land, Metro’s due diligence was fulfilled and no further action was necessary.

Consultation also occurred with representatives of Native American tribes identified by the NAHC in 2017. On December 26, 2017, FTA sent letters to representatives of the following tribes: Fernandeno

Tataviam Band of Mission Indians, Gabrielino-Tongva Tribe, Gabrielino Tongva Indians of California Tribal Council, Gabrielino/Tongva Nation, Gabrieleno Tongva San Gabriel Band of Mission Indians, San Fernando Band of Mission Indians, and Gabrieleno Band of Mission Indians – Kizh Nation. This letter invited the tribes to provide information on traditional cultural properties, sacred sites, and potential archaeological sites within the project area. Refer to Section 4.5.2 for a summary of tribal consultation. On January 17, 2018, Metro sent letters to consulting parties who participated in earlier project phases, as well as consulting parties identified by the VA. A list of the parties who received these letters is provided in Section 4.5.1 of this memorandum. A representative of the Muller Company responded to the letter provided by Metro indicating she was not aware of any archaeological sites, sacred sites, and/or traditional cultural properties located in the area of the revised Area of Potential Effect (APE). The Veterans Park Conservancy confirmed they have no additional comments. Further information on the consultation is included in Section 4.5.2 of this memorandum as well as Section 3.4 of the *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f) included in Appendix B.

Mr. Robert Dorame spoke with representatives of the FTA on January 9, 2018, and stated there are major Indian burial sites near Kuruvungna (Serra Springs) located southwest of the VA WLA Campus outside the Project's APE. Mr. Dorame also identified a potential for artifacts west of I-405 and the presence of a dry creek bed near the helipad on the VA WLA Campus. Mr. Dorame also requested to be a cultural monitor during project construction. A meeting was held with Mr. Dorame on May 31, 2018, during which Mr. Dorame provided additional information regarding the cultural sensitivity of the vicinity around the revised APE. No specific information was obtained about archaeological sites or features or resources that meet the definition of tribal cultural resources known to be present within the revised APE.

Consultation also occurred with representatives of the Gabrieleno Band of Mission Indians – Kizh Nation on February 15, 2018. The Kizh provided information about tribal use of the general WPLE Project area, but did not provide specific information about archaeological sites, features, or resources meeting the definition of tribal cultural resources known to be present within the expanded APE. The Kizh requested a tribal monitor be present during construction of Section 3.

In addition to tribes, consultation was reinitiated by the FTA and Metro with the SHPO, ACHP, and the VA in summer 2017 to receive feedback on the proposed project modifications and refinements. Metro coordinated extensively with cultural resources staff from the VA, including the VA's Federal Preservation Officer (FPO), in support of compliance with Section 106. Consultation included a site visit on July 17, 2017, during which Metro discussed project elements within proximity to Section 106 resources on the VA WLA Campus. Representatives of the VA also discussed the potential of finding archaeological resources during construction.

To address the VA's concerns regarding archaeological resources, Metro conducted archaeological surveys on the VA WLA Campus within the footprint of construction activities as well as an adjacent Caltrans infiltration basin (also referred to as a BMP area) located west of I-405 and south of Wilshire Boulevard, which would be used for a construction staging area to identify locations of archaeological sensitivity. A summary of the coordination related to these surveys is provided in Section 4.5.1 of this memorandum; the results of the surveys are provided in Section 0.

In January 2018, the SHPO alerted FTA and Metro that the (Westwood) Federal Building on the GSA property was determined to be eligible for listing in the National Register of Historic Places in December 2016. On March 13, 2018, FTA and Metro sent a letter to the GSA's FPO with a description of the WPLE Project in proximity to the Federal Building and requested comments on historic preservation issues. The GSA FPO responded to FTA and Metro on April 11, 2018, stating that GSA looked forward to reviewing the Effects Report and working with FTA and Metro throughout the duration of the Project. The FPO also provided a list of staff who should be included on correspondence.

On May 22, 2018, FTA and Metro hosted a teleconference with Section 106 consulting parties. Representatives of the following tribes, agencies, or organizations participated in the meeting: ACHP, SHPO, City of Beverly Hills Historic Preservation Division, the VA, Gabrieleño Band of Mission Indians – Kitz Nation, Gabrieleño/Tongva San Gabriel Band of Mission Indians, and Veterans Park Conservancy. FTA and Metro provided an update on the Project, including an overview of the project refinements and status of Section 106 evaluation for both historic and archaeological resources. FTA and Metro responded to comments received from the consulting parties.

On June 22, 2018, FTA sent letters to consulting parties via email with a letter sent via U.S. Postal Service on June 23, 2018, requesting comments on the revised APE for the Project (refer to Section 3.19.1 for further information). Two responses were received stating that there were no comments on the revised APE. The VA provided a comment on the revised APE in August 2018. On September 18, 2018, FTA provided the revised APE to SHPO for concurrence. In a letter dated October 15, 2018, SHPO stated that the expanded APE is sufficient for the undertaking, per 36 CFR Section 800.4(a)(1) and that FTA may have future responsibilities pursuant to 36 CFR 800 if unanticipated discoveries or a change in the project description or method of implementation were to occur. This letter from SHPO is included in Appendix F.

On July 5, 2018, a copy of the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) was provided electronically to consulting parties for review and comment. In addition, on July 5, 2018, a copy of the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) and the *Westside Purple Line Extension Project Section 3 Archaeological Extended Identification Report* (Metro 2018f) was provided electronically to tribes for review and comment. The VA provided written comments in August 2018; these comments were considered and incorporated into the Historic Properties Reassessment of Effects Report. The *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c), the *Westside Purple Line Extension Project Section 3 Archaeological Extended Identification Report* (Metro 2018f), and the updated California Department of Parks and Recreation form for the Linde (Westwood) Medical Plaza was provided to SHPO for review on November 8, 2018. SHPO concurred with the determination of No Adverse Effect to project refinements as a result of the project refinements on December 12, 2018. However, because of the demolition of Ace Gallery, the Project's previous adverse effect assessment is maintained.

As summarized in Section 4.5.1, FTA, Metro, and VA have met on several occasions to discuss use of the archaeological sensitivity model in the analysis for the WPLE Project as well utilizing archaeological monitors during construction of the WPLE Project in compliance with this model. On September 11, 2018, the VA requested that the archaeological sensitivity for locations that will be used to temporarily store the relocated palm trees be assessed consistent with the model. Metro agreed to include archaeology monitors during relocation of the trees and noted that the request is similar to the

requirement for other construction activities. The VA noted that the presence of tribal monitors would be required if requested by tribes. The VA also emphasized its role in the Native American Graves Protection and Repatriation Act process, stating that the VA must be notified first for certain archaeological discoveries in addition to the presence of human remains.

Refer to Appendix C of the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) for correspondence and other coordination materials. Further discussion of Section 106 consultation is included in Section 4.5. Because the NRHP-listed WLA VA Historic District Subarea 2 was identified within the APE, supplemental historical research was conducted to identify potential subsurface archaeological resources. The construction staging area west of Bonsall Avenue associated with construction of the Westwood/VA Hospital Station west crossover (referred to in this section as Construction Staging Area 2A), the Western VA construction staging area (referred to in this section as Construction Staging Area 1), and the underground alignment are located within Subarea 2 of the WLA VA Historic District. The construction staging areas located east of Bonsall Avenue and within Lot 42 (referred to as Construction Staging Area 2B), within the Caltrans infiltration basin south of Wilshire Boulevard and west of I-405 (referred to as Construction Staging Area 3), and the work area for the parking structure in Lot 43 (referred to as Parking Structure and Construction Area 4) are located outside the historic district.

A 1910 map depicts the location of the original NHDVS hospital as just east of Bonsall Avenue, where the Construction Staging Area 2B, the WPLE alignment, and the Westwood/VA Hospital station box are proposed (Santa Monica Land and Water Board Company 1910). It is estimated that the original hospital existed in this location from 1888 to around 1925. The Wadsworth Hospital that was in use in 1930 was located outside of the expanded archaeological APE; however, several barracks and quarters were in use at that time within the expanded APE. The historic map information suggests that subsurface building foundations may exist within this construction staging area and the related WPLE alignment and station box. Extensive ground disturbance has occurred within this construction staging area as well as Construction Staging Area 2A located west of Bonsall Avenue with the installation of various utilities and solar panels. Further, 26 geotechnical bores were completed to a depth of 50 feet within or in close proximity to Construction Staging Areas 2A and 2B; no evidence of intact archaeological deposits was encountered.

Beneath the paved surface of Construction Staging Area 1, the remains of the Los Angeles Pacific Railroad tracks may exist, as well as associated historic debris. One geotechnical bore was completed to a depth of 50 feet within this construction staging area; no evidence of intact archaeological deposits was encountered.

There is no evidence of buildings or structures within Construction Staging Area 3 as far back as 1894. The current stormwater facility appears to have been constructed around 2011 and included substantial excavation and grading. This area was surveyed three times prior to the grading with no cultural resources observed and none were reported during the grading.

Regarding Parking Structure and Construction Area 4, in 1910, a group of seven buildings, identified as the O.T. Shop stood at the very northern boundary of this area. Five buildings (Buildings 71-74 and 89, Duplex Quarters) were located along the western edge in 1930. By 1950, only one small building was extant. No buildings were present by 1966.

Based on the results of this analysis, subsurface historic deposits may be encountered in Construction Staging Areas 1, 2A, 2B and Parking Structure and Construction Staging Area 4.

3.19.3.2 Sensitivity Analysis Based on Buried Site Sensitivity Model for the VA WLA Campus (Onken et al. 2018)

After the Project Archaeologist conducted supplemental research during late 2017 and early 2018, Onken et al. (2018) completed buried site sensitivity modeling in order to predict where prehistoric and historic archaeological resources are most likely to occur within the VA WLA campus. This model was created in support of the Department of Veterans Affairs' preparation of a new Master Plan for the VA WLA Campus. Using Esri ArcGIS 10.3.1 software, the model used information regarding surficial geology, soils, pre-development slope, locations of prehistoric sites, locations of springs, locations of areas previously mechanically graded, and the locations of built environment resources to produce sensitivity maps that characterized areas of the VA WLA Campus as high, moderate, low, or very low sensitivity for buried prehistoric or historic archaeological resources. Refer to the *Westside Purple Line Extension Project Section 3 Archaeological Extended Identification Report* (Metro 2018f) for a description of the characteristics associated with each level of sensitivity.

Onken et al. (2018) recommended fulltime archaeological monitoring for areas identified as having moderate or high sensitivity, with a particular focus on the high sensitivity areas. Spot-check monitoring was recommended for areas identified as having low sensitivity. No monitoring was recommended for those areas identified as having very low sensitivity. Onken et al. (2018) also recommended that Buried Site Testing could be conducted in order to verify or recategorize the sensitivity of various areas on campus.

Based on the sensitivity maps for buried prehistoric resources in Onken et al. (2018), a majority of the areas of direct impact and construction staging areas associated with the Project are located within areas identified as having low and very low sensitivity. The eastern edge of Construction Staging Area 2B and Parking Structure and Construction Staging Area 4 are identified as having high sensitivity for buried prehistoric resources.

Based on the sensitivity maps for buried historic resources in Onken et al. (2018), Construction Staging Areas 2A, 2B, and Parking Structure and Construction Staging Area 4 are located within areas identified as having high sensitivity. The northern portion of Construction Area 1 is identified as having low sensitivity, while the southern portion is identified as having moderate sensitivity for buried historic archaeological resources.

Onken et al.'s (2018) buried site sensitivity model is researched-based and uses information regarding surficial geology, soils, pre-development slope, locations of prehistoric sites, locations of springs, locations of areas previously mechanically graded, and the locations of built environment resources to produce sensitivity maps for buried prehistoric or historic archaeological resources. It describes various archival sources, which serve to inform identification efforts and characterize potential sensitivity at the VA WLA Campus. As with all models, there are limitations to research, which may not yield the same information as on-site investigations. However, models are useful tools to provide preliminary assessments of areas prior to on-site investigations.

This type of model is most useful when it is treated as a "living" document, continually updated as new information is available. Archaeological work in support of the Project has resulted in new information that

could be incorporated. Onken et al. (2018) did not include information from Native American tribal members. During Section 106 consultation for the Project, Chairman Dorame provided confidential information on the location of cultural resources (midden) and burials of which he had personal knowledge. The location of the cultural resources and burials are located outside of, but within 200 meters of, the revised APE for the Project, a sensitivity characteristic used in Onken et al.'s (2018) model.

Analysis was conducted for the Project using the same data set and methods as described in Onken et al. (2018) but also included the location of the cultural resources and burials identified by Chairman Dorame (Figure 3-17) and the results of GPR surveys. Results indicate Construction Area 1 should be high sensitivity for prehistoric resources, not low and moderate, as ranked by Onken et al (2018:7).

The buried site sensitivity model created by Onken et al. (2018) uses prehistoric site location information from Metropolitan Water District projects near Hemet, which is within the traditional territory of the Luiseño and Cahuilla; these projects are located in a different physical and cultural environment than the VA WLA Campus. Therefore, incorporating findings from the results of investigations on the Project would inform the sensitivity assessments presented in the model. Specifically, the Project on the VA WLA Campus is located within Tongva traditional territory, which consists of a coastal environment. The applicability of the model to this location would be augmented by use of cultural factors associated with the Tongva and coastal environments. Extensive work, including geoarchaeology, has been performed at Playa Vista that would be relevant to the VA WLA Campus.

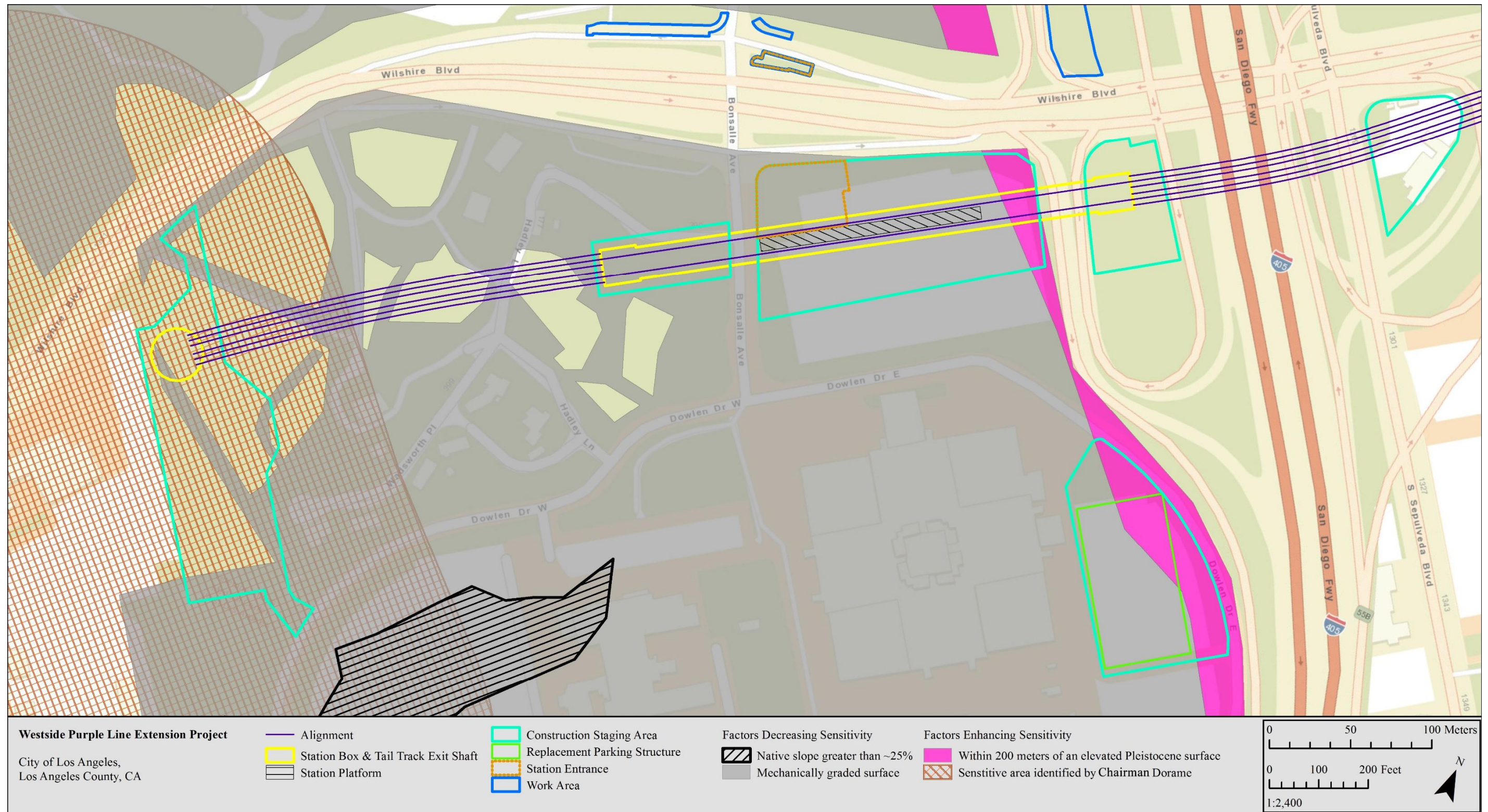
Finally, it appears that Onken et al. (2018) did not have access to the historic research, pedestrian survey, or GPR survey data obtained for this Project, which was being developed simultaneously. While GPR data has limitations, it provides actual on-site analysis compared to a research-based model and was used as part of the investigations at the VA WLA Campus. As discussed in Section 0 of this memorandum, the WPLE results, which used GPR analysis, show the possibility of encountering intact buried historic archaeological resources is moderate to low rather than high in Construction Staging Areas 2A, 2B, and Parking Structure and Construction Staging Area 4 as in the Onken et al. (2018) model. Overall, in all construction staging areas at the VA WLA Campus, the possibility of encountering intact buried historic archaeological resources is moderate to low rather than high as in the Onken et al. (2018) model.

3.19.3.3 Physical Investigation

To identify potential archaeological resources within the expanded APE that have not been previously documented, pedestrian and ground-penetrating radar (GPR) surveys were conducted. On July 17, 2017, a pedestrian survey on the VA WLA Campus was conducted by walking parallel transects, spaced at no greater than 15-meter intervals while closely inspecting the ground surface. Existing disturbances (e.g., rodent burrows, cut banks) were examined for artifacts or buried cultural deposits in areas that were not hardscaped or covered in dense vegetation.

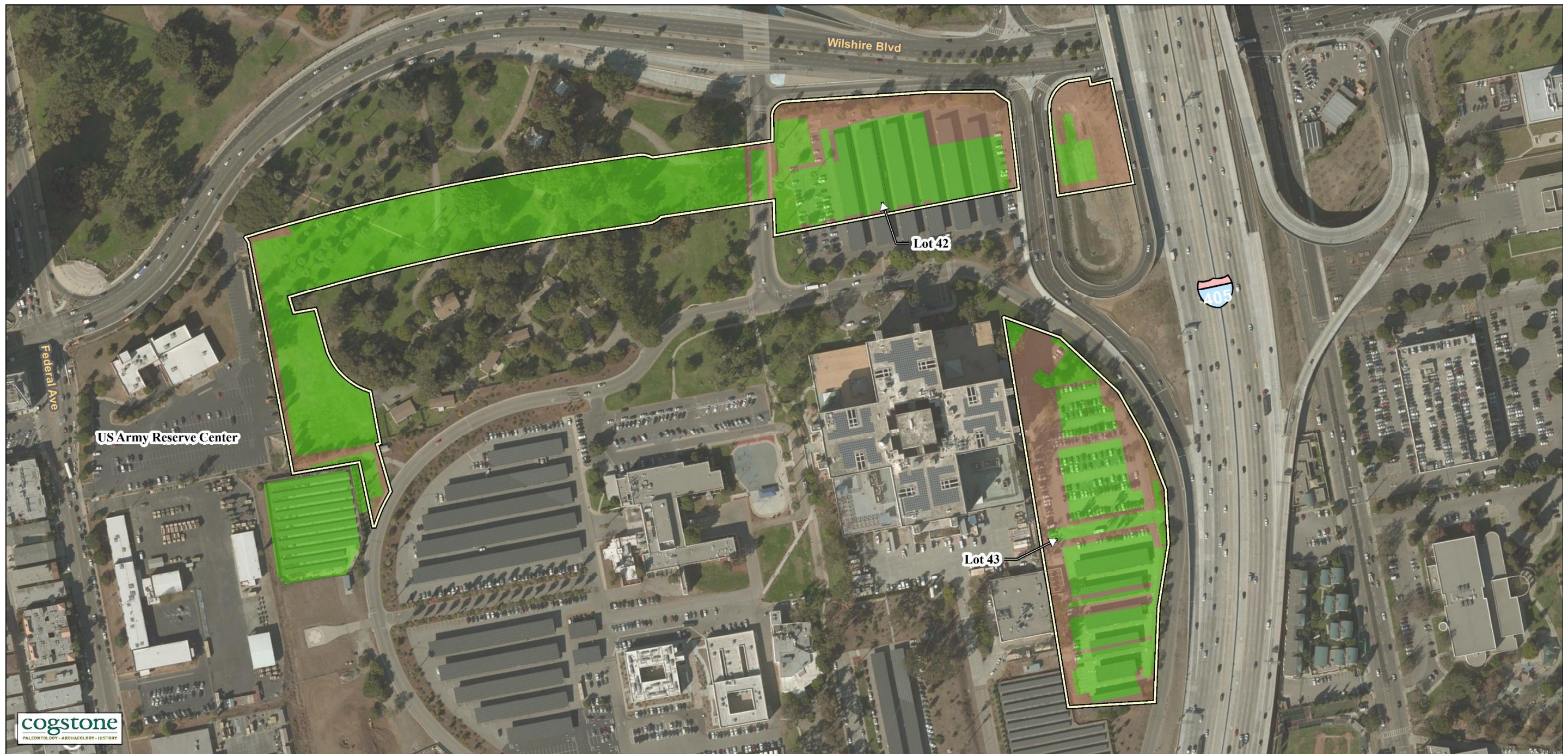
In consultation with the VA and FTA, GPR surveys were conducted in areas of direct impact as well as construction staging areas (Figure 3-18). GPR surveys were conducted from December 13 to 19, 2017; from January 4 to 7, 2018; and on January 12, 2018; and the resulting data were processed. Additional information on the approach for the surveys is provided in the *Westside Purple Line Extension Project Archaeological Extended Identification Report* (Metro 2018f) (included in Appendix B).

Figure 3-17: Sensitivity Factors for Buried Sites (Onken et al. 2018) with 200-Meter Buffer Around Cultural Resources Identified by Chairman Dorame



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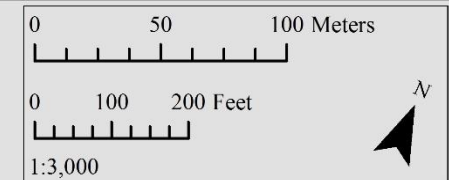
Figure 3-18: Locations of GPR Surveys



Westside Purple Line Extension Project

City of Los Angeles,
Los Angeles County, CA

- Location of GPR Surveys and Targeted Magnetometer Surveys (As Required)
- Not Surveyed
- Surveyed



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A number of areas were not surveyed due to the inability to completely clear vehicles, dense ground cover, landscaping, buildings, and concerns for equipment and personnel safety in steep areas. No GPR surveys were performed near active electrical conduits or significant metallic objects, including solar panels and pipeline areas. Electrical activity and interaction between the GPR equipment and the facilities could have damaged both. While these areas could not be subjected to direct GPR survey, they were considered to have undergone prior soil disturbance from pipeline installation as well as the electrical conduits and subgrade supports for the solar panel array; therefore, archaeological resources would not be anticipated within these areas.

3.19.3.4 Results of Physical Investigation

Pedestrian surveys were conducted within a total of 17.95 acres of the expanded APE. No cultural resources were observed. A total of 12.54 acres were surveyed with GPR. Visibility was hindered by hardscaping and landscaping. The areas of the archaeological APE within the Caltrans detention basin were fenced and thus were visually surveyed only. It should be noted the detention basin was excavated following a negative pedestrian survey by Caltrans archaeologists. No cultural resources were observed.

A total of 35 anomalies were identified as potential subsurface archaeological resources, with 27 located within and 8 located outside of the areas of direct impact and construction staging areas (Figure 3-19). All of the anomalies range in depth from 0.15 feet to 3.28 feet below ground surface. Three are very shallow, refilled pits located within Construction Staging Area 2B and the remainder appear to be small non-linear metallic objects. All anomalies are within the disturbance zone of prior ground disturbance. Based on these factors, none appear to have data potential. Twenty-two are located within Construction Staging Area 2B and five are located within Parking Structure and Construction Area 4. When compared to the 1910 and 1934 maps, 18 anomalies are co-located within or in close proximity to known buildings that are no longer extant. No GPR anomalies were identified within the WLA VA Historic District. Based on the results of the physical investigations and GPR analysis, the possibility of encountering intact buried historic archaeological resources is moderate to low rather than high as in the Onken et al. (2018) model. Refer to the *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f) included in Appendix B for additional information on the results of the GPR surveys.

3.19.3.5 Conclusions and Recommendations

No prehistoric or historic archaeological cultural resources were observed during pedestrian surveys in the APE. Pedestrian surveys were conducted originally in 2009 and 2011. The revised APE was surveyed in 2017. Visibility was hindered by hardscaping and landscaping. The areas of the revised APE within the Caltrans detention basin were fenced and thus were visually surveyed only. It should be noted the detention basin was excavated following a negative pedestrian survey by Caltrans archaeologists.

GPR studies of the area of direct impacts for construction, including construction staging areas as defined at that time, were conducted in December 2017 and January 2018. About 13 acres were surveyed with GPR. Areas not surveyed with GPR were due to presence of obstructions, including buildings, cars, solar panels, and steep slopes.

A total of 35 anomalies were identified subsurface, 27 of which are within limits of direct impacts or construction staging areas associated with the Project. These anomalies were located within VA Parking Lots 42 and 43. No GPR anomalies were identified within the WLA VA Historic District. All of the

anomalies range in depth from 0.15 foot to 3.28 feet below ground surface; all within the zone of prior ground disturbance for prior building, demolition, and grading for parking lots. Three anomalies are interpreted as shallow refilled pits, and the remainder appear to be small non-linear metallic objects.

When compared to the 1910 and 1934 maps, 18 anomalies are co-located within or in close proximity to known buildings that are no longer extant. The shallow refilled pits may represent removal of prior foundations as nothing that appears structural in nature has been identified through surveys. The scattered metallic objects may be rebar or other refuse. No anomalies appear to represent intact archaeological features or deposits.

Buried prehistoric sensitivity based on Onken et al.'s (2018) model at the locations of the construction staging areas and tunnel alignment is shown in Figure 3-7 in the *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f). As shown, most of the areas of construction activity are identified as low or very low sensitivity, with the exception of high sensitivity along the eastern edge of Construction Areas 2B and 4. Addition of new data to the Onken et al.'s (2018) buried site sensitivity model results in a change from low and moderate sensitivity to high prehistoric sensitivity for Construction Area 1. In addition, it results in a change from high sensitivity to moderate-to-low sensitivity for Construction Areas 2A, 2B, and 4.

Buried historic sensitivity based on Onken et al.'s (2018) model at the locations of the construction staging areas and tunnel alignment is shown in Figure 3-8 in the *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f). As shown, the majority of the tunnel alignment and all of Construction Areas 2A, 2B, and 4 are identified as high sensitivity while Construction Area 1 identified as moderate sensitivity in the north and low sensitivity in the south. Based on the results of the physical investigations and GPR analysis, the possibility of encountering intact buried historic archaeological resources is moderate to low rather than high as in the Onken et al. (2018) model.

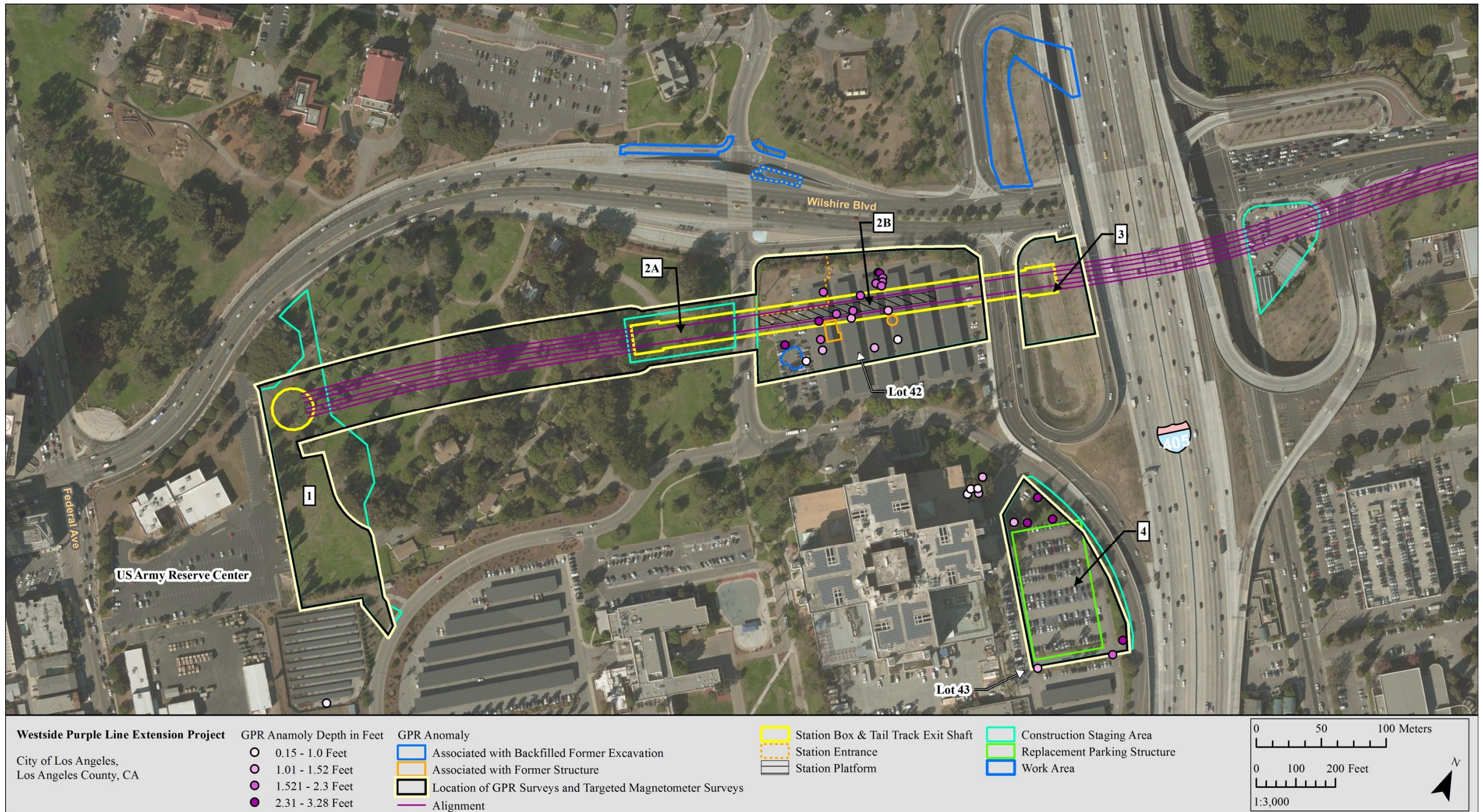
To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

- A. Is associated with events that have made a significant contribution to the broad patterns of our history
- B. Is associated with the lives of persons significant in our past
- C. Embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction
- D. Has yielded, or may be likely to yield, information important in history or prehistory

In addition, the property must retain enough integrity to convey its period of significance. Integrity includes location, design, setting, materials, workmanship, feeling, and association. The criteria of eligibility are applied first and then resource integrity is considered.

Research has not revealed any historically important events or persons associated with potential archaeological resources within the expanded APE that differ from the criteria for the WLA VA Historic District. Criterion C might apply if intact structures were present subsurface, but none are known.

Figure 3-19: GPR Anomalies



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Criterion D is typically applied to archaeological deposits and has two requirements, which must both be met for a property to qualify:

- The property has yielded or is likely to yield information important to our understanding of human history or prehistory, and
- The information must be considered important.

Under the first of these requirements, a property is eligible if it has been used as a source of data and contains more, as yet unretrieved data. A property is also eligible if it has not yet yielded information but, through testing or research, is determined a likely source of data.

Under the second requirement, the information must be carefully evaluated within an appropriate context to determine its importance. Information is considered "important" when it is shown to have a significant bearing on a research design that addresses such areas as: 1) current data gaps or alternative theories that challenge existing ones, or 2) priority areas identified under a state or federal agency management plan.

The current WLA VA Historic District was found eligible for its contribution to the "development of a national policy for Veteran health care" and as a "tangible manifestation of the federal government's commitment to the health care of Veterans of World War I, which resulted in the nation's largest network of hospitals." The appropriate theme for evaluation within the expanded APE is VA Medical Uses and Staff Housing with a period of significance of 1923-1952 consistent with the known uses of this physical space.

As stated above, no features or other intact archaeological deposits have been identified through surveys and record searches completed to date. The three shallow backfilled pits and 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. As such, No Adverse Effects on known archaeological resources would occur.

3.19.3.6 Construction

In March 2012, the FTA and California SHPO executed the Project's 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 County, California with Metro as an invited signatory. Stipulation II pertains to archaeological resources and sets forth measures to be implemented during construction to reduce potential impacts to known archaeological historic properties and to undocumented archaeological resources, including human remains. Additionally, the Final EIS/EIR and Mitigation Monitoring and Reporting Program included the following mitigation measure related to archaeological resources: AR-1 (Unanticipated Discoveries and Consultation with Native American Individuals, Tribes and Organizations and Treatment of Cultural Remains and Artifacts).

Based on coordination with representatives of the VA in support of the updated Section 106 process, FTA and the VA will comply with the Native American Graves Protection and Repatriation Act in the case of unanticipated discoveries of human remains on the VA WLA Campus. If unanticipated human remains are identified on the VA WLA Campus during construction of Section 3 of the WPLE Project, Metro will alert the Director of the Greater Los Angeles Healthcare System of the discovery prior to proceeding in accordance with the applicable county, state, and federal laws and codes, including those in the WPLE Mitigation Monitoring and Reporting Program and the MOA, which will be revised to reflect this commitment along with the applicable timeframes.

Representatives of the VA have also requested to retain ownership to all materials recovered on the VA WLA Campus and will notify Metro of the specific protocols for preparing artifacts. Metro agrees that the VA can retain ownership for artifacts found on the VA WLA Campus during construction of the WPLE Project if those artifacts are related to prior uses of the area as a medical facility or other historic period uses. Treatment of artifacts that are determined to be associated with Native American individuals, tribes, and organizations would be in accordance with the Project's MOA, Stipulation IIA2 or as otherwise stipulated in the amended MOA. This stipulation requires that the expressed wishes of Native Americans be considered regarding disposition of prehistoric archaeological materials.

As part of the amendment to the MOA, a process will be determined for archaeological eligibility determinations and reporting results for resources identified on the VA WLA Campus during construction. The process will describe consultations with consulting parties (such as VA) and Native American tribes.

3.19.4 SHPO Concurrence

In support of the reevaluation of effects to historic and archaeological resources, FTA provided the revised APE to SHPO for concurrence on September 17, 2018, and concurrence was received on October 15, 2018. FTA provided the updated California Department of Parks and Recreation forms for the Linde (Westwood) Medical Plaza, the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c), *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f), arborist reports, correspondence with the VA, and a letter with the Finding of Effect for the project to SHPO on November 8, 2018. 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 Section 3. The prior finding of Adverse Effect remains unchanged for the WPLE Project.

3.19.5 Memorandum of Agreement

The Project had an executed MOA as part of the prior Section 106 assessments. Because of the project refinements, the MOA would require amendments. FTA has agreed to amend the MOA to include the VA as a signatory given the extent of proposed construction on the grounds of the VA WLA Campus and the potential effects to the WLA VA Historic District. The Advisory Council on Historic Preservation (ACHP) revised its initial position on February 5, 2018, and will be a signatory to the amended MOA.

The process to amend the MOA will begin following submission of this report. Draft text addressing minimization measures can be written, with revisions occurring after the consulting parties have reviewed the report and the SHPO has concurred with its contents. The final amended MOA will be reviewed by all signatories, including prior signatories, as well as the VA and the ACHP, which will be signatories to the amended MOA.

3.20 Growth Inducing Impacts

Chapter 4, Section 4.16 of the Final EIS/EIR considered growth-inducing impacts of the Project. Section 3 of the Project would not induce growth beyond that already anticipated in the regional plans and projections for the Southern California Association of Governments region or in local land and community plans. Section 3 of the Project is located within a densely developed urban area and would not extend into previously undeveloped areas. The Final EIS/EIR stated that growth could occur near stations from implementation of local and state land use policies or local planning objectives. However,

such growth would be consistent with adopted plans and policies. The land acquired for the Project is for the explicit use of the transit project and would not be used for joint development.

One refinement would result in an increase or extension of utilities—the underground conduits (Section 2.9). However, the conduits are for the exclusive use of Metro and, therefore, the conduits would not result in growth inducing impacts. The Westwood/VA Hospital Station entrances are located on the VA WLA Campus and development on the campus is at the discretion of the VA. The VA is currently undertaking updates to its Master Plan; it is anticipated that the Master Plan would consider the provision of a new subway station on the campus. Additionally, the Westwood/UCLA Station entrance in Lot 36 is on the UCLA campus and new growth in this location is at the discretion of the Regents of the University of California. Land acquired by Metro would be for the exclusive use of the transit project. Therefore, the impact conclusions of the Final EIS/EIR remain unchanged with implementation of the project refinements.

3.21 Cumulative Impacts

Chapter 4, Section 4.17.4 of the Final EIS/EIR summarized the cumulative impacts resulting from operation and construction of the Project for the transportation and environmental topics evaluated in Chapters 3 and 4 of the Final EIS/EIR. The following sections summarize the updated evaluation of cumulative impacts for the project refinements. The full evaluation is included in Appendix E of this technical memorandum. As demonstrated in the following sections, cumulative impacts during operation of the WPLE Project would not be adverse. During construction, impacts would be temporarily adverse but with the mitigation described in prior sections of this technical memorandum, these impacts would not be significant. Please refer to Section 3.19.2 for the cumulative impacts assessment for historic resources.

3.21.1 Proposed Projects

The cumulative impact evaluation in the Final EIS/EIR was based on the 2008 *Regional Transportation Plan* (SCAG 2008). This assessment has been updated in consideration of proposed projects in the City of Los Angeles, the UCLA Campus, and the VA WLA Campus. Since the completion of the Final EIS/EIR, new development projects have been planned or programmed within and adjacent to Section 3 station areas, including the Westwood/VA Hospital Station and the Westwood/UCLA Station. These areas formed the basis of the evaluation as the projects in these areas would be located in close proximity to the project refinements and, therefore, have the greatest potential to affect the cumulative impact findings contained in the Final EIS/EIR. The Section 3 cumulative analysis contained within this document accounts for anticipated cumulative growth within these areas, including growth from approved projects that are planned but not yet built in the City of Los Angeles, and planned and programmed projects identified in the GLA DMP and UC Capital Financial Plan (University of California 2014). The programmed projects identified in the GLA DMP and UC Capital Financial Plan are major projects that are planned for each campus, respectively.

The following cumulative analysis is based on conceptual site plans for the GLA DMP and improvements associated with the UC Capital Financial Plan (University of California 2014). Future development associated with these plans is dependent on funding and additional planning that is ongoing. The VA is currently developing a programmatic EIS for the GLA DMP, which would be subject to the VA's approval of the programmatic EIS and future planning efforts.

3.21.1.1 Projects within the City of Los Angeles

Table 3-27 lists the proposed projects in the City of Los Angeles that would be located approximately 1 mile from the Westwood/VA Hospital Station and Westwood/UCLA Station areas; the locations of the projects are shown on Figure 3-20. In general, the proposed projects include multi-family apartments, mixed-use, hotel, office, and commercial uses. In total, the proposed projects would consist of up to approximately 258,000 square feet of new development, up to 134 new hotel rooms, and up to 831 new multi-family dwelling units. The timing of these projects is currently unknown; however, for the purposes of this analysis it is assumed that construction of these projects would occur concurrently with construction of the WPLE Project. Further, it is assumed that all projects would be complete during operation of the WPLE Project.

Table 3-27: Proposed Projects within One Mile of Station Areas

	Project	Description	Land Use Designation	Address	Distance to Station Area (mile)	Status*
1.	Apartments	24 DU to 46 DU	Medium Residential	625 S. Barrington Ave.	0.9 Westwood/VA Hospital Station	Under construction
2.	Apartment building	31 DU	High Medium Residential	11024 W. Strathmore Dr.	0.6 Westwood/UCLA Station	Completed
3.	Medical office and retail	38,539 SF	Community Commercial	10970 Le Conte Ave.	0.4 Westwood/UCLA Station 0.8 Westwood/VA Hospital Station	Under construction
4.	Cava Grill restaurant	2,328 SF	Community Commercial	1073 S. Broxton Ave.	0.2 Westwood/UCLA Station 0.7 Westwood/VA Hospital Station	Completed
5.	Mixed-use building apartment and retail	33 DU	Neighborhood Commercial	1855 S. Westwood Blvd.	0.9 Westwood/UCLA Station 1.0 Westwood/VA Hospital Station	Pending
6.	Westwood Hotel (hotel, condo, retail)	134 Room 10 DU 16,500 SF	Regional Commercial	10955 W. Wilshire Blvd	0.1 Westwood/UCLA Station 0.6 Westwood/VA Hospital Station	Pending
7.	Mixed-use apartment and retail/restaurant	376 DU 5,000 SF	General Commercial	11750 W. Wilshire Blvd	0.6 Westwood/VA Hospital Station	Pending
8.	The Picasso mixed-use apartment and retail	108 DU 13,000 SF	Community Commercial	12029 W. Wilshire Blvd	0.9 Westwood/VA Hospital Station	Under Construction
9.	Westside Family YMCA	65,000 SF	Public Facility	1466 S. Westgate Ave.	0.8 Westwood/VA Hospital Station	Completed
10.	Mixed-used apartment and retail	175 DU 45,000 SF	General Commercial	11800 W. Santa Monica Blvd	0.8 Westwood/VA Hospital Station	Under construction
11.	West Los Angeles Vons supermarket	53,000 SF	Neighborhood Commercial	11660 W. Santa Monica Blvd	0.7 Westwood/VA Hospital Station	Under construction
12.	Mixed-use apartment and restaurant	52 DU 3,300 SF	Neighborhood Commercial	1900 S. Sawtelle Blvd	0.9 Westwood/VA Hospital Station	Completed

	Project	Description	Land Use Designation	Address	Distance to Station Area (mile)	Status*
13.	Change of use from animal hospital to retail	7,600 SF	Light Manufacturing	1736 S. Sepulveda Blvd	0.8 Westwood/UCLA Station 0.7 Westwood/VA Hospital Station	Pending
14.	Mixed-use retail and office	9,235 SF	General Commercial	10700 W. Santa Monica Blvd	0.9 Westwood/UCLA Station	Completed

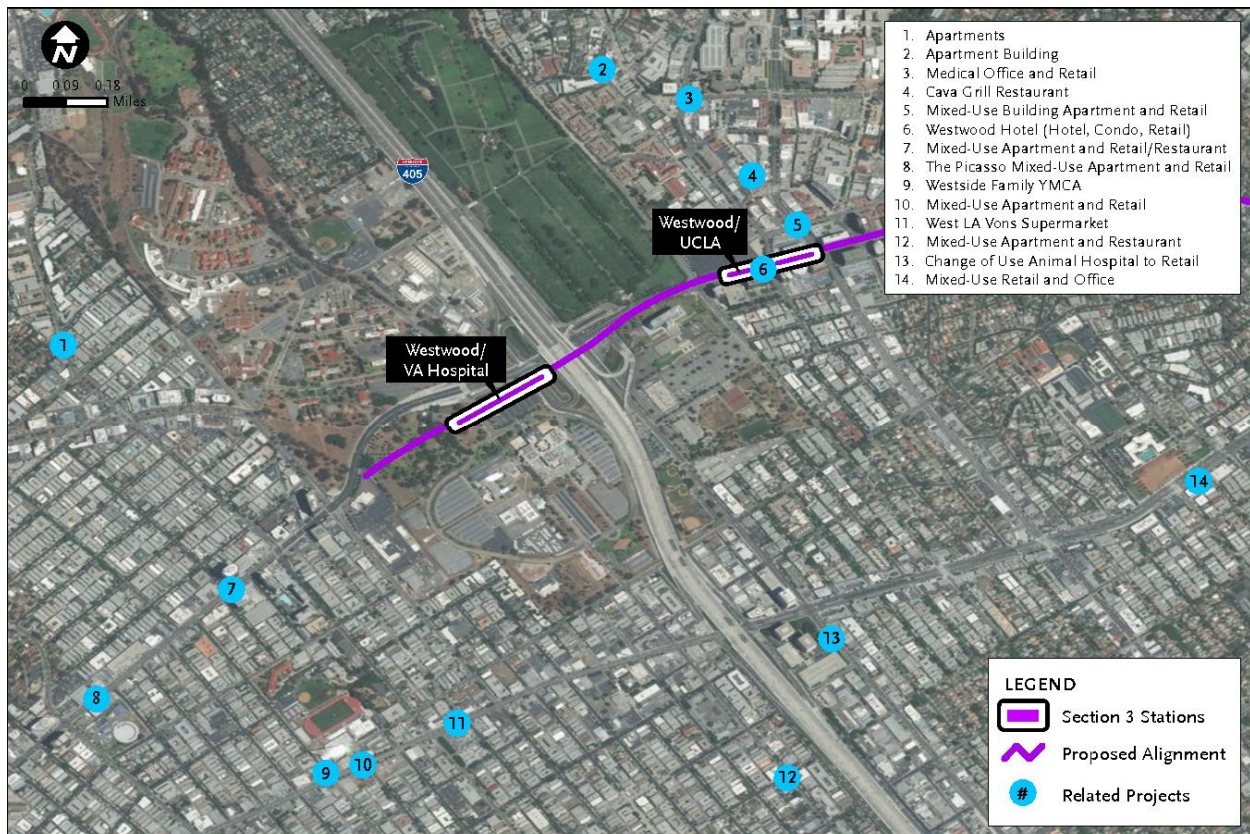
Source: Los Angeles Department of Transportation, 2018

Notes:

* Projects that are yet to begin construction or approved are noted as "pending".

DU = dwelling unit; SF = square feet; UCLA = University of California, Los Angeles; VA = Veterans Affairs

Figure 3-20: Proposed Projects within One Mile of Station Areas



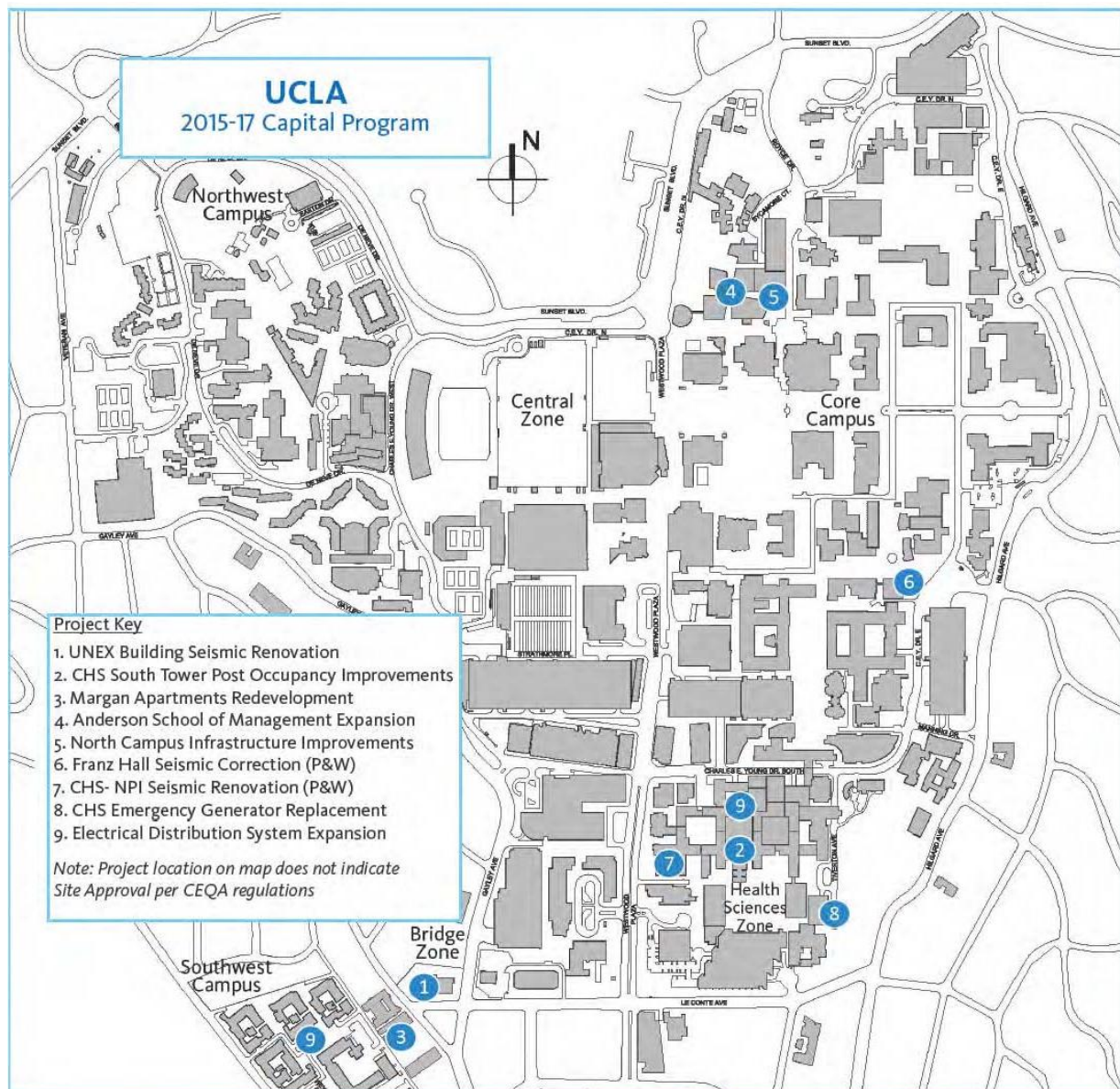
Source: TAHA, 2018

3.21.1.2 University of California, Los Angeles

The UC Capital Financial Plan (University of California 2014) delineates the multi-year program of proposed capital construction projects and renovations throughout UC campuses. The UC Capital Financial Plan framework guides UC campuses in prioritizing capital investments in support of long-range development plans. Programmed projects under the UC Capital Financial Plan are not yet approved, may not have secured funding, and are described in a program manner. As such, the specific

timing of these projects is currently unknown. Capital program projects on the UCLA Campus may include seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. The approximately 30 capital-funded projects are anticipated to be developed through 2025 and would occur primarily in the core campus, health sciences zone, and southwest campus of UCLA (Figure 3-21). The nearest capital-funded project to the Westwood/UCLA Station entrance located in Lot 36 would be the Margan Apartments Redevelopment, which would be located approximately 0.36 mile north.

Figure 3-21: UCLA Capital Program Projects



Source: UCLA, 2016

3.21.1.3 VA WLA Campus

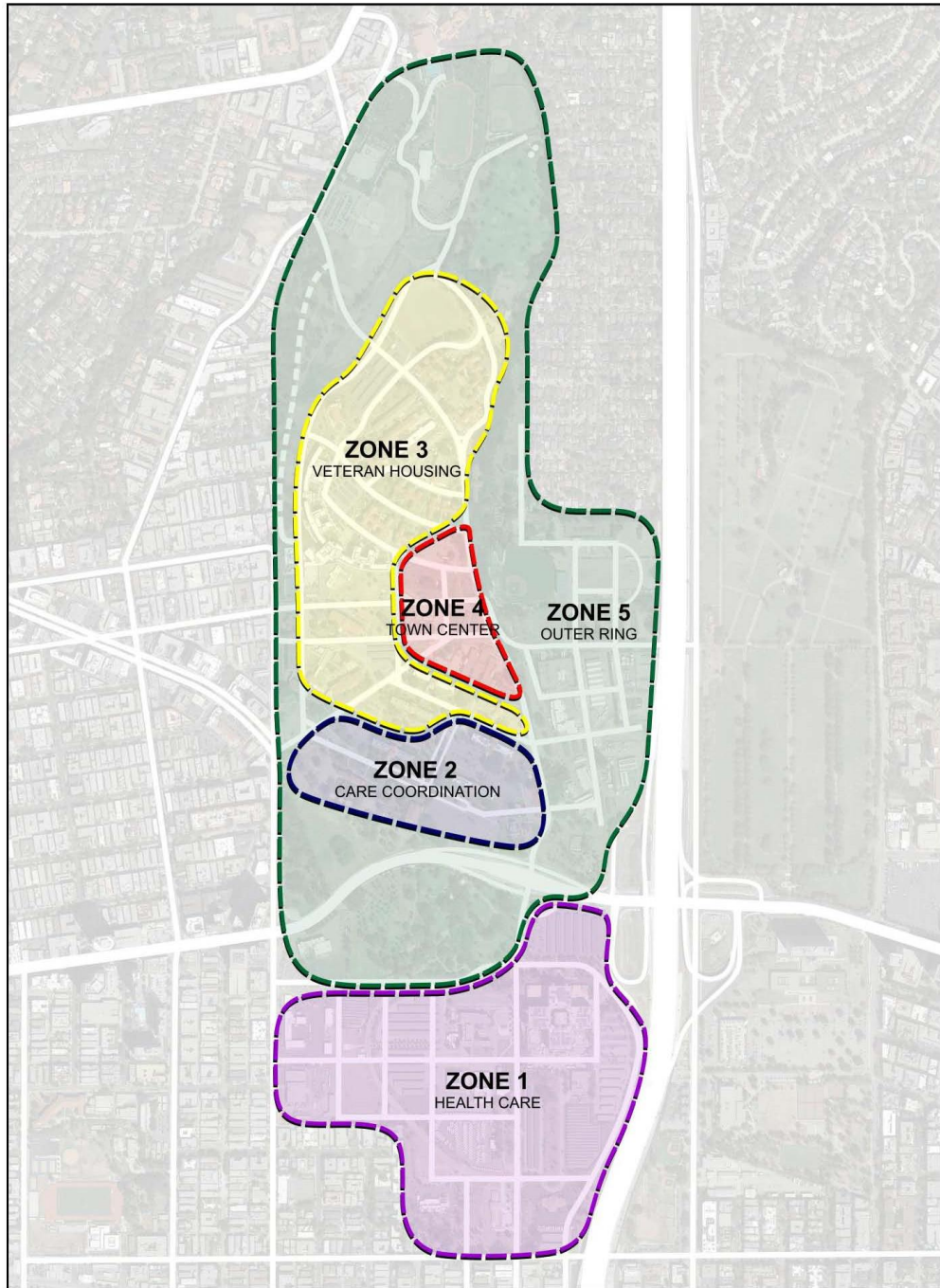
The GLA DMP (VA 2016) is a framework to assist the VA in determining the most effective use of the VA WLA Campus for veterans, including chronically homeless veterans; severely disabled veterans; veterans with physical and mental disabilities, such as post-traumatic stress disorder or traumatic brain injuries; substance abusers; veteran families; female veterans; and elderly veterans. With the adoption of the GLA DMP in 2016 and current, conceptual updates as of August 2018, the VA strives to create a 21st Century campus by renovating and protecting the property's historic features and functions as a home; expanding its resource offerings to meet current demands; enhancing its open spaces and natural features; improving its internal navigability and circulation; and optimizing its connection to the greater community. In general, long-term projects identified in the GLA DMP are anticipated to meet the vision and goals of the VA to revive the campus in a veteran-focused manner. The vision also includes planning for significant and adequate levels of housing units, time-limited "bridge" and transitional housing, and short-term treatment services that can provide state-of-the-art primary care, mental health, and addiction services to veterans, particularly chronically homeless veterans. The VA plans to provide no less than 1,200 units for permanent supportive housing to meet current and future needs of Los Angeles-area homeless and at-risk veterans.

The GLA DMP identified five distinct planning zones that apply design concepts to advance the vision and objectives to transform the campus into a veteran-focused community where veterans can access housing and supportive resources and services as needed. A description of these zones and an overview of future planning are provided as follows and shown on Figure 3-22:

- Zone 1 (Health Care), located in the southern campus, would be the medical science foci of the campus and may include building improvements that collaboratively integrate healthcare, food service, and comprehensive translational research facilities in support of veterans. Improvements may also meet all VA and California seismic mandates for medical center operations.
- Zone 2 (Care Coordination), located in the northern campus, would focus on coordinated care and may include development of a veteran and family resource center, therapeutic supportive services and facilities, and a memorial park.
- Zone 3 (Veteran Housing), located in the northern campus, would concentrate on increasing the housing supply for veterans through future development of short-term housing (i.e., bridge housing, community living center, domiciliary, and transitional housing) and long-term housing (i.e., permanent support housing). In June 2017, the VA completed 54 permanent supportive housing units in Building 209, located in the north campus of the VA WLA Campus. Future planned housing projects would be primarily in Zone 3 located in the north campus.
- Zone 4 (Town Center), located in the north campus, is identified as the "downtown" for the veterans with future plans of a fitness center, café, and a public square.
- Zone 5 (Outer Ring), considered the outer ring and primarily located in the north campus, with the southern portion of Zone 5 located in the south campus, is focused as the green space of the VA WLA Campus.

Proposed projects located in the south campus of VA WLA Campus are anticipated to be primarily located in Zone 1 and in the southern section of Zone 5 (Outer Ring). Based on a conceptual site plan of the south campus provided by representatives of the VA in August 2018, future conceptual planning in the south campus is anticipated to occur at and around the medical facilities and may include a community green, parking structure, outpatient clinics, pedestrian promenade, research building, new central utility plant, central kitchen, and surge building.

Figure 3-22: VA WLA Campus Zones



Source: GLA DMP

In addition to future projects at the medical center and structural improvements in the south campus, the conceptual site plan also illustrates proposed improvements to the circulation on the south campus. Based on this site plan, the peripheral roadway around the medical center on Dowlen Drive would be reconfigured along the west side of the medical campus to provide circulation for proposed housing; however, the remaining portions of Dowlen Drive would be maintained and would continue to provide access to the surrounding parking lots, including a proposed parking structure serving the medical center facilities. Sawtelle Boulevard to the south may be reconfigured north of Dowlen Drive into a turnabout. Access to and from Bonsall Avenue from Dowlen Drive and Wilshire Boulevard in the north and Sawtelle Avenue from Dowlen Drive in the south may be maintained under the conceptual south campus site plan. The proposed circulation pattern is currently designed to also improve the existing pedestrian circulation throughout the medical center with a pedestrian promenade that connects the main medical buildings and hospital. A drop-off area into the medical center and pedestrian promenade is also planned adjacent to the community green, located southeast of Bonsall Avenue. Landscaping and open space is also anticipated throughout the medical center and around the parking lots and structure. Based on the conceptual document, future development does not seem to be proposed within the WLA VA Historic District located west of Bonsall Avenue and south of Wilshire Boulevard. The conceptual site plan also identifies the station for the WPLE Project (labeled as "Metro Station") south of Wilshire Boulevard and east of Bonsall Avenue. This location is consistent with the station entrance evaluated in the 130(c) technical memorandum and corresponding technical studies.

3.21.1.4 Construction Phasing

As shown in Figure 2-1, Section 3 of the Project is anticipated to begin construction in 2019 (Year 1) and be complete by 2025 (Year 7). The construction schedule is largely consistent with the construction timeline presented in the Final EIS/EIR. However, Metro must advance the tunnel and station contracts concurrently in order to have the Project operational in time for the 2028 Olympic Games. In comparison, the Final EIS/EIR did not assume that these contracts would overlap. An overview of construction activities associated with Section 3 of the WPLE Project is provided in Section 2.0.

It is anticipated that construction of several of the proposed projects and Section 3 of the WPLE Project could occur concurrently. In addition, new projects and plans may also be approved during the construction phase of the Project. The exact construction schedules for the proposed projects identified in the City of Los Angeles are currently unknown. Additionally, programmed projects in the UC Capital Financial Plan (University of California 2014) are not yet approved, may not have secured funding, and are described in a program manner. Nonetheless, construction of proposed projects on the UCLA Campus are not anticipated to conflict with the construction of the WPLE Project because the capital-funded projects would be located primarily away from UCLA Lot 36 where construction of the WPLE Project would occur. Even though the construction phasing and scheduling of the proposed projects identified in the City of Los Angeles and on the UCLA Campus are currently unknown, for purposes of providing a conservative analysis, it was assumed that construction of these projects would overlap with construction of the Project.

According to the conceptual construction schedule provided by the VA in February 2018 for the south campus, the construction schedule for Section 3 and the proposed projects on the VA WLA Campus could overlap as follows:

Year 1

- WPLE Construction: Tunnel boring machine launch box piling and excavation at the Western VA construction staging area on the VA WLA south campus. This construction activity would be completed at the end of Year 1.
- VA Construction: Construction of a proposed food and nutrition kitchen at the medical center on the south campus and construction of housing units at Buildings 205 and 208 in the north campus is also anticipated to begin.

Year 2

- WPLE Construction: Section 3 tunneling activities and concurrent station construction of the Westwood/UCLA Station and Westwood/VA Hospital Station are anticipated to begin.
- VA Construction: VA anticipates construction of housing units at Buildings 156, 157, and 158 in the north campus to begin. On-going construction of the proposed food and nutrition kitchen would continue in Year 2.

Year 3

- WPLE Construction: Section 3 tunneling activities would be completed during Year 3 and construction activities for the cross-passage would begin. Station construction would continue through Year 3.
- VA Construction: Site utility work in the south campus and construction of housing units at Buildings 156, 157, and 158 in the north campus would be completed during Year 3. VA anticipates initiating construction on a new bed tower in the south campus, and begin housing construction at Buildings 206, 207, 210, 256, and 257 in the north campus.

Year 4

- WPLE Construction: Cross-passage construction and station construction would continue through Year 4.
- VA Construction: VA construction of the bed tower and demolition of Buildings 345, 401, and 402 in the south campus, and housing construction at Buildings 206, 207, 210, 256, and 257 in the north campus may be completed.

Year 5

- WPLE Construction: In addition to ongoing station construction, tunnel invert and walkway construction would occur during Year 5. The tunnel invert and walkway construction would be completed in Year 5.
- VA Construction: VA anticipates beginning construction of a new central utility plant and a research building in the south campus and the construction of additional housing units in the north campus.

Year 6

- WPLE Construction: Completion of station construction and start of station backfill and street restoration, as applicable. Additionally, systems installation and facilities would begin.

- VA Construction: VA construction activities related to the bed tower, research building, and central utility plant in the south campus and construction of housing units in the north campus would continue through Year 6.

Year 7

- WPLE Construction: The construction of Section 3 systems installation and facilities, and station backfill and street restoration would be completed and would signal the end of construction activities for Section 3 of the Project.
- VA Construction: VA anticipates construction of the bed tower, research building, and central utility plant would be completed in the south campus. Construction of new outpatient clinics would begin in the last quarter of Year 7. VA construction activities related to housing units in the north campus would continue through Year 7 and is anticipated to be completed one year after construction of Section 3 has ended.

Additional construction activities are anticipated to occur on the south campus during the early operating years of Section 3 of the Project. These future projects could include the demolition of Buildings 304 and 500 and the construction a new VA parking garage to serve the medical center.

3.21.2 Long-Term Operational Evaluation

Chapter 4, Section 4.17.4 of the Final EIS/EIR considered cumulative impacts during operation of the Project. The Final EIS/EIR stated the Project combined with other projects would not result in cumulatively considerable impacts as it relates to transit, streets and highways, land use and development, community and neighborhoods, visual effects, air quality, climate change, energy, noise and vibration, geologic hazards, parklands and community facilities, cultural and historic resources, water quality, and hazardous materials. The Project combined with projects would enhance circulation and connectivity within the SCAG region and would result in beneficial cumulative effects related to the increase in transit and improving traffic congestion; improved air quality and reaching climate change goals; an increase in compact and pedestrian-oriented growth; enhanced circulation and connectivity with the region; enhanced character and cohesion of communities and neighborhoods; and a reduction of wasted energy consumption.

However, the Final EIS/EIR disclosed that the Project, combined with potential effects of other projects, would result in cumulatively adverse impacts to parking and archeological resources. Note – the cumulative impacts identified for archeological resources would occur during the construction phase of the Project as ground disturbance is not required during project operation. Refer to Section 3.21.3 for a summary of the cumulative impacts assessment for archeological resources. Regarding parking, the Final EIS/EIR stated the Project would result in on-street parking impacts due to residential neighborhood spillover around the Westwood/UCLA and Westwood/VA Hospital Stations. Further, the projected increase in population within a one-quarter mile walking distance of the station locations would increase parking demand; therefore, the WPLE Project would result in cumulatively adverse impacts.

The following is a summary of the cumulative impact assessment for the project refinements.

3.21.2.1 Public Transit

No changes in existing transit service or facilities are proposed based on the scope and description of the proposed projects in the City of Los Angeles, UCLA Campus, and VA WLA Campus. These proposed projects could increase the demand for public transit; however, this increase in use would be nominal in relation to projected growth throughout the region. Further, these proposed projects and associated travel demand have been accounted for in the 2016-2040 RTP/SCS. The increased demand is not anticipated to affect the reliability of the transit system or transit travel times. As demonstrated in Section 3.1.1 of this technical memorandum, the project refinements would provide transit benefits. When combined with the proposed projects, the project refinements would not result in new cumulative impacts to transit service. Therefore, the project refinements would not contribute to cumulatively adverse public transit impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.2 I-405 and Local Traffic Circulation

Proposed projects in the City of Los Angeles and on the VA WLA Campus could result in the increase of vehicle trips and changes to the level of service on arterials also used by motorists accessing the passenger drop-off area at the Westwood/VA Hospital Station. The anticipated future housing growth and the potential medical center expansion projects on the VA WLA Campus could result in an increase in residents, staff, and visitors accessing the campus via personal vehicle and, in turn, could result in an increase in vehicle trips and VMT to the surrounding streets. These projects would be required to comply with applicable regulations, develop project-specific traffic analyses, implement mitigation measures, and undergo discretionary review for approval to minimize potential traffic impacts.

The project refinements would not affect traffic flow (e.g., reduction in lanes), increase traffic volumes, require closures of driveways, or introduce new driveways. The project refinements would not generate traffic near the Westwood/UCLA Station because this station does not include a park-and-ride or passenger drop-off area. The traffic analysis conducted for the passenger drop-off area at the Westwood/VA Hospital Station (Section 3.2.1) considered increases in background traffic as a result of planned population and employment growth; therefore, this traffic analysis considers cumulative impacts when the WPLE Project is combined with other future projects. As shown in Section 3.2.1, the passenger drop-off area would not result in adverse impacts in 2025 or 2045. As such, the project refinements would not have a cumulative impact to streets and highways.

3.21.2.3 Parking

Proposed projects in the City of Los Angeles, UCLA Campus, and VA WLA Campus could increase demand for parking. It is anticipated that parking demand resulting from proposed projects on the UCLA and VA WLA Campuses would be confined to the campuses as there is limited available on-street parking outside the campuses. Construction of a new parking structure adjacent to the western side of the medical center on the south campus is proposed by the VA, which would at least partially address the parking demands of the VA WLA program. For proposed projects in the City of Los Angeles, proposed projects would be required to comply with development-specific parking requirements and would be subject to City review to ensure that adequate parking is provided. Similarly, projects on the UCLA Campus would be required to comply with UC Regent parking requirements and subject to discretionary review to ensure adequate parking is provided. VA is preparing a programmatic EIS to evaluate impacts associated with VA's proposed developments. It is anticipated that long-term parking impacts would be

evaluated as part of this process to determine if adequate parking supply is adequate to accommodate future projects and the accompanying parking demands on the VA WLA Campus. Therefore, the proposed projects are not anticipated to result in adverse impacts.

Long-term impacts associated with the project refinements are described in Section 3.3.1 of this technical memorandum. Based on further design in support of the project refinements, there would not be a net loss of on- or off-street parking at either the Westwood/UCLA or Westwood/VA Hospital Stations. Rather, site plans developed for the transit plaza in UCLA Lot 36 show a net increase in parking in that location after construction of the Project. As described in Section 3.3.1, spillover parking is not anticipated at the Westwood/VA Hospital Station as the formal passenger drop-off area added as part of the project refinements would reduce the potential for spillover parking. Additionally, the project refinements would not increase the potential for spillover parking at the Westwood/UCLA Station compared to the Final EIS/EIR. The mitigation measures identified in the Final EIS/EIR and summarized in Section 3.3.1 of this memorandum would continue to apply to the project refinements. Therefore, the project refinements do not increase the severity of spillover parking impacts identified in the Final EIS/EIR. Provision of the Westwood/VA Hospital Station is anticipated to reduce parking demand on the VA WLA Campus. As stated previously, a parking structure would be constructed in Lot 43 to offset the parking permanently removed in Lot 42 to accommodate the station entrance and passenger drop-off area. Therefore, the WPLE Project would not contribute to cumulative parking impacts on the VA WLA Campus.

3.21.2.4 Pedestrian and Bicycle Facilities

It is anticipated that proposed projects in the City of Los Angeles, UCLA Campus, and VA WLA Campus would be designed to avoid or minimize potential safety hazards to pedestrians and bicyclists. Proposed projects would be subject to review by the applicable jurisdictions to ensure that they are designed with adequate access/circulation, including standards for sight distance, sidewalks, crosswalks, and pedestrian movement controls and are ADA compliant. Therefore, the proposed projects are not anticipated to result in adverse impacts. As demonstrated in Section 3.4.1, the project refinements would not result in new conflicts to pedestrian or bicycle facilities. Instead the project refinements would provide a benefit in terms of pedestrian circulation at both stations. The refinements would also comply with applicable codes and regulations. When combined with proposed projects, the refinements would not result in long-term impacts to pedestrian or bicycle facilities and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.5 Land Use

Proposed projects in the City of Los Angeles, UCLA Campus, and VA WLA Campus would be required to comply with relevant plans, policies, and regulations and would be subject to review by the applicable jurisdictions. As such, adverse impacts to land use are not anticipated. As demonstrated in Section 3.5.1, the project refinements would not result in incompatibility or inconsistencies with regional and local land uses plans and surrounding land uses and would not divide an established community. The project refinements would not result in adverse impacts to land use. When combined with the proposed projects, the refinements would not result in an increase of long-term land use impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse land use impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.6 Communities and Neighborhoods

The proposed projects in the City of Los Angeles would consist of residential, commercial, office, and hotel uses and are not anticipated to result in new impacts to community assets and community cohesion or create barriers within the community. Projects at the UCLA Campus may include seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. Projects such as these are not anticipated to result in new impacts to community assets, community cohesion, or otherwise create barriers within the community.

Future proposed projects at the VA WLA Campus would be veterans-focused, particularly for homeless veterans, including underserved populations. The proposed projects are anticipated to advance the vision and objectives of the GLA DMP to transform the campus into a veteran-focused community where veterans can access housing and supportive veteran resources and services as needed. Based on the scope and location of proposed projects on the VA WLA Campus, there is limited potential for an adverse cumulative impact on communities and neighborhoods when combined with the WPLE Project. Furthermore, the VA is in the process of preparing a programmatic EIS for VA's proposed development, for which comments would be sought. Because the VA would oversee all GLA DMP development on the campus and would consider public review, it is anticipated that proposed projects on the VA WLA Campus would not result in adverse impacts to communities or neighborhoods, including to the veteran community.

As demonstrated in Section 3.6.1, the project refinements would not result in adverse impacts to community assets and community cohesion or create a barrier within the community because a majority of the refinements would be underground, temporary, or provide accessibility improvements for transit patrons. As discussed in Section 3.6.1, the WPLE Project and associated refinements would not displace identified community assets associated with the VA WLA Campus or otherwise affect access to identified community assets. Additionally, the WPLE Project would provide a replacement parking structure within VA Lot 43 to offset temporary and permanent parking loss resulting from displacement of some parking within VA Lot 42. As part of the project refinements, the station entrance would be shifted closer to the VA Main Hospital (Building 500). Overall, the project refinements would benefit the community, particularly members of the veteran community and the VA WLA Campus. While the WPLE Project would remove the northeast mural along Bonsall Avenue (Section 2.4), Metro proposes developing a mosaic that conveys the story of the mural and placing it on an embankment in Los Angeles County property located across from its current location. Metro is coordinating with the VA, veterans groups, and other stakeholders regarding removal of the northeast mural and conveying the story in mosaic (refer to Section 4.6.3 for an overview of the coordination in support of this refinement) to help avoid potential adverse impacts related to community assets. When combined with proposed projects, the refinements would not increase long-term impacts to communities and neighborhoods and would not result in new cumulative impacts because proposed projects associated with the GLA DMP are unlikely to result in permanent adverse impacts to community assets associated with the VA WLA Campus. Therefore, the project refinements would not contribute to cumulatively adverse impacts to communities and neighborhoods and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.7 Acquisition and Displacement

Proposed projects on the UCLA Campus and VA WLA Campus are generally anticipated to utilize existing land and property owned or leased by the respective project proponents, namely the UC Regents and the VA. Proposed projects in the City of Los Angeles could require property acquisitions and could potentially displace existing owners or tenants. However, based on the location, scope, and schedules of these proposed projects, it is unlikely that substantial numbers of people or housing units would be displaced. The proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses would be required to undergo discretionary review and if new easements are required, coordination with owners and tenants of those parcels would occur. Thus, adverse impacts associated with acquisitions and displacements for proposed nearby projects are not anticipated.

As described in Section 3.7.1, the project refinements would not require full acquisitions. One business would be displaced (Chase Bank); however, per discussions with the property owner, the bank is interested in relocating to a vacant spot within the Linde (Westwood) Medical Plaza. Therefore, the changes to permanent easements would not result in adverse impacts. When combined with the proposed nearby projects, the refinements would not increase acquisition and displacement impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse acquisition and displacement impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.8 Visual Quality

Proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses may introduce multi-story buildings to the visual environment which could alter or otherwise affect visual character or views of their surroundings. Discretionary review and approval of those projects would be required, and it is anticipated that mitigation measures for visual impacts would be identified and implemented if any such impacts were to occur. Additionally, proposed projects in the City of Los Angeles are dispersed throughout the Study Area and are not concentrated in any single viewshed such that a cumulative visual effect would be identifiable among the projects in the City of Los Angeles.

The visual setting of the VA WLA Campus may change as a result of improvements to the greenspaces and buildings, particularly on the south campus. It is anticipated that the visual setting of the south campus could be improved through implementation of the GLA DMP and the corresponding public review process in support of the programmatic EIS being prepared by the VA. Accordingly, the cumulative effect of the proposed projects on the VA WLA Campus as part of the GLA DMP are anticipated to be beneficial to the visual character and quality of the campus.

The project refinements would not create a new source of substantial light or glare compared to the Project as evaluated in the Final EIS/EIR (Section 3.8.1). The project refinements would not introduce new project features that would conflict with the scale or visual character of the surrounding area. While the refinement to the northeast station entrance for the Westwood/UCLA Station (adjacent to the Linde (Westwood) Medical Plaza) would remove the existing Chase Bank building, the façade of the station entrance would replicate pertinent features of this portion of the Linde (Westwood) Medical Plaza when it was first opened, restoring the character of this portion of the building compared to today. As part of the refinement to the northeast Westwood/UCLA Station entrance, Metro proposes removing four planters and the associated vegetation, including tall palms, from the plaza adjacent to the Chase Bank to improve pedestrian circulation and safety. Planters on other portions of the property would

remain. The trees are not consistent with similar landscaping on adjacent properties nor the heights of existing street trees along Wilshire Boulevard. Therefore, the loss of trees would not result in an adverse visual impact. Coordination is ongoing with the VA regarding replacement for trees lost on the VA WLA Campus as a result of construction staging areas. Based on this coordination, there would not be adverse visual impacts on the campus as a result of the temporary removal of trees. Therefore, there would not be adverse visual impacts associated with the project refinements. When combined with the proposed projects, the refinements would not result in an increase of visual quality impacts and would not result in a new cumulative impact. Therefore, the project refinements would not contribute to cumulatively adverse visual quality impacts, and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.9 Air Quality

Proposed projects in the City of Los Angeles, the UCLA Campus, and the VA WLA Campus could increase vehicular trips, which would increase air emissions. None of the proposed projects are anticipated to result in land uses that would emit pollutants (e.g., factories). Discretionary review and approval of those projects would be required, and it is anticipated that mitigation measures would be identified and implemented if an individual project would result in emissions of criteria pollutants that exceed the SCAQMD recommended daily thresholds for project-specific impacts. Further, this level of development would be consistent with 2016-2040 RTP/SCS population and employment forecasts, for which an air quality assessment was conducted. Therefore, adverse air quality impacts are not anticipated as a result of the proposed projects.

The project refinements would continue to operate on electrical power and would not generate local air pollution during operation (Section 3.9.1). Traffic analyses were conducted in support of the passenger drop-off area and two new signalized intersections, as documented in the *Westwood/VA Hospital Station Passenger Drop-Off Facility Traffic Impact Study* (Metro 2018a). Based on the analyses, the passenger drop-off area and the addition of traffic signals would not result in traffic impacts or air quality impacts associated with a degradation in level of service. Furthermore, idling restrictions would be in place, with multiple signage within the passenger drop-off area indicating that the area is a no-idle zone. As such, no air quality impacts are expected from these refinements. When combined with proposed projects, the refinements would not increase emissions of air pollutants and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts related to air quality and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.10 Greenhouse Gases

Each of the proposed projects could generate greenhouse gases through increases in vehicular trips and energy consumption, which would contribute to climate change. Discretionary review and approval of those projects would be required, and it is anticipated that mitigation measures would be identified and implemented if an individual project would result in adverse greenhouse gas impacts. The project refinements are minor changes and would not affect overall operations of the Project or VMT in the region or Project Area (Section 3.10.1). Therefore, the beneficial greenhouse gas effects identified in the Final EIS/EIR remain unchanged with implementation of the project refinements. When combined with the proposed projects, the refinements would not increase long-term impacts related to climate change and would not result in new cumulative impacts. Therefore, the project refinements would not

contribute to cumulatively adverse impacts related to climate change and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.11 Noise and Vibration

None of the proposed projects in the City of Los Angeles or UCLA Campus are anticipated to introduce land uses that would generate sources of noise (e.g., introduction of a new outdoor amphitheater). The proposed projects in the City of Los Angeles and on the UCLA Campus would increase noise levels along arterial roadways (e.g., Westwood Boulevard, Wilshire Boulevard) related to increased vehicle traffic; however, such increases are anticipated to be consistent with the urban development of the Study Area and are unlikely to result in a significant cumulative impact related to noise. Discretionary review would be required for proposed projects and mitigation would be identified if adverse noise impacts are identified. Therefore, the proposed projects are not anticipated to result in adverse noise impacts.

Similarly, none of the proposed projects on the VA WLA Campus are considered to have particularly noisy operations. Proposed projects on the VA WLA Campus may increase vehicle traffic on surrounding roadways; however, this area is already subject to traffic noise from Wilshire Boulevard and the I-405. The VA is currently preparing a programmatic EIS in support of updates to the GLA DMP. It is anticipated that the VA would identify mitigation to address impacts posed by proposed projects in the GLA DMP if adverse noise impacts occur. None of the proposed projects are expected to generate substantial vibration such that a cumulative impact would occur.

The project refinements would not result in adverse noise or vibration impacts at sensitive receivers during operations (Section 3.11.1). When combined with the proposed projects, the refinements would not increase long-term impacts related to noise and vibration and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts related to noise and vibration and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.12 Energy

All of the proposed projects would require energy for operation; however, none of these appear to have particularly intensive energy needs that could not be met, individually or cumulatively, by local utility service. While the proposed projects would have a cumulative effect related to energy consumption, it is not anticipated that the cumulative impact on energy would be significant given the scope and use of the proposed projects. In addition, such effects could be reduced through the incorporation of project-specific design features and implementation of BMPs to reduce overall energy consumption.

As shown in Section 3.12.1, the project refinements are minor changes and would not affect overall operations of the Project or VMT in the region or Project Area. Additionally, the project refinements would not increase energy demands for the Project. Coordination is underway with representatives of VA regarding the removal of solar panels located in Lot 42. Further, Metro power requirements will not affect the VA's power supply because Southern California Edison is planning to upgrade the Sawtelle substation for Metro's use. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged. When combined with the proposed nearby projects, the refinements would not result in long-term energy impacts in the City of Los Angeles or on the UCLA or VA WLA Campuses and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse energy impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.13 Geologic Hazards

The proposed projects are located on previously disturbed land and it is assumed each proposed project would be subject to limited risk related to liquefaction, expansive soils, subsidence, or collapse due to unstable geologic units. It is anticipated that the proposed projects would require limited ground disturbance restricted to the footprint of their respective sites and may require excavation and soil removal for underground parking structures, setting foundations, and related activities consistent with other development in the Study Area. In general, each of the proposed projects are subject to some degree of geologic hazard given the seismically active nature of the region, but none would increase, exacerbate, or otherwise pose increased risks of geologic hazard individually or when considered cumulatively. Each of the proposed projects would be required to comply with applicable state and local building regulations and requirements to minimize potential geological hazard impacts. It is anticipated that design and development would comply with applicable codes and regulations to minimize risk associated with geologic hazards.

As described in Section 3.13.1, geotechnical investigations have continued since the completion of the Final EIS/EIR and the Project design has been revised based on the investigations. The project refinements are not in the vicinity of known active faults. The refinements are also in similar soil conditions as the Project as evaluated in the Final EIS/EIR. Metro would continue to comply with applicable regulations and implement the mitigation and design measures identified in the Final EIS/EIR. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged. When combined with the proposed projects, the refinements could result in long-term geological hazard impacts as identified in the Final EIS/EIR, but would not result in a new cumulative impact. Therefore, the project refinements could contribute to cumulatively adverse geological hazard impacts but the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.14 Hazardous Materials

None of the proposed projects in the City of Los Angeles or UCLA Campus would require particularly hazardous operations or include uses that would create new hazards or generate substantially more hazardous wastes (e.g., introduction of a new laboratory). The projects proposed on the VA WLA Campus are more likely to result in new or increased hazardous materials as the proposed central kitchen, hospital, utility plan, and research building are likely to result in an increase in biohazardous wastes and use hazardous materials related to the programmed increase in patients at the hospital and associated clinics. Routine transport and use of typical hazardous materials (e.g. fertilizers, cleaning products, solvents) can be expected to result from proposed projects in the Study Area. However, given the scope of these projects, it is unlikely that any cumulative impact related to the transport and use of hazardous waste and materials would occur. The proposed projects in the City of Los Angeles and on the UCLA and the VA WLA Campuses would also be required to comply with applicable federal and state regulatory requirements and would implement clean-up plans in the event spills occur.

The project refinements would not increase the risk for hazardous materials/waste spills or require the transport of hazardous materials during operation of the Project, as summarized in Section 3.14.1. Therefore, no long-term adverse hazardous materials impacts are anticipated during operations of Section 3 of the Project. When combined with the proposed projects, the refinements would not result in long-term impacts related to hazardous waste and materials and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse hazardous waste and materials impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.15 Ecosystems/Biological Resources

Proposed projects in the City of Los Angeles would have limited potential for impacts to ecosystems or biological resources as there is limited to no habitat for wildlife in the vicinity of these projects. Both the UCLA and VA WLA Campuses contain green spaces that can serve as habitat for urban wildlife, but it is unlikely that sensitive species reside in these areas. While the proposed projects on the UCLA Campus do not pose substantial modification to open space areas on the campus, there is potential that the proposed projects could result in the removal of trees that may support nesting birds. The VA WLA Campus projects would make alterations to the open spaces on the campus, which may require removal and replacement of trees on the campus. Given the limited presence of biological resources in the Study Area and the scope and location of the proposed projects, there is no potential for adverse cumulative impacts on biological resources posed by proposed projects.

As described in Section 3.15.1, the project refinements would be located in a densely developed urban area and are not located near sensitive ecosystems or biological resources. Trees and palms removed at the VA WLA Campus would be replaced upon the completion of construction and, therefore, there would not be a long-term impact to biological resources at the VA WLA Campus. The palms and other vegetation adjacent to the Chase Bank at the Linde (Westwood) Medical Plaza that would be removed during construction would not be replaced when construction is complete. However, other trees that would provide suitable habitat would remain on and adjacent to the property. Therefore, the project refinements would not result in adverse impacts to ecosystems/biological resources. When combined with the proposed projects, the refinements would not result in long-term impacts to ecosystems/biological resources and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse ecosystems/biological resource impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.16 Water Resources

Proposed projects in the City of Los Angeles and on the UCLA Campus would be located on sites that are already developed and thus would not substantially increase impervious surfaces or otherwise generate substantial runoff or stormwater beyond existing conditions. Proposed projects would likely increase demands on water supplies and increase generation of wastewater, although the density and scope of these projects are consistent with existing development. Proposed projects would also be required to comply with existing regulations and implement project-specific design features and BMPs to reduce post-construction pollutants. Therefore, adverse impacts are not anticipated.

Proposed projects on the VA WLA Campus may include new development of housing and medical facilities, which could increase the demand on water supplies and the generation of increased wastewater. While increase in impervious surfaces could be expected from implementation of some of the projects in the GLA DMP, the master plan generally proposes reuse of existing buildings where possible, and open/undeveloped areas on the campus are anticipated to be maintained such that substantial changes to stormwater and runoff flows are not expected. The VA is currently preparing a programmatic EIS in support of updates to the GLA DMP. It is anticipated that mitigation would be implemented if adverse impacts would occur to water resources resulting from proposed projects in the GLA DMP. Therefore, adverse impacts from proposed projects on the VA WLA Campus are not anticipated.

The project refinements would not increase impervious areas or change drainage patterns compared to the Final EIS/EIR (Section 3.16.1). Grassy areas that are disturbed during construction would be restored when construction is complete. The project refinements would not result in adverse impacts to water resources. When combined with the proposed projects, the refinements would not result in long-term impacts or new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse water resources impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.17 Safety and Security

Proposed projects in the City of Los Angeles would result in a cumulative increase in demand for emergency services. Proposed projects on the UCLA Campus may primarily consist of seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. Several of the capital-funded projects would benefit the UCLA Campus and its constituents regarding seismic safety and building safety. Nonetheless, expansion projects and student housing projects may also increase the demand for emergency services. However, implementation of these projects would include coordination with emergency service providers (e.g., police and fire) to reduce potential impacts to emergency services. The proposed projects would also be required to comply with building code and design standards related to safety. The proposed projects are also anticipated to implement operational design features to enhance safety within and immediately surrounding each individual proposed project.

Proposed projects on the VA WLA Campus would increase the number of residents and visitors to the VA WLA Campus and could result in the need for more safety and security measures. However, the proposed projects would implement project-specific design features to increase security and safety within the VA WLA Campus and the surrounding area and would comply with design standards related to safety. It is anticipated that safety and security impacts that may result from proposed projects included in the GLA DMP would be mitigated as part of the programmatic EIS that is being prepared by the VA.

As demonstrated in Section 3.17.1, the project refinements would not introduce new project elements that would pose a new (previously unidentified) risk to safety or security. Coordination is ongoing with representatives of the VA to address safety and security concerns of the VA related to the introduction of a station on the VA WLA Campus. The VA has expressed concerns about the potential for safety and security to arise as a result of transit patrons utilizing the VA WLA Campus to access the transit system. Mitigation Measure SS-6 requires inclusion of security features and law enforcement at stations; with this measure, safety and security issues would not arise at the VA WLA Campus. The mitigation measures identified in the Final EIS/EIR would continue to be applicable to the project refinements.

Therefore, the impact conclusions of the Final EIS/EIR related to safety and security remain unchanged with implementation of the project refinements. When combined with the proposed projects, the refinements would not result in long-term safety and security impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse safety and security impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.18 Parklands and Community Services and Facilities

The proposed projects are not anticipated to result in direct impacts on parklands or community facilities. Proposed projects in the City of Los Angeles and housing units proposed on the UCLA Campus would result in an increase in population, thereby increasing use of available parklands and community facilities. New developments in the City of Los Angeles would be required to pay development fees to help offset impacts on parklands related to increased use. In addition, each proposed project may be required to coordinate with the City of Los Angeles to ensure that such facilities are considered and potential impacts are minimized through project-specific design features or mitigation measures.

The VA WLA program includes projects that would improve open and green spaces on the campus for its visitors, patients, staff, and residents. Accordingly, if the GLA DMP program is implemented, it can be expected that a beneficial impact on parkland, open space, and associated facilities on the VA WLA Campus would be realized.

Parklands and community facilities evaluated in this memorandum are discussed in Section 3.18.1 and include the VA WLA Campus, Los Angeles National Cemetery, and the UCLA Campus, among others. As stated in Section 3.18.1, the project refinements would not result in new adverse impacts to parklands and community facilities. This conclusion considers impacts including, but not limited to, parking, noise, vibration, aesthetics, and access. The Project would have the potential to increase the use of medical facilities on the VA WLA Campus and facilities associated with the UCLA Campus as a result of improved access via transit. However, the proposed projects contemplated as part of the GLA DMP and UCLA Campus Capital Program Project would address this potential increase in use by providing updated facilities. When combined with the proposed projects, the project refinements would not result in long-term impacts to parklands and community services and facilities in the City of Los Angeles or on the UCLA or VA WLA Campuses and would not result in a new cumulative impact. Therefore, the project refinements would not contribute to cumulatively adverse parklands and community services and facilities impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.2.19 Historic and Archaeological Resources

None of the proposed projects or the project refinements would require ground disturbance during long-term operational conditions. As such, there is no potential for impacts to archaeological resources.

None of the proposed projects in the City of Los Angeles or on the UCLA Campus appear to involve historic structures. It is anticipated that an assessment of impacts to historic resources would occur prior to construction of the proposed projects and that impacts to historic resources would be avoided or minimized as part of that process.

Refer to Section 3.19.2 for the cumulative impact assessment associated with the WLA VA Historic District. Because all project activity in the vicinity of the (Westwood) Federal Building is underground, no cumulative impacts to that resource are anticipated. Cumulative impacts to the (Westwood) Federal Building are discussed throughout Section 3.21.

3.21.3 Construction Phase Evaluation

Chapter 4, Section 4.17.4 of the Final EIS/EIR also considered cumulative impacts during construction of the Project. The Final EIS/EIR concluded that construction of the Project would not result in cumulative

impacts related to parking, pedestrian and bicycle circulation, visual quality, air quality, noise and vibration, geologic hazards, ecosystems/biological resources, and historic resources.

However, Section 4.17.4 of the Final EIS/EIR stated that construction of the Project could result in potentially cumulative impacts related to traffic, communities and neighborhoods, hazardous materials, water quality, and archaeological resources. The cumulative impact findings from the Final EIS/EIR for each resource is as follows:

- Traffic: construction would result in adverse and unavoidable impacts during construction as a result of temporary disruption and rerouting of traffic. This adverse impact would contribute to cumulative increases in congestion.
- Communities and neighborhoods: construction activities would result in temporary adverse impacts related to the physical division of established communities. If construction of the Project occurs at the same time as other projects in a particular community, cumulative effects associated with noise and vibration; street closures and traffic; parking; aesthetics; access to businesses, parks, and public facilities; and other construction-related effects would be significant during construction.
- Hazardous materials: spoils from construction of the Project would be disposed of at appropriate licensed facilities. Since there is only a limited number of disposal facilities within the SCAG region, when combined with disposal associated with the construction of other projects, the cumulative effect of transporting hazardous materials outside the SCAG region would be cumulatively considerable.
- Water Quality: the contribution of the Project to cumulative impacts on water quality from other projects would be cumulatively considerable.
- Archaeological resources: no archaeological resources have been identified within the APE for the Project; however, undocumented cultural resources, including intact archaeological deposits, could be affected during construction. Based on the density of standing historic-period buildings and structures, the sensitivity for the discovery of historic-era archaeological sites is higher between the Westwood/UCLA and Century City Stations. Therefore, when combined with potential effects of other projects on archeological resources, this impact would be cumulatively considerable.

3.21.3.1 Public Transit

Construction of proposed projects in the City of Los Angeles located along Wilshire, Santa Monica, or Westwood Boulevards may require temporary bus stop closure or relocation. Similarly, construction of proposed projects on the UCLA Campus may disrupt BruinBus service or bus stops. Each proposed project would be required to coordinate transit service disruptions with Metro, Big Blue Bus, or BruinBus to minimize potential impacts on public transit. BruinBus service provides service internal to the UCLA Campus and Westwood Village and would not be affected by construction of proposed projects in the City of Los Angeles. Accordingly, proposed projects in the City of Los Angeles and on the UCLA Campus are not anticipated to have a cumulative impact on transit service.

Construction of the proposed projects on the VA WLA Campus appear unlikely to involve roadway modifications or other construction activities that would have effects on public transit service or bus stops along Wilshire Boulevard, San Vicente Boulevard, Bonsall Avenue, or on Dowlen Drive. These projects may affect transit service operated by the VA; however, it is anticipated that new bus stops and bus detours would be identified such that public transit would not be adversely affected during

construction. Therefore, construction of the proposed projects on the VA WLA Campus is not anticipated to result in adverse impacts to transit service.

As detailed in Section 3.1.2, construction of underground conduits would change street closures from those identified in the Final EIS/EIR. However, construction of the underground conduit would not result in adverse impacts to buses on Wilshire Boulevard because the bus-only lane would remain open during peak periods; bus stops would not need to be relocated; and detour routes for the bus would not be required. Therefore, the impact conclusions in the Final EIS/EIR related to construction-related impacts to public transit remain unchanged. When combined with construction of the proposed projects, the refinements would not result in an increase of public transit impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse public transit impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.2 Streets and Highways

Construction of the proposed projects in the City of Los Angeles and on the UCLA Campus may result in increased truck traffic and worker trips on roadways that would also be used by construction vehicles for the WPLE Project. Given the scale and scope of these proposed projects, it is unlikely that a cumulative impact would occur to streets and highways, even if the construction activities overlap. As stated in Section 3.2.2, truck trips associated with construction of the Westwood/UCLA Station would amount to less than 4 additional trips per hour on Wilshire Boulevard east of I-405 when spread throughout the off-peak period. When compared to traffic volumes on that segment of Wilshire Boulevard, this increase in traffic would be minor. As such, construction of the Project would not contribute to cumulatively adverse impacts to Wilshire Boulevard.

Proposed projects on the VA WLA Campus may lead to cumulative impacts on Wilshire Boulevard and the I-405 on- and off-ramps at Wilshire Boulevard. At the request of the VA, the Western VA construction staging area would include a shared driveway from Wilshire Boulevard for use by the Metro and VA construction contractors. The shared driveway was added at the request of the VA to minimize the number of access points used by construction traffic for access to and from the south campus. This would reduce the potential for cumulative impacts to occur on Bonsall Avenue as VA-related construction traffic would have direct access to Wilshire Boulevard via the new driveway. As shown in Figure 3-4, the greatest number of construction trips associated with the WPLE Project would occur in Year 4, of which 160 vehicles per day would utilize the Western VA construction staging area. During this time, VA anticipates construction of the new bed tower and demolition of Buildings 345, 401, and 402 in the south campus and housing construction at Buildings 206, 207, 210, 256, and 257 in the north campus may be completed. Given the amount of potential construction activity programmed on the VA WLA Campus and the limited means of access to the north and south campuses, it is likely that a cumulative impact could occur on circulation within and surrounding the VA WLA Campus related to congestion on roadways, including Wilshire Boulevard, Bonsall Avenue, and along the on- and off-ramps to I-405 at Wilshire Boulevard. Construction truck activity on the VA WLA Campus in support of the WPLE Project would be limited to Bonsall Avenue to access Lot 42 and the northeastern portion of Dowlen Drive to access Lot 43, except in emergencies. Therefore, there would not be cumulative effects to the majority of the intercampus circulation on the south campus when VA construction activities are underway. Accordingly, while construction traffic associated with the WPLE Project and GLA DMP would occur concurrently, there would be minimal overlap on VA WLA Campus roadways. As described in Section 3.2.2.1, haul truck activity associated with the WPLE Project would be spread throughout the

off-peak hours to the extent feasible, which would amount to approximately 25 trips per hour on Wilshire Boulevard and 40 trips per hour on I-405. Based on the off-peak volumes associated with these roadways, these construction truck trips would not result in adverse impacts. As such, construction of the Project would not contribute to cumulatively adverse impacts to Wilshire Boulevard or I-405.

As stated in Section 3.2.2.4, construction of the underground conduits would require short-term closures of the eastbound far right travel lane on Wilshire Boulevard during off-peak hours. Additionally, construction of the vaults within Wilshire Boulevard could require closure of up to two eastbound lanes; however, the remaining eastbound lane would remain open. Construction of vaults on Ohio and Federal Avenues could require up to two weeks of closures; however, the limits of construction are small and there are only three to four vaults on each street. Intermittent partial (directional) closures would also be required for side streets that intersect with Federal or Ohio Avenues when work occurs in proximity to that side street. These partial closures would occur during off-peak periods for two to three days. Non-contiguous lane closures may be permitted. None of the projects identified in the City of Los Angeles would occur along these streets. Further, construction activities for proposed projects on the VA WLA Campus would not require closures of lanes along these streets. Therefore, construction of the Project would not contribute to cumulatively adverse impacts.

The project refinements would not affect access by existing driveways, require roadway closures or detours that were not previously identified in the Final EIS/EIR, or substantially increase the number of truck trips. Construction of the project refinements would not result in new impacts to streets and highways or increase the severity of previously identified impacts. Therefore, the impact conclusions in the Final EIS/EIR related to cumulative impacts to streets and highways remain unchanged and have not increased in severity.

3.21.3.3 Parking

Construction of the proposed projects in the City of Los Angeles and on the UCLA Campus may result in the temporary displacement of on- and off-street parking for the purpose of construction-vehicle access or staging. Based on the scope of these proposed projects, construction work is unlikely to displace a substantial number of parking spaces both individually and cumulatively. Construction of proposed projects on the VA WLA Campus may result in the temporary use of all or portions of surface parking lots on the campus, particularly on the south campus. However, a parking structure would be constructed by Metro to offset the temporary and permanent parking lost in Lot 42 as a result of the WPLE Project. The footprint of the Western VA construction staging area has been modified to avoid impacts to the solar farm, which has been identified by the VA as a potential location for staging construction of VA projects, thereby minimizing the WPLE Project's contributions to cumulative impacts to parking. As such, construction of the Project would not contribute to cumulatively adverse impacts to parking on the VA WLA Campus.

The project refinements would not increase the off-street parking impacts identified in the Final EIS/EIR; however, on-street parking impacts would change along Ohio and Federal Avenues to accommodate construction of the underground conduit, as described in Section 3.3.2. Proposed projects have not been identified in proximity to this work. Construction of the project refinements would not result in new impacts to on- or off-street parking or increase the severity of previously identified impacts. When combined with construction of the proposed projects, the refinements would not result in an increase of parking impacts and would not result in new cumulative impacts. Therefore, the project refinements

would not contribute to cumulatively adverse parking impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.4 Pedestrian and Bicycle Circulation

The proposed projects in the City of Los Angeles and on the UCLA Campus have the potential to result in temporary sidewalk closures, disruptions, and pedestrian detours if construction activities take place on or adjacent to sidewalks. None of the proposed projects would require roadway modification and thus are not anticipated to result in construction-related impacts on bicycle circulation. Potential impacts on pedestrian or bicycle circulation would be localized and confined to the vicinity of the proposed projects. Thus, proposed projects in the City of Los Angeles and on the UCLA Campus are unlikely to result in cumulative impacts on pedestrian and bicycle circulation.

The proposed projects on the VA WLA Campus would be confined to the campus and would have no potential to impact pedestrian or bicycle circulation outside the campus. Within the campus, proposed projects could affect internal pedestrian circulation on the south campus based on the conceptual site plan because pedestrian movement would be restricted through active construction zones. It is anticipated that measures to minimize impacts on veterans, patients, visitors, and staff, such as temporary wayfinding signage and detours, would be implemented during construction as appropriate. It is also anticipated that access would be maintained to buildings on the VA WLA Campus. While impacts on pedestrian circulation can be anticipated, they would not be cumulatively adverse.

On the VA WLA Campus, construction of the WPLE Project would not require closure of sidewalks. Further, the construction contract specifications for the WPLE Project require the contractor to develop a VA Hospital Access Plan that considers patient, employee, and vendor access, and includes the means by which access by sidewalk along Bonsall Avenue would be maintained to the hospital at all hours of the day. It is anticipated that the VA would participate in the preparation and review of this document. Therefore, construction of the WPLE Project would not result in adverse impacts to sidewalks on the VA WLA Campus.

As stated in Section 3.4.2, the refinements would not require sidewalk or bicycle facility closures that were not previously identified in the Final EIS/EIR or increase detour routes. Therefore, the project refinements would not affect the sidewalk and bicycle impact conclusions presented in the Final EIS/EIR or increase the severity of the impacts. There would be no new contributions to potential cumulative impacts to pedestrian and bicycle circulation.

3.21.3.5 Land Use

Proposed projects in the City of Los Angeles and on the UCLA and VA Campuses are anticipated to comply with identified local land use plans, policies, and regulations. Due to the sensitivity of the veteran community on the VA WLA Campus, construction on the campus may result in temporary adverse impacts related to the physical division of established communities as a result of temporary street and sidewalk closures and traffic detours, if required. However, it is anticipated that the VA would coordinate with the veteran community and implement a construction management plan to ensure adequate and safe access throughout the VA WLA Campus is maintained. Staging areas for the proposed projects would be temporary and are not anticipated to result in adverse impacts to adjacent surrounding uses. The VA is preparing a programmatic EIS, which would be distributed to the public for review and comment. It is anticipated that VA would identify further mitigation measures if it is found

that construction of the proposed projects in the GLA DMP would result in temporary adverse impacts to land uses. Further, potential construction impacts related to land use would be temporary and would be end once construction is completed. Therefore, no adverse construction effects related to land use are anticipated to occur.

Per Section 3.5.2, the refinements to construction activities, equipment, and methods are consistent with the Project as evaluated in the Final EIS/EIR and would not introduce new physical barriers, alter or create a division of an established community, or require temporary easements on new properties. Construction of the project refinements would not result in incompatibility with the surrounding land uses. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged. When combined with the proposed projects, the refinements would not result in construction-related land use impacts and would not result in a new cumulative impact. Therefore, the project refinements would not contribute to cumulatively adverse land use impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.6 Communities and Neighborhoods

Construction of the proposed projects in the City of Los Angeles on the UCLA Campus are anticipated to require construction staging, materials stockpiling, and hauling of dirt and materials. Potential effects to streets, parking, and pedestrian and bicycle circulation from these projects are described in Sections 3.21.3.2, 3.21.3.3, and 3.21.3.4, respectively. Noise and vibration effects are described in Section 3.21.3.11 and air quality in Section 3.21.3.9. Construction of proposed projects in the City of Los Angeles and on the UCLA Campus would be site specific and would not be anticipated to result in the physical division of an established community. It is anticipated that construction would be staged in a manner that would maintain access to adjacent land uses. Further, construction activities would be temporary and construction-related effects to the surrounding community would end at the completion of construction activities. Therefore, no adverse construction effects related to communities and neighborhoods are anticipated to occur.

Construction of proposed projects on the VA WLA Campus may occur concurrently on the south and north campus and result in construction-related impacts that could physically divide the veteran community. Specifically, construction activities on the VA WLA Campus may result in temporary street and sidewalk closures, traffic detours, or changes in circulation. The VA is preparing a programmatic EIS to evaluate impacts associated with construction of the proposed projects. As part of this process, the VA is coordinating with members of the veteran community. It is anticipated that construction-related impacts to the veteran community, including potential divisions of the community, would be evaluated as part of this process and mitigation would be identified if impacts resulting from the proposed projects in the GLA DMP would occur. In addition, it is anticipated that mitigation for impacts related to noise, access, traffic, aesthetics, and air quality would be mitigated to the extent feasible. Therefore, adverse construction-related effects to communities and neighborhoods are not anticipated to occur.

As demonstrated in Section 3.6.2, construction of the project refinements would not result in temporary adverse impacts to communities and neighborhoods, including the VA WLA Campus and the Westwood and UCLA community. This determination considers impacts associated with noise and vibration, construction-related traffic and roadway and lane closures, on- and off-street parking, visual resources, and access to businesses, parks, and other community facilities. Mitigation measures identified in the Final EIS/EIR would also be applicable to construction of the project refinements and would minimize

potential impacts to the extent feasible. Specifically, Mitigation Measures CON-1 (Signage), TCON-1 (Traffic Control Plans), TCON-2 (Designated Haul Routes), TCON-3 (Emergency Vehicle Access), TCON-4 (Transportation Management Plan), TCON-7 (Parking Management), TCON-8 (Parking Monitoring and Community Outreach), TCON-10 (Pedestrian Routes and Access), and TCON-11 (Bicycle Paths and Access) identified in the Final EIS/EIR would be implemented with the project refinements to minimize potential adverse construction-related effects to the VA WLA Campus as well as the surrounding community. Mitigation Measures CON-85 (Informational Program to Enhance Safety) and CON-86 (Traffic Control), as identified in Section 4.15 of the Final EIS/EIR, would also continue to reduce construction-related adverse effects to community facilities. When combined with the proposed projects, the refinements would not result in construction-related impacts to communities and neighborhoods and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts to communities and neighborhoods, and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.7 Acquisitions and Displacements

Proposed projects in the City of Los Angeles and UCLA Campus are anticipated to be site-specific projects that may require temporary easements during construction. These easements would be temporary and ownership of the area would return to the property owner when construction is complete. Proposed projects associated with the GLA DMP would be located entirely on the VA WLA Campus. Construction staging areas required to support construction of the proposed projects could be required on multiple portions of the north and south campus concurrently; however, it is anticipated that construction phasing would be implemented in a manner that would minimize construction-related impacts to the extent feasible. Temporary easements would be returned to previous conditions once construction is complete. Thus, temporary easements in the City of Los Angeles and on the UCLA and VA WLA Campuses are not anticipated to result in adverse impacts to the campus.

Construction of the project refinements would not result in adverse impacts to acquisitions and displacements (Section 3.7.2). When combined with the proposed projects, the refinements would not result in construction-related impacts to acquisitions and displacements and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts to acquisitions and displacements, and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.8 Visual Quality

Construction-related impacts on visual quality posed by the proposed projects would include the temporary presence of construction equipment (e.g. cranes, bulldozers, graders, and trucks) and materials, barriers, and fencing, as well as removal of existing structures and architectural treatments. Such impacts would be confined to the individual project sites associated with each project and, with the exception of tall construction equipment such as cranes, generally would not be cumulatively visible within a given viewshed such that an adverse cumulative impact would result.

Based on the conceptual construction schedule provided by the VA in August 2018, multiple projects on the VA WLA Campus would be under construction concurrently, which could have a temporary cumulative impact on the visual character of the campus depending on the proximity of these projects to one another. Concurrent construction of multiple projects in the south campus is anticipated to occur between 2021 and 2026 with up to three major activities taking place concurrently in a relatively

confined area. These concurrent activities could result in a noticeably diminished visual environment on the south campus, although the impact would be temporary. The VA is in the process of preparing a programmatic EIR, and it is anticipated that construction-related visual impacts would be mitigated to the extent feasible.

Visible elements of WPLE Project construction would be limited to construction staging areas. During construction, the construction staging areas would be enclosed behind approximately 20-foot-high temporary noise barrier walls, although tall construction equipment, such as cranes, would be visible above the walls. Metro has minimized impacts to existing palms and trees on the VA WLA Campus to the extent feasible; these trees would screen construction equipment and staging areas from certain vantage points. The analysis concluded that construction of the project refinements on the VA WLA Campus would not result in adverse visual impacts. Therefore, even though construction of the WPLE Project is anticipated to occur concurrently with projects on the south campus in support of the GLA DMP, the WPLE Project's contribution is not anticipated to be cumulatively adverse.

Per Section 3.8.2, the project refinements would not result in adverse impacts to visual resources or quality during construction. When combined with the proposed projects, the refinements would not result in construction-related impacts to visual quality and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts to visual quality and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.9 Air Quality

An assessment was conducted of the air quality impacts associated with construction of the project refinements, as summarized in Section 3.9.2. The updated analysis determined that construction emissions associated with construction of Section 3 of the WPLE Project would be lower than those presented in the Final EIS/EIR and would not exceed any SCAQMD thresholds. Therefore, construction of the project refinements would not result in an increase in severity of air quality impacts identified in the Final EIS/EIR.

Construction activities associated with each proposed project would generate localized dust impacts and air emissions associated with the operation of heavy construction equipment and trucks. Proposed projects in the City of Los Angeles and on the UCLA Campus do not pose a potential for cumulatively adverse construction air quality impacts because these projects are relatively dispersed throughout the area and it is unlikely that localized dust or equipment emissions impacts would combine resulting in a potentially more severe impact. Each of the proposed projects would be required to comply with regulatory requirements related to air quality, including SCAQMD rules pertaining to dust control measures.

Within the VA WLA Campus, construction of multiple projects could occur concurrently over a seven-year period, which could result in adverse air quality impacts related to dust and vehicle emissions. The VA is preparing a programmatic EIS to evaluate impacts associated with construction of its proposed projects. It is anticipated that construction-related air quality impacts would be evaluated as part of this process and mitigation would be identified if impacts from the proposed projects in the GLA DMP would occur. Additionally, construction activities on the VA WLA Campus would be required to comply with regulatory requirements related to air quality, including SCAQMD rules pertaining to dust control measures and emissions from construction equipment.

Construction activities on the south campus that are concurrent with the WPLE Project would occur to the south of the Metro staging areas from approximately 2019 to 2033. Maximum daily construction emissions associated with the WPLE Project would occur in the second quarter of year 2021 and would not exceed SCAQMD thresholds, including localized impacts on sensitive receptors such as patients at the VA Main Hospital (Building 500). Most construction activities on the south campus would take place in the years following the peak emissions of the WPLE Project. The exception to this is construction activities associated with site utilities, the kitchen AVG tunnel, and B212, all of which commence in 2021. As the peak emissions for the WPLE Project are well below the SCAQMD thresholds, it is not expected that these construction activities would contribute emissions to the point of exceeding either regional or localized SCAQMD thresholds. Section 3.9.2 provides a more detailed discussion of regional and localized construction period impacts posed by the Project.

The planned buildings that would be located closest to the Metro construction staging areas include the future research building and parking structure. Construction of the research building is expected to start in 2023 and take place over the course of two and a half years; this is toward the end of Metro's construction schedule, which would taper off by late 2025. Furthermore, construction of the parking structure would not commence until 2030, well beyond the end of Metro's construction activities. Demolition of the buildings closest to Metro's construction staging areas, identified as Building 304 and Building 500 (Main Hospital), would not commence until 2029, also well beyond the end of Metro's construction activities.

In conclusion, the major construction activities on the south campus are scheduled to occur following peak construction activities at the WPLE Project. Furthermore, the construction activities closest to the Metro construction staging areas would occur well beyond the end of Metro's construction activities. Accordingly, cumulatively adverse impacts on sensitive receptors such as patients at the VA Main Hospital (Building 500) are not anticipated because pollutants from the WPLE Project and proposed projects associated with the GLA DMP would not combine in concentrations that would potentially exceed SCAQMD thresholds for localized air quality impacts. Both regional and localized construction period air quality impacts associated with the project refinements would be minor and would not represent a significant contribution to a cumulative impact. Therefore, no cumulatively adverse impacts are anticipated with construction of the proposed projects.

3.21.3.10 Greenhouse Gases

Proposed projects in the City of Los Angeles, on the UCLA Campus, and on the VA WLA Campus are not anticipated to generate substantial amounts of greenhouse gas emissions, although some cumulative contribution to greenhouse gases can be attributed to any project that includes construction activities. Each of the proposed projects would be required to comply with regulatory requirements related to air quality and climate change.

In support of the project refinements, the energy use and resulting greenhouse gas emission burdens associated with construction of all of Section 3 of the Project was estimated based upon the latest construction schedule and equipment, as detailed in Section 3.10.2. Emissions of criteria pollutants and greenhouse gases associated with larger portions of the Project (i.e., Section 3) would be significantly lower than those presented in the Final EIS/EIR. Therefore, construction of Section 3 of the Project would not result in new cumulatively adverse impacts related to greenhouse gases and climate change during construction.

3.21.3.11 Noise and Vibration

Construction of the proposed projects in the City of Los Angeles and on the UCLA Campus would generate noise. Noise from proposed projects could combine and result in impacts when construction activities are within 500 feet of each other. Beyond this distance, noise generally attenuates to a level that would not be cumulatively adverse. Two projects are located within 500 feet of the Westwood/UCLA Station construction area: the Westwood Hotel project and a 33-unit mixed-use building (see projects 5 and 6 on Figure 3-20). The construction schedule of these projects is unknown, but if construction of the Westwood/UCLA Station were to coincide with construction of these two projects, noise generated from construction would combine resulting in temporary noise disruptions to nearby sensitive receptors. Since construction activities would be temporary and subject to local regulations restricting hours of construction, it is not anticipated that the cumulative noise impacts would be adverse. These proposed projects would be required to comply with applicable noise thresholds and would implement project-specific design features and mitigation measures to minimize potential impacts. Off-site truck noise would be generated by the combination of different truck trips from the WPLE Project (up to 140 daily trips) and the proposed projects. However, the anticipated haul routes are already heavily traveled by trucks and other traffic, and it is unlikely that trips from the WPLE Project and other proposed projects would result in significant increases in noise levels above existing conditions. Construction-related noise impacts associated with the WPLE Project would not exceed applicable thresholds with implementation of mitigation (Section 3.11.2). Furthermore, as different projects are completed noise levels would fluctuate or be reduced due to the decrease in construction activity.

Construction of proposed projects on the VA WLA Campus are likely to result in increases in noise. The VA is preparing a programmatic EIS to evaluate impacts. It is anticipated that construction-related noise impacts would be evaluated as part of this process and mitigation would be identified by the VA to address potential noise impacts associated with the GLA DMP if impacts would occur to sensitive receivers. Construction-related noise impacts associated with the WPLE Project would not exceed applicable thresholds with implementation of mitigation (Section 3.11.2). Therefore, construction of the project refinements would not result in new cumulative impacts or contribute to cumulatively adverse construction-related noise impacts.

With regard to construction vibration, vibration is a localized event and dissipates after a few feet. It is unlikely that cumulative vibration impacts would occur. Therefore, construction of the project refinements would not contribute to cumulatively adverse impacts related to construction-related vibration and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.12 Energy

Each of the proposed projects would include construction activities that consume energy through the operation of equipment that uses electricity or burns fossil fuels. None of the proposed projects in the Study Area are of a scope or size such that construction activities, when considered individually or cumulatively, would consume a significant amount of energy.

As stated in Section 3.12.2, the overall construction methods, approach, and schedule associated with the project refinements remain consistent with those analyzed in Section 4.15.3 of the Final EIS/EIR in terms of energy demand. An updated energy analysis was conducted for construction activities associated with Section 3 of the Project, including with implementation of the project refinements,

which concluded that construction-related energy needs have decreased compared to the Final EIS/EIR. Therefore, construction of the project refinements would not result in adverse impacts to energy. When combined with the proposed projects, the refinements would not result in construction-related energy impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse energy impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.13 Geologic Hazard

Construction of proposed projects are located on previously disturbed land and it is assumed each project would be subject to limited risk related to liquefaction, expansive soils, subsidence, or collapse due to unstable geologic units. It is anticipated that design and construction of proposed projects would be performed by qualified professionals in consideration of geologic conditions and hazards associated with the site and that necessary design measures would be implemented to minimize potential impacts. Therefore, adverse impacts resulting from geologic hazards is not anticipated.

As stated in Section 3.13.2, impacts from seismic ground shaking, hazardous gases, liquefaction, expansive soils, subsidence, and collapse would not be adverse with implementation of mitigation measures. When combined with construction of the proposed projects, the refinements would not result in adverse impacts related to geological hazards. Therefore, the project refinements would not contribute to cumulatively adverse impacts related to geologic hazards and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.14 Hazardous Waste and Materials

The majority of proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses would not require significant ground disturbance, with the potential exception of a proposed parking structure on the VA WLA south campus that could result in hazardous materials, if present, being uncovered if the structure includes subterranean parking. Construction of the proposed projects is not anticipated to involve the use and disposal of hazardous materials outside of those typical for construction. All hazardous materials would be removed and disposed of in accordance with state and federal regulatory guidelines. Should hazardous materials be encountered, they would be disposed off-site at disposal facilities within and outside the SCAG region, which may result in a cumulative impact.

Per Section 3.14.2, the project refinements do not require the use of new hazardous materials during construction from those considered in the Final EIS/EIR. There is no history of known contaminated soils near the project refinements. The project refinements do not increase the volume of hazardous spoils requiring disposal such that the cumulative impact identified in the Final EIS/EIR would be more severe. Therefore, the impact conclusions in the Final EIS/EIR related to hazardous materials remain unchanged during construction of the project refinements.

3.21.3.15 Ecosystems/Biological Resources

Proposed projects in the City of Los Angeles have limited potential for impacts to ecosystems or biological resources as there is limited to no habitat or wildlife-supporting land in the vicinity of these projects. Both the UCLA and VA WLA Campuses contain green spaces that can serve as habitat for urban wildlife, but it is unlikely that sensitive species reside in these areas. It is anticipated that trees removed during construction of proposed projects would be replaced. Given the limited presence of biological

resources and the scope and location of the proposed projects, there is no potential for an adverse cumulative impact on biological resources posed by construction of proposed projects.

As stated in Section 3.15.2, the project refinements would result in the temporary removal of trees and palms on the VA WLA Campus. Other trees and palms would remain in the area and nests could be developed in the remaining trees. The impact conclusion of the Final EIS/EIR related to ecosystems and biological resources remain unchanged during construction of the project refinements. When combined with the proposed projects, the refinements would not result in new construction-related impacts to ecosystems/biological resources in the City of Los Angeles or on the UCLA and VA WLA Campuses and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse ecosystems/biological resource impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.16 Water Resources

Proposed projects within the City of Los Angeles and the UCLA Campus are located on sites that are previously developed; therefore, it is anticipated that impervious surfaces would not be increased; drainage patterns would not be changed; and the water supply would not be substantially affected. Water use during construction would most likely be limited to control of fugitive dust on the project site. It is further anticipated that construction of these projects would comply with applicable codes and regulations and BMPs would be implemented as appropriate. Projects on the VA WLA Campus similarly do not pose substantial risks related to water resources. It is anticipated that mitigation measures and BMPs would be implemented during construction to control possible impacts related to water resources.

As demonstrated in Section 3.16.2, the project refinements would not change water needs compared to the construction means and methods evaluated in the Final EIS/EIR. The project refinements include modification to a Caltrans infiltration basin located north of Wilshire Boulevard and west of I-405 to replace the water quantity volume displaced by construction within the south basin. The mitigation measures identified in the Final EIS/EIR related to ground water, dewatering, and drainage would also be implemented during the construction of the project refinements, as applicable. The project refinements would not result in adverse impacts to water quality or water resources and therefore the project refinements would not increase the severity of the cumulative water quality impacts identified in the Final EIS/EIR. Therefore, the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.17 Safety and Security

Proposed projects within the City of Los Angeles and the UCLA Campus are located on sites that are previously developed and previously disturbed, and it is unlikely that there are unknown safety hazards associated with development of these projects. Construction of each proposed project would be subject to typical safety and security hazards associated with construction work, but there are no projects identified that appear to have greater or more severe safety risks. Each project would be required to adhere to Occupational Safety and Health Administration standards and requirements for worker and public safety. Therefore, a cumulatively adverse impact is not anticipated.

Proposed projects on the VA WLA Campus similarly do not appear to pose greater risks of safety or security based on the scope outlined in the GLA DMP. However, given that these projects may be

constructed on an active medical facility site, it is possible that disabled veterans could be subject to increased risks associated with construction safety. As with other proposed projects, each project that could be constructed on the VA WLA Campus would be required to comply with Occupational Safety and Health Administration standards and requirements for worker and public safety.

The project refinements would not introduce new safety concerns during construction or result in adverse impacts, as stated in Section 3.17.2. When combined with the proposed projects, the refinements would not result in construction-related impacts to safety and security and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse safety and security impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.21.3.18 Parklands and Community Services and Facilities

None of the proposed projects in the City of Los Angeles or on the UCLA Campus are proposed on or adjacent to parkland or other community facilities. While construction activities associated with some of the proposed projects may result in temporary disruptions such as lane closures and traffic delays, it is not anticipated that access to parklands or emergency access would be affected. It is not anticipated that any of the proposed projects, either individually or cumulatively, would result in adverse impacts on parklands or community facilities.

Within the VA WLA Campus, proposed projects could result in construction impacts to the grassy area south of Wilshire Boulevard and west of Bonsall Avenue (south campus) and Los Angeles National Veterans Park (north campus). Construction of the WPLE Project would not have impacts to the Los Angeles National Veterans Park, which is not open to the public. During construction, a portion of grassy area south of Wilshire Boulevard would be unavailable in the location of the cut-and-cover construction area for the Westwood/VA Hospital Station west crossover and the Western VA construction staging area. However, the majority of the grassy area would remain open and available during construction. Construction-related impacts associated with noise, aesthetics, and air quality have been minimized such that adverse impacts to this area associated with construction of the WPLE Project are not anticipated. Therefore, construction would not result in an adverse impact. It should be noted that the conceptual site plan did not specifically identify proposed development within the area that would be occupied by the cut-and-cover construction area for the Westwood/VA Hospital Station west crossover and the Western VA construction staging area.

The project refinements would not result in new construction-related impacts to parklands and community services and facilities, including the VA WLA Campus and the Los Angeles National Veterans Park, Linde (Westwood) Medical Plaza, and UCLA Lot 36 Kinross Building South, as stated in Section 3.18.2. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

3.21.3.19 Historic and Archaeological Resources

Refer to Section 3.19.2 for the cumulative impact assessment for historic resources.

The proposed projects are not anticipated to require substantial ground disturbance likely to uncover previously unknown archaeological resources. However, the Final EIS/EIR identified higher sensitivity for the discovery of historic-era archaeological sites in the vicinity of the Westwood/UCLA Station. Accordingly, there is increased potential for the Westwood Hotel project to impact archaeological

resources given its proximity to identified archaeologically sensitive areas if construction of this project requires ground disturbance into areas that were not previously disturbed.

As detailed in the *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f) and summarized in Section 3.19.3, GPR surveys were conducted for areas of the VA WLA Campus within the footprint of the project refinements. The surveys did not identify anomalies that would yield data potential. Consistent with the Final EIS/EIR Mitigation Measure R-1 (Unanticipated Discoveries and Consultation with Native American Individuals, Tribes and Organizations and Treatment of Cultural Remains and Artifacts) would apply during construction of the Project. Adverse impacts to archaeological resources are not anticipated during construction of the project refinements. As such, the Project would not result in a cumulatively adverse contribution to impacts to archaeological resources.

3.22 Section 4(f) Evaluation

The effects of the Project on resources protected under Section 4(f) of the U.S Department of Transportation Act of 1966 were evaluated in Chapter 5 of the Final EIS/EIR. The project refinements detailed in Section 2.0 of this technical memorandum are in the vicinity of two Section 4(f) resources evaluated in the Final EIS/EIR—the Linde (Westwood) Medical Plaza and the Veterans Affairs Medical Center Historic District (now referred to as the WLA VA Historic District). The Section 4(f) Evaluation Overview from Section 5.1 of the Final EIS/EIR applies to this reevaluation as well. The reevaluation concludes that the Section 4(f) finding included in the Final EIS/EIR remains valid and does not include a new finding nor alter the prior finding.

3.22.1 Description of Section 4(f) Properties

The Final EIS/EIR identified two historic properties, the Linde (Westwood) Medical Plaza, and the Veterans Affairs Medical Center Historic District as Section 4(f) properties. The area surrounding the project refinements detailed in Section 2.0 was also reviewed for other potential Section 4(f) properties as part of this reevaluation.

3.22.1.1 Historic Properties

Section 3.19 reviews historic properties that are in the vicinity of the project refinements detailed in Section 2.0 of this reevaluation. Six historic properties are identified, the Linde (Westwood) Medical Plaza, the (Westwood) Federal Building, the WLA VA Historic District, Wadsworth Chapel (Catholic-Protestant Chapels, Veterans Administration Center), News Stand (Streetcar Depot), and Los Angeles National Cemetery. The chapel, news stand, and cemetery are also contributing resources to the WLA VA Historic District. The WLA VA Historic District, Wadsworth Chapel, and News Stand, are listed in the NRHP, and the National Cemetery, Linde (Westwood) Medical Plaza, and (Westwood) Federal Building are eligible for listing in the NRHP. As such, these properties require consideration under Section 4(f) as historic properties of national, state, or local significance. The three properties are detailed in Section 3.19 of this memorandum.

3.22.1.2 Parklands

The open space within the WLA VA Historic District that is located at the southwest corner of Wilshire Boulevard and Bonsall Avenue is signed:

This Medical Center is for Patrons, Employees, and Official Business Only. For the safety and concerns of our patients, dogs are not allowed. Not a Public Thoroughfare VA Regulation 1.218(a) CFR-8.

The *Section 4(f) Policy Paper* (FHWA 2012) states that Section 4(f) requires consideration of parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public. While the open space is publicly owned, it is not open to the general public. The open space, therefore, does not constitute a parkland that is a Section 4(f) property.

A portion of the VA WLA Campus north of Wilshire Boulevard and bordering San Vicente Boulevard is designated as the Los Angeles National Veterans Park. The Los Angeles National Veterans Park is identified in the GLA DMP (VA 2016). The Los Angeles National Veterans Park was originally developed as a community park in a partnership with the Veterans Park Conservancy. The GLA DMP provides a context of the 2013 District Court for Central District of California decision in the *Valentini v. McDonald* case that was settled through a “Principles for Partnership Agreement” that required activities within the VA WLA Campus to be veteran focused, which is a concept to focus on serving veterans and their families rather than of benefit to the public at large. The Veterans Park Conservancy, which continues to partner with the Department of Veterans Affairs, states that they are developing the Los Angeles National Veterans Park for the benefit of veterans and their families and that larger community access is available during business hours and at other times as determined by the Department of Veterans Affairs (Veterans Park Conservancy 2018). To be most protective, FTA and Metro have considered the Los Angeles National Veterans Park within the context of Section 4(f).

3.22.2 Evaluation of Use of Section 4(f) Properties

Per Section 3.3.1 of the *Section 4(f) Policy Paper* (FHWA 2012), a *de minimis* impact is one that, after taking into account any measures to minimize harm (such as avoidance, minimization, mitigation, or enhancement measures), results in a Section 106 finding of no adverse effect or no historic properties affected on a historic property. Temporary occupancy results when Section 4(f) property is required for project construction-related activities. When the conditions outlined in 23 CFR 774.13(d) are met, the temporary occupancy does not constitute a use.

Section 5.4 of the Final EIS/EIR detailed that the Project would have a *de minimis* impact on the VA Medical Center Historic District (now referred to as the WLA VA Historic District) and the Linde (Westwood) Medical Plaza during construction and operation of the Project. This reevaluation considers whether the project refinements detailed in Section 2.0 would change the prior finding for the WLA VA Historic District or the Linde (Westwood) Medical Plaza, and it also evaluates the (Westwood) Federal Building as a Section 4(f) property.

3.22.2.1 Los Angeles National Veterans Park

The Project would not incorporate land, either permanently or during construction, from the Los Angeles National Veterans Park. During construction of the Project, construction access to the Western VA construction staging area would occur from the south side of Wilshire Boulevard immediately south of the Los Angeles National Veterans Park. These activities would occur for a period less than the total duration of project construction (refer to Figure 2-1 for the construction schedule). There would be no long-term substantial impairment to the property’s activities, features, or attributes that qualify the property for protection under Section 4(f). The access and staging activities at the Western VA construction staging area were evaluated for their potential to affect the Los Angeles National Veterans

Park. 3.11.2 states that with the implementation of mitigation measures, the Project would not result in adverse noise and vibration impacts during construction. Therefore, construction would not create an increase in noise and vibration levels that would substantially interfere with the recreational activities of the park. The park does not contain noise sensitive features such as a campground or outdoor amphitheater. As discussed in Section 3.8, the WPLE Project would not result in adverse visual impacts because existing trees would obscure most of the construction equipment necessary for construction of the WPLE Project; therefore, the WPLE Project would not substantially impair visual or aesthetic qualities of the Los Angeles National Veterans Park; nor would it restrict access to the park. Additionally, the park does not function as a wildlife refuge and the Project would not have an ecological intrusion on such. There would be neither temporary or long-term substantial impairment to the activities, features, or attributes that qualify the Los Angeles National Veterans Park for protection under Section 4(f). Per the requirements of 23 CFR 774.15, the Project would not have a use or a constructive use on the Los Angeles National Veterans Park.

3.22.2.2 WLA VA Historic District

As described in Section 3.19.2, the Project, including project refinements, would occupy land within the historic district during construction and operation. The only permanent features of the Project within the historic district are an access hatch located on a slightly widened Hadley Lane (which would be covered); a series of six small vent grills that would be placed approximately 100 feet apart in the grassy area above the station box; and an emergency exit hatch, emergency exit walkway, and three ventilation grates in the westernmost part of the WLA VA Historic District. These features would be flush with the ground. No permanent above-ground features within the WLA VA Historic District were included in the Final EIS/EIR. The Final EIS/EIS identified 1.4 acres of subsurface easements (Table 3-6) under the VA WLA Campus, a portion of which would have been under the WLA VA Historic District.

The Project, including with the project refinements, would require 2.2 acres of permanent subsurface easements under the VA WLA Campus, a portion of which would be under the WLA VA Historic District. The 2.2 acres of subsurface easement are for tunnels under the WLA VA Historic District. Per Question 28A of the *Section 4(f) Policy Paper* (FHWA 2012), Section 4(f) applies to tunneling under historic sites only if the tunneling:

- 1) Disturbs archaeological sites that are on or eligible for the National Register which warrant preservation in place;
- 2) Causes disruption which would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
- 3) Substantially impairs the historic values of a historic site; or
- 4) Otherwise does not meet the exception for temporary occupancy

The WLA VA Historic District is not an archaeological site, nor a park, recreation, wildlife, or waterfowl refuge; therefore, the first two conditions are not met. Because the Project would have no adverse effect under Section 106 on the WLA VA Historic District, it would, by definition, not substantially impair the historic values of the property. Construction staging, as further described below, would be temporary and not have an adverse effect under Section 106 on the WLA VA Historic District, which is consistent with the conditions for a temporary occupancy exception. As a result, Section 4(f) does not apply to tunneling under the WLA VA Historic District.

Permanent above-ground impacts to the WLA VA Historic District would be limited to approximately 0.13 acre, including an access hatch located on a slightly widened Hadley Lane (which would be covered); a series of six small vent grills that would be placed approximately 100 feet apart in the grassy area above the station box; and an emergency exit hatch, emergency exit walkway, and three ventilation grates in the westernmost part of the WLA VA Historic District. These features would be flush with the ground. Their presence in the WLA VA Historic District would not impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f).

FTA has determined that the permanent project refinements would have no adverse effect under Section 106 on the WLA VA Historic District. On December 12, 2018, the SHPO concurred with FTA's determination. In finding that there would be no adverse effect under Section 106 on the WLA VA Historic District, the Project would not substantially impair the activities, features, or attributes that qualify the district for protection under Section 4(f) as a historic property. FTA notified the SHPO of its determination and its intent to make a *de minimis* finding under Section 4(f) on November 8, 2018. The approximately 0.13 acre of permanent above-ground impacts to the WLA VA Historic District were not included in the Final EIS/EIR; however, the Section 106 finding of no adverse effect has not changed. The permanent effects of the project refinements meet the definition of a *de minimis* impact, which is consistent with FTA's finding for the property in the Final EIS/EIR.

During construction, approximately 4.1 acres within the historic district would temporarily function as construction staging areas. The Final EIS/EIR identified temporary construction staging of approximately 0.4 acre within the WLA VA Historic District (Figure 2-2). As discussed in Section 3.19.2, the historic district area comprising the temporary area for the cut-and-cover for the Westwood/VA Hospital Station west crossover and station box cavern activities previously included buildings according to historic mapping and has only appeared in its current state as a green space since the 1990s. Construction staging areas within the WLA VA Historic District would be restored to their prior condition when construction is complete or as otherwise determined through coordination with the VA. Although project work would temporarily disrupt the pattern of the Palm-Tree Grid located near the intersection of Wilshire Boulevard and Federal Avenue, the landscape would be restored, as described in Section 3.19.2.

Per Question 7A of the *Section 4(f) Policy Paper* (FHWA 2012), a temporary occupancy will not constitute a Section 4(f) use when all of the conditions listed in 23 CFR 774.13(d) are satisfied:

- 1) Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- 2) Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
- 3) There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
- 4) The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
- 5) There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

The duration of the occupancy for construction staging will be less than the duration of the total construction period. The area occupied is a small portion of the total WLA VA Historic District. As documented in the Section 106 consultation with the SHPO, there will be no adverse effect to the WLA VA Historic District. The area will be fully restored at the end of construction. FTA consulted with the SHPO and determined that the temporary effects of the project refinements would have no adverse effect under Section 106 on the WLA VA Historic District. On December 12, 2018, the SHPO concurred with FTA's determination. Construction effects on the WLA VA Historic District would meet the conditions for temporary occupancies of land that are so minimal as not to constitute a use.

Per 23 CFR 774.14 (a), a constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. The WPLE Project would incorporate land from the WLA VA Historic District for the surface features described previously, therefore, there is a direct use, but no constructive use would occur. This would not result in a change compared to the findings of the Final EIS/EIR.

As described above, the Project refinements detailed in Section 2.0 would require permanent surface easements that were not identified in the Final EIS/EIR and greater temporary surface easements and permanent sub-surface easements than identified in the Final EIS/EIR. The approximately 0.13 acre of permanent above-ground impacts to the WLA VA Historic District would have a *de minimis* impact on the historic property. Temporary occupancy of the VA Medical Center Historic District would meet the conditions for temporary occupancies of land that are so minimal as not to constitute a use. Also, no constructive use of the WLA VA Historic District would occur. The Project, including refinements, would continue to have no adverse effect under Section 106 and a *de minimis* impact under Section 4(f) on the WLA VA Historic District, which is consistent with the findings in Section 5.4.1 of the Final EIS/EIR.

3.22.2.3 Los Angeles National Cemetery

The evaluation of Section 4(f) use of the WLA VA Historic District included consideration of the Los Angeles National Cemetery, which is wholly located within the historic district. As described in Section 3.19.2, the Project, including project refinements, would have no adverse effect under Section 106 on the Los Angeles National Cemetery and would not use land within the boundary of the Los Angeles National Cemetery. Section 3.11.2 states that with the implementation of mitigation measures, the Project would not result in adverse noise and vibration impacts during construction. Therefore, construction would not create an increase in noise and vibration levels that would substantially interfere with the contemplative environment of the Los Angeles National Cemetery. As discussed in Section 3.8, the WPLE Project would not result in adverse visual impacts because existing vegetation and boundary walls would obscure most of the construction equipment necessary for construction of the WPLE Project. Therefore, the WPLE Project would not substantially impair visual or aesthetic qualities; nor would it restrict access to the Los Angeles National Cemetery. FTA consulted with the SHPO and determined that the project refinements would have no adverse effect under Section 106 on the Los Angeles National Cemetery. On December 12, 2018, the SHPO concurred with FTA's determination. Additionally, the Los Angeles National Cemetery does not function as a wildlife refuge and the Project would not have an ecological intrusion on such. The Project would have no use or constructive use, under Section 4(f), of the Los Angeles National Cemetery.

3.22.2.4 Wadsworth Chapel

The evaluation of Section 4(f) use of the WLA VA Historic District included consideration of the Wadsworth Chapel, which is wholly located within the historic district. As described in Section 3.19.2, the Project, including project refinements, would have no adverse effect under Section 106 on the Wadsworth Chapel and would not use land within the boundary of the Wadsworth Chapel historic property. Section 3.11.2 states that with the implementation of mitigation measures, the Project would not result in adverse noise and vibration impacts during construction. Therefore, construction would not create an increase in noise and vibration levels that would substantially interfere with the historic features of the Wadsworth Chapel. As discussed in Section 3.8, the WPLE Project would not result in adverse visual impacts because Wilshire Boulevard is elevated between Wadsworth Chapel and the construction area and would obscure most of the construction equipment necessary for construction of the WPLE Project. Therefore, the WPLE Project would not substantially impair visual or aesthetic qualities of Wadsworth Chapel; nor would it restrict access to Wadsworth Chapel. FTA consulted with the SHPO and determined that the project refinements would have no adverse effect under Section 106 on the Wadsworth Chapel. On December 12, 2018, the SHPO concurred with FTA's determination. Additionally, Wadsworth Chapel does not function as a wildlife refuge and the Project would not have an ecological intrusion on such. The Project would have no use or constructive use, under Section 4(f), of the Wadsworth Chapel.

3.22.2.5 News Stand (Streetcar Depot)

The evaluation of Section 4(f) use of the WLA VA Historic District included consideration of the News Stand (Streetcar Depot), which is wholly located within the historic district. As described in Section 3.19.2, the Project, including project refinements, would have no adverse effect under Section 106 on the News Stand and would not use land within the boundary of the News Stand historic property. Section 3.11.2 states that with the implementation of mitigation measures, the Project would not result in adverse noise and vibration impacts during construction. Therefore, construction would not create an increase in noise and vibration levels that would substantially impair the historic features of the News Stand. As discussed in Section 3.8, the WPLE Project would not result in adverse visual impacts because Wilshire Boulevard is elevated between the News Stand and the construction area and would obscure most of the construction equipment necessary for construction of the WPLE Project. Therefore, it would not substantially impair visual or aesthetic qualities (Section 3.8); nor would it restrict access to News Stand. FTA consulted with the SHPO and determined that the project refinements would have no adverse effect under Section 106 on the News Stand (Streetcar Depot). On December 12, 2018, the SHPO concurred with FTA's determination. Additionally, the News Stand does not function as a wildlife refuge and the Project would not have an ecological intrusion on such. The Project would have no use or constructive use, under Section 4(f), of the News Stand.

3.22.2.6 Linde (Westwood) Medical Plaza

As described in Section 3.19.2.2, the Project, including project refinements, would occupy land during construction and operation within the boundary of the Linde (Westwood) Medical Plaza. The Project would convert the Chase Bank retail space, which was previously substantially altered and does not contribute to the integrity of the Linde (Westwood) Medical Plaza, into a station entrance (Section 2.6). The proposed station entrance would be of similar dimensions and massing compared to the footprint currently occupied by the Chase Bank. Additionally, the station entrance design would replicate and replace the building's original design characteristics and details removed since the building's

construction in 1960-61 to the extent feasible. Four raised planters containing trees and located within the altered landscaped plaza fronting the Chase Bank retail space would be permanently removed. The planters have been altered since they were originally installed. These landscaped elements were determined to no longer contribute to the property due to a loss of integrity resulting from numerous alterations.

FTA, considering both temporary and permanent effects, has determined that the project refinements would have no adverse effect under Section 106 on the Linde (Westwood) Medical Plaza. FTA notified the SHPO of its determination and its intent to make a *de minimis* finding under Section 4(f) on November 8, 2018. On December 12, 2018, the SHPO concurred with FTA's determination. Per Section 3.3.1 of the *Section 4(f) Policy Paper* (FHWA 2012), a *de minimis* impact is one that, after taking into account any measures to minimize harm (such as avoidance, minimization, mitigation, or enhancement measures), results in a Section 106 finding of no adverse effect or no historic properties affected on a historic property. The effects of the project refinements meet the definition of a *de minimis* impact, which is consistent with FTA's finding for the property in the Final EIS/EIR. As described in the Final EIS/EIR, a use of Section 4(f) property having a *de minimis* impact can be approved by FHWA without the need to develop and evaluate alternatives that would avoid using the Section 4(f) property. The Project, including consideration of the refinements detailed in Section 2.6, would continue to have a *de minimis* impact on the Linde (Westwood) Medical Plaza, as detailed in Section 5.4.1 of the Final EIS/EIR. This would not result in a change compared to the findings of the Final EIS/EIR.

3.22.2.7 (Westwood) Federal Building

As described in Section 3.19.2.3, the guideway tunnels would cross under land that is within the historic property boundary for the (Westwood) Federal Building. There would be no construction staging on or other use of surface land from the property during construction. There would be neither temporary nor permanent occupancy or alteration of property at the surface. FTA has determined that the project refinements would have no adverse effect under Section 106 on the (Westwood) Federal Building. Per Question 28A of the *Section 4(f) Policy Paper* (FHWA 2012), Section 4(f) applies to tunneling under historic sites only if the tunneling:

- 1) Disturbs archaeological sites that are on or eligible for the NR which warrant preservation in place;
- 2) Causes disruption which would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
- 3) Substantially impairs the historic values of a historic site; or
- 4) Otherwise does not meet the exception for temporary occupancy

The (Westwood) Federal Building is not an archaeological site, nor a park, recreation, wildlife, or waterfowl refuge; therefore, the first two conditions are not met. FTA consulted with the SHPO and determined that the project refinements would have no adverse effect under Section 106 on the (Westwood) Federal Building. On December 12, 2018, the SHPO concurred with FTA's determination. Because the Project would have no adverse effect under Section 106 on the (Westwood) Federal Building, it would not substantially impair the historic values of the property. There would be no temporary occupancy of the property. As a result, Section 4(f) does not apply to tunneling under the property. This would not result in a change compared to the findings of the Final EIS/EIR.

3.22.2.8 Summary

The project refinements detailed in Section 2.0 of this technical memorandum would not result in additional use of Section 4(f)-protected parkland compared to the findings of the Final EIS/EIR. There are no parklands that are Section 4(f) properties that would be used by the project refinements detailed in Section 2.0 of this technical memorandum.

The project refinements detailed in Section 2.0 would not change the Section 4(f) finding of *de minimis* impact on the WLA VA Historic District and the Linde (Westwood) Medical Plaza. As described in the Final EIS/EIR, a use of a Section 4(f) property having a *de minimis* impact can be approved by FHWA without the need to develop and evaluate alternatives that would avoid using the Section 4(f) property. As explained in Section 3.3.1 of the *Section 4(f) Policy Paper*, *de minimis* impacts are generally not differentiators in a least overall harm analysis because the net harm resulting from the *de minimis* impact is negligible (FHWA 2012); therefore, an evaluation of least overall harm is not required for *de minimis* impacts. The Project would have no Section 4(f) use of the Wadsworth Chapel, News Stand, or Los Angeles National Cemetery. Section 4(f) does not apply to tunneling under the (Westwood) Federal Building. Because the Section 4(f) finding included in the Final EIS/EIR remains valid, this reevaluation does not include a new finding nor alter the prior finding.

3.22.3 Coordination and Consultation

As part of the coordination and consultation process for the Final EIS/EIR, FTA and Metro provided notification to the public and agencies of its intent to make a *de minimis* impact determination under Section 4(f) on the VA Medical Center Historic District and the Linde (Westwood) Medical Plaza. As documented in Section 5.7 of the Final EIS/EIR, FTA completed required public and agency notification of FTA's intent to make a *de minimis* impact determination on these properties and considered public and agency comments. FTA and Metro notified the SHPO on November 8, 2018 that the previous *de minimis* impact determination that was made in the Final EIS/EIR for the VA Medical Center Historic District and the Linde (Westwood) Medical Plaza continues to apply to Section 3 of the WPLE Project. On December 12, 2018, the SHPO concurred with FTA's finding of effect under Section 106.

3.23 Environmental Justice

Environmental Justice (EJ) was evaluated in Chapter 4, Section 4.2.6 of the Final EIS/EIR. The following sections evaluate long-term operational and construction-related impacts associated with the project refinements that may have the potential to change the impact conclusions in the Final EIS/EIR related to environmental justice. For additional information on this updated analysis, refer to the *Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum* (Metro 2018d), which provides an in-depth analysis of the project refinements described in Section 2.0 and includes the most current land use, community and neighborhood characteristics, and EJ analysis for Section 3. As demonstrated in the following sections, effects to Section 3 EJ communities would not be disproportionate when compared to a Section 2 non-EJ community.

For projects funded by FTA, the EJ analysis follows the procedures and methods set forth in Circular 4703.1. This circular requires that impacts to minority and low income populations be compared with non-minority and non-low income populations that may also be affected by the project. The circular defines a minority population as any readily identifiable group or groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed or transient persons such

as migrant workers or Native Americans who will be similarly affected by a proposed Department of Transportation program, policy or activity. Minority includes persons who are American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian and other Pacific Islander. FTA Circular 4701.1 defines low-income as a person whose median household income is at or below the Department of Health and Human Services poverty guidelines. Specifically, the comparison considers whether EJ populations would experience disproportionately high and adverse impacts from implementation of the Project, both long term and during construction compared to non-EJ populations. The analysis considers whether impacts: (1) are predominantly borne by an EJ population, (2) are appreciably more severe or greater in magnitude on an EJ population than those that would be suffered areas with low percentages of low income and/or minority populations, or (3) affect a resource that is especially important to an EJ population.

Chapter 4, Section 4.2.6 of the Final EIS/EIR identified EJ populations based on Circular 4703.1 and *Environmental Justice: Guidance Under the National Environmental Policy Act* (Council on Environmental Quality, 1997):

- A higher proportion of the population is below the poverty level in comparison to the County of Los Angeles, which is 18.2 percent below poverty
- The aggregate minority race/ethnicity exceeds 50 percent of the community population or is meaningfully greater when compared to the general population of the County of Los Angeles, which is 73.1 percent minority
- The Hispanic or Latino population exceeds 50 percent of the population or is meaningfully greater when compared to the Hispanic or Latino population of the County of Los Angeles, which is 48.2 percent Hispanic or Latino

Consistent with Circular 4702.1 and compared to the general population of the County of Los Angeles, the communities of VA WLA Campus (58.9 percent below poverty and 68.2 percent total minority), West Los Angeles (51 percent total minority), and Westwood (26.2 percent below poverty) have been identified as EJ populations. The Westwood/UCLA Station (Westwood community) and the Westwood/VA Hospital Station (VA WLA Campus) are both located in EJ communities. The VA WLA Campus qualifies as an EJ population because both the percentage of minorities and low-income populations are greater than County of Los Angeles. In addition, the VA WLA Campus population also qualifies as an EJ population because it includes a chronically homeless veteran population that is low-income. Informal homeless veteran encampments have been identified on the VA WLA Campus in the wooded area near the Japanese Garden and just outside of the VA WLA Campus gate located at the intersection of Bringham Avenue and Gorham Avenue (see Section 3.6 for additional detail). The VA WLA Campus provides services and facilities to the EJ population.

3.23.1 Long-Term Operational Evaluation

The Final EIS/EIR stated that the Project would not result in adverse impacts to minority or low-income communities as it related to geology and soils; hazardous waste and materials; water quality; energy; historic and archaeological resources; parklands, community facilities, and other Section 4(f) properties; and safety and security. To identify and analyze the potential for disproportionate impacts between areas with low percentages of low income and/or minority populations and an EJ community, a comparative long-term operational impact analysis was conducted between the areas with low percentages of low income and/or minority populations in Century City (Constellation Station) in

Segment 2 of the WPLE Project and the EJ communities of VA WLA Campus (Westwood/VA Hospital Station) and Westwood (Westwood/UCLA Station).

The project refinements in addition to the substantial tangible benefit of increased transit access to the local and regional workforce and health, cultural, and educational resources, would not result in new disproportionately adverse long-term impacts or increase the severity of previously identified impacts to this EJ community. Specifically, long-term operational impacts would be experienced by EJ populations in the vicinity of the Westwood/UCLA and Westwood/VA Hospital Stations. The impacts would not be adverse and would be similar to long-term operational impacts identified at the Constellation Station in the Century City areas with low percentages of low income and/or minority population. While EJ populations are affected, impacts are not predominantly borne by EJ populations because similar impacts occur at the Constellation Station, which is located in an area that does not have a high concentration of low-income and/or minority populations. Therefore, impacts would not be disproportionately high and adverse since similar impacts would occur in areas with high and low percentages of low-income and/or minority populations. In addition, benefits of increased transit access would be realized by the EJ populations. No new adverse operational traffic/circulation or parking impacts have been identified for EJ communities with implementation of the project refinements, as demonstrated in Sections 3.2.1 and 3.3.1. Similarly, no adverse operational traffic/circulation or parking impacts are anticipated for the Century City areas with low percentages of low income and/or minority populations. Therefore, no disproportionate adverse effect would occur.

Permanent easements would be required in both the Westwood and VA WLA Campus EJ communities and the areas of Century City with low percentages of low income and/or minority populations. As described in Section 3.7.1, changes to permanent easements in the Westwood and VA WLA Campus areas would be borne by EJ communities, but would be minor and would not result in new adverse impacts. Similarly, permanent easements would be required for the areas of Century City with low percentages of low income and/or minority populations. Permanent displacements would also occur in the EJ and communities and areas with low percentages of low income and/or minority populations. Specifically, the Chase Bank in the Linde (Westwood) Medical Center in Westwood and a business located at 1940 Century Park East would both be displaced. Mitigation measures would be implemented to minimize adverse impacts. Thus, impacts related to permanent easements would not substantially differ between the non-EJ community and EJ communities and a disproportionate affect would not occur.

The project refinements would not result in new adverse effects to visual resources within the Westwood or VA WLA Campus EJ communities (Section 3.8.1). Long term, aboveground station components would be the primary visible project components at the Westwood/VA Hospital Station and Westwood/UCLA Station. As discussed, such changes would not be predominantly borne by EJ populations because these changes would be similar to those experienced at the Constellation Station, which is located in an area which does not have a high concentration of low-income and/or minority populations. Furthermore, visual changes associated with the Westwood/VA Hospital Station would be implemented in and around the South Campus of the VA WLA Campus while a majority of the EJ population in the area, including the homeless population, resides on the North Campus where the Westwood/VA Hospital Station would not be visible. In addition, access points would be designed such that they would complement the existing visual character of the area rather than detract from it. Areas disturbed by construction would be restored to existing conditions or as otherwise determined through coordination with the property owner and community. Similarly, aboveground station components at

the Constellation Station in Century City would also be visible and designed to complement the surrounding area. Therefore, a disproportionate effect on EJ communities would not occur related to permanent visual quality.

The project refinements do not change the operations of the Project in a manner that would change the air quality analysis presented in the Final EIS/EIR (Section 3.9.1). Furthermore, the Project was presented at SCAG's Transportation Conformity Working Group in June 2017, and it was unanimously determined that it is not a project of air quality concern. As discussed in the Final EIS/EIR, the Project would have beneficial operational air quality effects to EJ and non-EJ communities. Therefore, no new air quality effects would occur to EJ communities or areas with low percentages of low income and/or minority populations during operation as a result of the project refinements and the impact conclusions of Final EIS/EIR would remain unchanged.

The potential to generate noise during operation would occur at the Westwood/VA Hospital Station and Westwood/UCLA Station (Section 3.11.1) and the Constellation Station. Noises audible at the surface include the station ventilation system fans and the emergency ventilation system fans, which would adhere to Metro design levels and would not exceed the FTA noise impact criteria. Noise from rail operations, including interaction of wheels on tracks, motive power, signaling and warning systems, and the traction power substations, would occur well below ground. Operational noise would not substantially differ for EJ communities and areas of Century City with low percentages of low income and/or minority populations. Therefore, a disproportionate effect on EJ communities would not occur related to operational noise.

Project refinements to the Westwood/VA Hospital Station would yield accessibility benefits to the veteran's community and their families, employees, and patients to the VA Main Hospital (Building 500) and other important community assets on the VA WLA Campus.

As demonstrated throughout this section, implementation of the project refinements would not result in new adverse long-term operational impacts, increase the severity of previously identified impacts, or result in new impacts that would be disproportionately high and adverse for EJ populations. The mitigation measures identified in the Final EIS/EIR would continue to be uniformly applied to EJ communities and areas with low percentages of low income and/or minority populations. Per the requirement of Circular 4703.1, that no additional modifications to these mitigation measures for EJ populations would be required as a result of the project refinements. As similar impacts would occur both in the areas of Century City with low percentages of low income and/or minority populations and in the EJ communities of Westwood and the VA WLA Campus, a disproportionate effect regarding long-term operational impacts would not occur. Metro will also continue to implement the recently adopted Transit Homeless Action Plan and Equity Platform Framework. These policies, in concert with Metro's Homeless Task Force, will address homelessness issues within the transit network, including the Westwood/VA Station area. The Homeless Task Force will work with the Los Angeles County Department of Mental Health, the Los Angeles Homeless Services Authority, and deputies from the Los Angeles County Sheriff's Department to respond to homelessness and work with homeless individuals and families, including homeless veterans, and connect them to resources and services. With this policy and implementation focus, no adverse long-term project-related effects on the homeless are anticipated.

3.23.2 Construction Phase Evaluation

The Final EIS/EIR determined that no minority or low-income communities were identified to have disproportionately high and adverse impacts during construction. Mitigation measures identified in the Final EIS/EIR, and reiterated throughout this document, including but not limited to Mitigation Measures CON-1 (Signage), TCON-1 (Traffic Control Plans), TCON-2 (Designated Haul Routes), TCON-3 (Emergency Vehicle Access), TCON-4 (Transportation Management Plan), TCON-7 (Parking Management), TCON-8 (Parking Monitoring and Community Outreach), TCON-10 (Pedestrian Routes and Access), and TCON-11 (Bicycle Paths and Access), would be applied uniformly to EJ communities and areas with low percentages of low income and/or minority populations to maintain vehicular and pedestrian access during construction to the extent feasible and safe. To analyze the potential for disproportionate impacts between an EJ community and areas with low percentages of low income and/or minority populations, a comparative construction impact analysis was conducted between the areas of Century City (Constellation Station) in Segment 2 of the WPLE Project with low percentages of low income and/or minority populations and the EJ communities of the VA WLA Campus (Westwood/VA Hospital Station) and Westwood (Westwood/UCLA Station).

Typical construction-related impacts including increased noise, haul truck traffic, detours, and other disruptions would be experienced by residents and visitors of the VA WLA Campus. The impacts would be similar to short-term construction impacts identified at the Constellation Station in the Century City areas with low percentages of low income and/or minority populations. While EJ populations are affected by construction impacts, the impacts are not predominantly borne by EJ populations because similar impacts occur at the Constellation Station, which is located in an area which does not have a high concentration of low-income and/or minority populations. Therefore, impacts would not be disproportionately high and adverse since similar impacts would occur in areas with high and low percentages of low-income and/or minority populations.

Metro is coordinating with representatives of the VA to construct the Westwood/VA Hospital Station and associated station features in the least disruptive manner possible. Specifically, to avoid, minimize, and mitigate potential effects to the Veteran community, the following measures would be undertaken at the VA WLA Campus: erection of substantial noise barriers (consistent with CON-27 [Noise Barriers for Nighttime Construction]), shielding of lights (consistent with CON-4 [Construction Lighting]), the elimination of some of the on-campus haul routes, shifting substantial heavy construction activities away from the VA Main Hospital (Building 500), and implementation of a public awareness and notification plan (consistent with CON-83 [Work with Transportation, Police, Public Works, and Community Service Departments]). To avoid, minimize, and mitigate construction-related air quality impacts to the Veteran community, the following measures would be implemented: CON-9 (No Idling of Heavy Equipment), CON-10 (Maintenance of Construction Equipment), CON-11 (Prohibit Tampering of Equipment), CON-12 (Use of Best Available Emissions Control Technologies), and CON-13 (Placement of Construction Equipment). Furthermore, the placement of approximately 20-foot-high temporary noise barrier walls could be optimized to break the line-of-sight from exhaust sources to sensitive receptors near construction areas, thereby deflecting direct exposure to any potential odorous emissions from construction equipment. Air quality impacts would be further minimized during construction because construction specifications require: (1) specific pieces of equipment meet Tier 4 final emission standards and (2) all trucks used for hauling and deliveries be model year 2012 or newer. As part of Mitigation Measure CON-1 (Signage), Metro would provide an electronic management board system in portions of the VA WLA Campus to notify individuals of construction activities associated with the WPLE Project.

These boards would be updated as necessary to reflect construction activities on the VA WLA Campus. Detours for sidewalks and vehicular lanes on the VA WLA Campus are not anticipated; however, if detours are required these would also be communicated via the electronic management board system. It is anticipated that these mitigation measures would avoid, minimize, and mitigate effects that could be potential triggers to Veterans with post-traumatic stress disorder. The additional consideration given to the EJ population on the VA WLA Campus through coordination with representatives of the VA and associated mitigation, minimization, and avoidance measures would ensure that impacts associated with construction would not be appreciably more severe for EJ populations on the VA WLA Campus when compared to impacts experienced in areas where there is not a high concentration of low-income and/or minority populations. Therefore, a disproportionate effect on EJ communities would not occur related to construction.

Construction impacts at the Westwood/UCLA and Westwood/VA Station areas in the Westwood and VA WLA Campus EJ communities, respectively, and thus would be borne by EJ populations that reside in proximity to the station construction areas. Construction impacts would be similar to construction-related impacts identified at the Constellation Station in the Century City areas with low percentages of low income and/or minority populations. Construction-related traffic/circulation and parking impacts associated with the project refinements would not result in new adverse effects beyond what was presented in the Final EIS/EIR or increase the severity of previously identified impacts (Sections 3.2.2 and 3.3.2, respectively). Consistent with the Final EIS/EIR, traffic impacts during construction would be borne by both EJ communities and areas with low percentages of low income and/or minority populations. At the VA WLA Campus, shifting major construction activities from the Westwood/VA Hospital Station to the Western VA construction staging area would reduce the potential construction disruptions to the VA WLA Campus and avoid impacts to services at the VA facilities. Construction of the Westwood/VA Hospital Station in the VA WLA Campus EJ community and the Westwood/UCLA Station in the Westwood EJ community may require temporary partial street closures and detour routes, but no full street closures would occur. Similarly, construction of the Constellation Station would be located in Constellation Boulevard in the Century City community and would require phased lane closures consisting of sequenced partial and full street closures. Traffic control zones would also be established within the vicinity of the Westwood/VA Hospital, Westwood/UCLA, and Constellation Stations construction sites to minimize construction traffic impacts. The level of impact related to construction traffic would largely be the same for both Century City areas with low percentages of low income and/or minority populations and the VA WLA Campus and Westwood EJ communities. Therefore, a disproportionate effect on EJ communities would not occur related to construction traffic.

Parking impacts are summarized in Section 3.3.2. With construction of a replacement parking structure in Lot 43, no off-street parking loss would occur at the VA WLA Campus. A temporary loss of parking would occur in Lot 36 in the Westwood EJ community; however, this loss has not increased since the Final EIS/EIR. Similarly, temporary on- and off-street parking loss would occur in the Century City areas with low percentages of low income and/or minority populations. Mitigation measures would be implemented uniformly in the EJ and areas with low percentages of low income and/or minority populations to minimize impacts. Therefore, impacts would occur in both the EJ community and areas with low percentages of low income and/or minority populations and impacts would not be disproportionate to EJ communities.

Temporary easements would be required in the Westwood and VA WLA Campus EJ communities and the Century City areas with low percentages of low income and/or minority populations (Section 3.7.2).

Changes to temporary easements in the EJ communities would not result in adverse impacts. Similarly, temporary easements would be required for the Century City areas with low percentages of low income and/or minority populations. Thus, impacts related to permanent easements would not substantially differ between the areas with low percentages of low income and/or minority populations and the EJ communities and a disproportionate affect would not occur.

Visual effects during construction of the project refinements in the Westwood and VA WLA Campus EJ communities would be associated with construction equipment, staging areas, and the loss of trees (Section 3.8.2). Construction activities associated with the Constellation Station in the Century City areas with low percentages of low income and/or minority populations would result in similar visual effects. Mitigation would be implemented to minimize effects in both the EJ communities and areas with low percentages of low income and/or minority populations to the extent feasible. Therefore, temporary visual impacts would not substantially differ between the areas with low percentages of low income and/or minority populations and the EJ communities and a disproportionate affect would not occur.

The project refinements are not anticipated to change the construction equipment or schedule in a manner that would result in new adverse air quality impacts to EJ communities and areas with low percentages of low income and/or minority populations during construction. Instead, with implementation of mitigation, emissions of most pollutants would be less than the levels identified in the Final EIS/EIR (Section 3.9.2). Construction activities in Section 2 for the Constellation Station would result in similar levels of criteria pollutants. As such, there would not be a discernible difference in air quality emissions impacts between the EJ communities and areas with low percentages of low income and/or minority populations, and a disproportionate effect on EJ communities would not occur.

Based on the analysis, similar impacts would occur in the areas with low percentages of low income and/or minority populations and in the EJ communities of Westwood and the VA WLA Campus. As such, a disproportionately high and effect on EJ populations regarding construction impacts would not occur.

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4.0 AGENCY AND STAKEHOLDER COORDINATION

The Los Angeles County Metropolitan Transportation Authority (Metro) has coordinated with agencies and other stakeholders regarding the refinements to Section 3 of the Westside Purple Line Extension (WPLE) Project, which are described in Section 2.0 of this technical memorandum. This coordination is summarized in the following sections.

4.1 Federal Agencies

4.1.1 U.S. Department of Veterans Affairs

When the *Westside Subway Extension Final Environmental Impact Statement/Environmental Impact Report* (Final EIS/EIR) (Metro 2012a) was completed, it was anticipated that construction of Section 3 would begin in 2026. However, the November 2016 approval of Measure M, the one-half-cent sales tax, enables construction of Section 3 to occur sooner than originally planned. In support of the expedited construction timeframe, Metro reinitiated coordination with representatives of the U.S. Department of Veterans Affairs West Los Angeles Campus (VA WLA Campus). In July 2016, a meeting occurred with representatives of the VA regarding geotechnical coordination. Regular meetings and correspondence between Metro and representatives of the VA WLA Campus regarding the environmental reevaluation and property easements have been ongoing since May 2017 and are still ongoing as of October 5, 2018. Coordination has focused on environmental clearance of the project refinements proposed on the VA WLA Campus and execution of a real estate agreement for the permanent and temporary easements needed to support the Project. To assist with this coordination, various working groups were formed, including one focused on compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) (54 United States Code 300101 et seq.).

During these meetings, Metro presented information on elements of the Project located on or adjacent to the VA WLA Campus, including the Los Angeles National Cemetery, and the construction activities and durations associated with these project elements. Specifically, the following project refinements are located on the VA WLA Campus: construction staging areas (Section 2.1), alignment and Westwood/VA Hospital Station locations (Section 2.2), access to the Westwood/VA Hospital Station (Section 2.3), and construction method for the Westwood/VA Hospital Station west crossover (Section 2.5). The murals (Section 2.4), located on property owned by Los Angeles County, are an important resource to the veteran community; thus, Metro coordinated with representatives of the VA regarding the proposed removal of the entire northeast mural wall and conveying the story in a reduced-scale mosaic across from the current location onto a parcel that is County maintained. Coordination efforts with the VA focused on three topics: compliance with NEPA, compliance with Section 106 of the NHPA, and execution of a Memorandum of Understanding (MOU) for permanent and temporary easements. Metro has also participated in public outreach meetings with the VA to discuss both the WPLE Project and the *Greater Los Angeles Campus Draft Master Plan* (GLA DMP) (VA 2016). Consultation with the VA in support of Section 106 is summarized in Section 4.5; the following sections summarize coordination in support of NEPA, public outreach, and the MOU/Access and Easement Agreement (AEA).

4.1.1.1 Coordination in Support of NEPA

In support of advancing the project refinements, Metro conducted an environmental reevaluation following accepted procedures pursuant to NEPA, 40 Code of Federal Regulations (CFR) § 1502.9 and 23 CFR § 771.129 and 130. The environmental reevaluation considered, for each environmental topic included in the Final EIS/EIR, whether the project refinements had the potential to result in new impacts or change the severity of previously disclosed impacts when compared to the impact conclusions in the Final EIS/EIR. This reevaluation also included updates to the existing conditions (e.g., population, employment) and determinations of whether new information existed that could affect the impact conclusions in the Final EIS/EIR. When coordination with the VA began in May 2017, VA staff expressed the following concerns:

- Construction impacts on veterans, particularly related to air quality, noise, and light from construction activities
- Maintaining pedestrian and vehicular circulation on the campus, particularly between the north and south campus
- Parking impacts during construction related to a portion of Lot 42, located south of Wilshire Boulevard and east of Bonsall Avenue, being used during construction of the Project
- Locations of construction activities and equipment, particularly the location where the tunnel boring machine (TBM) would be launched, road closures, and the number of truck trips per day

The Final EIS/EIR included a commitment to build a parking structure in Lot 43 located east of the Main Hospital (Building 500) to offset temporary and permanent parking loss from Lot 42 during construction. This location is reflected in the analysis contained in this technical memorandum and supporting technical studies. On-going coordination efforts between Metro and the VA have included discussions of the location and capacity of this structure, particularly in terms of the GLA DMP that is being developed by the VA. In the event that the location of the parking structure changes, the environmental record will be updated accordingly.

To address the items listed above, Metro presented detailed information on construction means and methods, including the project schedule and phasing at meetings held throughout 2017 and early 2018. These coordination efforts assumed that construction on the VA WLA Campus would occur from Lot 42, Lot 43 for the replacement parking structure, a cut-and-cover area west of Bonsall Avenue and south of Wilshire Boulevard, and from a staging area located partially on the western side of the VA WLA Campus and partially on the U.S. Army Reserve site. On July 17, 2017, Metro and VA personnel visited an active construction site on Section 1 of the Project to provide VA staff with an example of what is involved in Metro's station construction. Additionally, Metro incorporated specific measures into the contract specifications related to construction on the VA WLA Campus to ensure that construction impacts on veterans and the campus would be minimized to the extent feasible.

A meeting with the VA was also held on January 11, 2018, during which participants discussed construction activities on the VA WLA Campus and the U.S. Army Reserve site, outreach during construction, and real estate needs on both properties. Representatives of the U.S. Army also participated in this meeting. At that time, a construction staging area was assumed partially on the U.S. Army Reserve site and partially on the western portion of the VA WLA Campus.

Because this “130c technical memorandum” is prepared pursuant to U.S. Department of Transportation guidance aimed at addressing environmental review of changes subsequent to a Record of Decision, meetings and other correspondence with the VA staff focused on describing what the 130c process entailed to familiarize them with the process and the documents to be prepared. In support of these efforts, Metro provided an annotated outline of this 130c memorandum to the VA on November 27, 2017. Sample 130c documents were also provided to the VA in November 2017. Further, Metro provided all technical memoranda prepared in support of this 130c memorandum that were related to refinements on the VA WLA Campus to representatives of the VA for their review and comment. On January 24, 2018, Metro submitted a draft of the 130c memorandum and supporting technical studies to representatives of the VA for their review and comment. A meeting was held with the VA on January 25, 2018, to provide an overview of the subject matter and findings contained in the 130c memorandum. This meeting was also attended by representatives of FTA, the U.S. Army, and elected officials.

The January 2018 submittal of the 130c and supporting technical studies assumed a construction staging area located partially on the U.S. Army Reserve site and partially on the western portion of the VA WLA Campus. The submittal also proposed a permanent Wayside Maintenance Access Building and aboveground exit shaft on the U.S. Army Reserve site. During meetings held in January with the FTA, VA, and U.S. Army, the U.S. Army stated that temporary and permanent features associated with the WPLE Project could not be accommodated on the U.S. Army Reserve site unless the VA was unable to accommodate them on the VA WLA Campus. In response to this information, Metro proposed two alternatives on the VA WLA Campus:

- Alternative 1: The staging area for tunnel construction would be located on the western-most portion of the VA WLA Campus adjacent to the U.S. Army Reserve site, including over a solar farm. Long-term, the aboveground exit shaft and Wayside Maintenance Access Building would remain adjacent to the U.S. Army Reserve site.
- Alternative 2: Tunnel construction would be staged from Lot 42 along with station construction. The tail tracks would be mined and an access shaft would be located approximately in the middle of the grassy area of the West Los Angeles Veterans Affairs Historic District (WLA VA Historic District), south of Wilshire Boulevard and west of Bonsall Avenue. A staging area would be required in this area for construction of the access shaft.

These alternatives were presented to the VA in a letter dated February 6, 2018. The VA responded on February 12, 2018, stating a preference for Alternative 1 with the condition that the Wayside Maintenance Access Building be eliminated, leaving only a permanent aboveground access shaft, exit hatch, and surface ventilation plenums on the VA WLA Campus after construction is complete. The VA stated that it does not support staging tunnel construction from Lot 42.

The VA transmitted comments on the 130c and supporting technical studies on February 21, 2018. A meeting was held with representatives of FTA and the VA on February 22, 2018, during which the VA provided an overview of their comments on the 130c and supporting studies. Attendees also discussed the potential implications to the environmental analyses and documentation if the construction staging area and tail track exit shaft were relocated from the U.S. Army Reserve site to the western portion of the VA WLA Campus.

As described in Section 4.1.2, in a letter dated April 30, 2018, the U.S. Army stated that the construction staging area could not be located on the U.S. Army Reserve site. Metro reevaluated the Alternative 1 construction staging area presented to the VA in February 2018 and developed a second option (referred to as Alternative 2) that would avoid impacts to the solar farm and four 100-year-old fig trees. In prior meetings, the VA indicated that the solar farm may be used as a construction staging area for construction of projects identified in the GLA DMP, including a new bed tower. Alternatives 1 and 2 were presented to the VA on May 10, 2018. In a letter dated May 14, 2018, the VA stated that it could accommodate Alternative 2 as long as the site was modified to include a two-way construction access road that would service the VA construction projects via Dowlen Drive. In response to this letter, Metro modified the site to provide a shared construction access road between Wilshire Boulevard and Dowlen Drive that would separate VA construction traffic from construction activities in support of the WPLE Project. The separation is required from a safety and security standpoint and to minimize potential disruption to construction of the WPLE Project. The modified site layout was presented to the VA on May 21, 2018. As of June 13, 2018, no further comments were received from the VA regarding the footprint or layout of this staging area. This is the construction staging area evaluated in this technical memorandum and corresponding technical studies.

It should be noted that when compared to the construction means and methods described in the Final EIS/EIR, the project refinements benefit veterans and others working or visiting the VA WLA Campus because heavy construction activities, such as launching and supporting the TBMs, were shifted from a staging area in Lot 42, which is approximately 300 feet from the VA Main Hospital (Building 500), to a staging area located on the western portion of the VA WLA Campus, which is 1,400 feet from the Main Hospital. As a result, truck trips were also reduced on the VA WLA Campus compared to what was described in the Final EIS/EIR. The air quality, noise and vibration, and transportation analyses included in Section 3.0 of this memorandum reflect this shift in the location of construction activities.

FTA and Metro met with VA on November 14, 2018 to discuss the NEPA evaluation and conclusions. This technical memorandum was revised to address VA comments on land use, community and neighborhoods, and EJ. A summary of the meeting is included in Appendix F of this memorandum. VA stated in a letter dated December 6, 2018, that all concerns had been addressed and concurred with the memorandum. This letter is included in Appendix F.

4.1.1.2 Public Outreach to Veterans and Veterans Groups

On October 18, 2017, Metro attended a Veterans Advisory Group quarterly meeting to provide a presentation on the Project. Attendees at the meeting inquired about station parking, pedestrian access to the north side of Wilshire Boulevard, and Metro's veterans programs. Attendees generally indicated support for the Project.

On June 21, 2018, and September 13, 2018, Metro hosted a public outreach meetings for Section 3 of the WPLE Project at the Westwood United Methodist Church on Wilshire Boulevard. Stakeholder groups identified by the VA were invited to these meetings. During the meetings, Metro provided an overview of the project refinements proposed since the Record of Decision. These meetings are summarized further in Section 5.1. The presentations provided at these meetings are included in Appendix C.

Metro has also coordinated with Vet's Advocacy. On June 28, 2018, Metro briefed Vet's Advocacy staff and leadership on the project refinements anticipated for the VA WLA Campus. Vet's Advocacy was supportive of the station and understands it to be a necessary component to the success of VA's own

Master Plan. Vet's Advocacy was supportive of the changes generally, and had a particularly positive reaction to 1) the portal being located closer to the hospital, 2) the TBM launch site and tunnel construction activities moving further away from the hospital and center of campus, and 3) the use of the western edge of campus for the tunnel construction activities. Vet's Advocacy understood the need for tree removal in the WLA VA Historic District and did not raise objections. Vet's Advocacy suggested Metro explore possible employment opportunities for veterans when the station is operational, including employing veterans to monitor the passenger drop-off area.

On July 26, 2018, Metro and the VA held a joint Town Hall meeting for the veteran community. Metro provided an overview of the WPLE Project and the project refinements proposed on the VA WLA Campus, including within the WLA VA Historic District. VA staff began the meeting by discussing the station's importance to their own Master Plan, highlighting the benefits to veterans, which include access to Los Angeles' job centers and cultural institutions, as well as easier access to campus for medical center staff and veterans traveling to campus for their care. VA staff were pleased with the information Metro shared, and those in attendance generally offered support for the Project and the refinements as outlined in the presentation. Questions fell into the following categories: parking, station safety and security, first/last mile access to the station (both for those on campus and those surrounding campus), noise mitigation, and traffic lane restrictions. In both questions and comments, attendees expressed an interest in the Purple Line continuing for at least one more stop to Wilshire/Bundy. The presentation is included in Appendix C.

On September 19, 2018, Metro met with the Community Veterans Engagement Board (CVEB) to discuss the project and Westwood/VA Hospital Station, background of the murals underneath Bonsall Avenue, plans for outreach and "hands on" engagement with veterans to repurpose the impacted section of mural onto a County-controlled parcel on the VA campus, and next steps in terms of schedule, including demolition of the impacted area. The presentation was well received and the CVEB expressed interest in being a part of the process. Approximately 10 to 15 people attended. The presentation is included in Appendix C.

On November 11, 2018, Metro staff attended the Veterans Day and World War I Celebration held by VA. Printed project information, including project maps and schedules, was disseminated at an onsite information booth. Metro's Construction Relations personnel, who staffed the booth, also answered questions about the project, including operation dates and the overall benefit to the local communities and region. Approximately 500 people attended.

4.1.1.3 Coordination in Support of a MOU/AEA for Real Estate

Metro coordinated extensively with representatives of the VA beginning in May 2017 related to execution of a MOU to obtain the temporary and permanent easements required for the Project. A separate working group was formed to focus on the MOU. A meeting was held on August 29, 2017, to brief the VA Real Estate team on the project refinements and outline the parcel easements required. A follow-up discussion was held on September 12, 2017. Coordination regarding the MOU is ongoing as of June 2018. A draft version of the MOU was received from the VA on September 13, 2018. Meetings were held with the VA on September 22, 2018, October 1, 2018, and in multiple meetings in November 2018, to discuss the MOU. The document is close to being finalized.

It has been agreed with the parties that a further document, an AEA will follow the MOU with specific details on work being performed. The MOU is expected to be signed in late 2018 and the AEA in early 2019. Future meetings will be arranged with VA, FTA and others as required to complete the documents.

4.1.2 U.S. Department of Army

Coordination occurred with the U.S. Department of the Army regarding a construction staging area located on the U.S. Army Reserve site and associated construction activities, including construction of the Wayside Maintenance Access Building and exit shaft. Meetings began on January 31, 2017, at which Metro presented the plan to launch and support the TBMs from the U.S. Army Reserve site. A follow-up meeting was held on May 8, 2017, in regard to further refinements. During a meeting on January 2, 2018, Metro provided an overview of the Project and details of the construction staging area and Wayside Maintenance Access Building. Representatives from the VA also attended this meeting. In addition, meeting attendees discussed the archaeological and topographic surveys required on the U.S. Army Reserve site, and Metro requested access to the property to conduct these surveys. Subsequent to the meeting, Metro provided additional details of the surveys to the U.S. Army. Representatives of the U.S. Army also participated in a meeting with representatives of the VA on January 11, 2018, during which participants discussed construction activities on the VA WLA Campus and the U.S. Army Reserve site, outreach during construction, and real estate needs on both properties.

In March 2018, Metro provided subsequent information to the U.S. Army regarding proposed uses on the U.S. Army Reserve site. Specifically, Metro proposed to maintain the construction staging area on the portion of the site identified to date; however, the Wayside Maintenance Access Building and aboveground exit shaft would no longer be constructed. A permanent subsurface easement would be required for the belowground shaft. In a letter dated April 30, 2018, the U.S. Army stated that the construction staging area could not be located on the U.S. Army Reserve site because the easement for underground facilities would constrain future development of a new, modern Reserve Center. Based on this letter, the portion of the staging area on the U.S. Army Reserve site was eliminated from consideration. No further coordination is required with the U.S. Army Reserve.

4.1.3 General Services Administration

The Final EIS/EIR included construction of a double crossover in front of and underneath property owned by the General Services Administration (GSA), referred to as the GSA crossover. As described in Section 2.2, this crossover has been eliminated so that only the tunnels are located beneath the GSA property, maintaining the same 100-foot clearance from the existing structures as originally requested by GSA. This reduction in construction activities in front of the GSA is considered beneficial to the property and the area. Metro met with the GSA on October 18, 2017, to provide an update on the status of Section 3 of the Project and discuss the changes to the Project relevant to the GSA building. GSA staff inquired about the provision of parking and rerouting of bus service during operation of the Project. Metro responded that parking would not be provided at stations and that plans for rerouting buses would not be completed until approximately two years before revenue service begins. Metro agreed to share preliminary plans for bus services with the GSA. A meeting was held on August 2, 2018, and the Project was presented to a wider GSA audience. The project team met with GSA and their major tenant, the FBI, on October 9, 2018. The FBI requested a set of contract documents for review but did not see any major issues with the project's design and relationship with the building. Real estate discussions are ongoing as of December 2018 and the appraisal process has been started.

4.2 State Agencies

4.2.1 California Department of Transportation

Metro met monthly with the California Department of Transportation (Caltrans) between mid-2016 and mid-2017 and then as needed to discuss the interface between the Project and Caltrans facilities. As part of these coordination efforts, a Project Study Report/Project Report (PSR/PR) was developed regarding impacts on Caltrans property associated with tunneling under Interstate 405 (I-405). The PSR/PR was approved by Caltrans in April 2017. The traffic study developed in support of the PSR/PR was reviewed and integrated into the traffic analysis completed for the refinement to the Westwood/VA Hospital Station passenger drop-off area.

Metro also coordinated with Caltrans in December 2017 and January 2018 regarding the archaeological surveys conducted within a BMP area located south of Wilshire Boulevard and west of I-405. Meetings in December 2017 and January 2018 also focused on design improvements for the BMP areas located north and south of Wilshire Boulevard and west of I-405.

A meeting was held on February 23, 2018, with Caltrans to discuss the Building Protection Report for the stations work. Caltrans had no further comments on the methods of construction and instrumentation proposed by the Project. Coordination with Caltrans has also focused on obtaining the necessary permits and agreements for construction of the Project. Concurrence has been reached on the steps required to obtain the permits. A Joint Permitted Used and Maintenance Agreement was signed by Metro in September 2018 and was signed by Caltrans on September 25, 2018. This agreement sets the framework for the final designers and contractors to obtain the necessary encroachment permits to undertake construction work and for Metro and Caltrans to agree on the joint uses of the property parcels for the purposes of the Project.

Coordination also occurred with Caltrans regarding the traffic study prepared for the Westwood/VA Hospital Station passenger drop-off area. In a letter dated October 2, 2018, Caltrans concurred with the results of the traffic study and accepted the methodology and analysis. This letter is included in Appendix F of this memorandum.

Future coordination will be held with Caltrans once the contractor is engaged and final design is occurring, so that Encroachment Permits can be obtained from Caltrans in a timely manner.

4.2.2 University of California, Los Angeles

Metro met with representatives of the University of California, Los Angeles (UCLA) on May 11, June 29, September 22, and November 2, 2017, regarding the Westwood/UCLA Station entrance located in Lot 36. Metro proposed relocating the station entrance to improve both pedestrian access and overall circulation on the site. The prior entrance location required underpinning the existing Los Angeles County storm drain. Underpinning would no longer be required; instead the storm drain would be relocated around the entrance plaza. Metro discussed these refinements with UCLA staff.

Further meetings were held with UCLA representatives on April 16, 2018, June 27, 2018, and September 13, 2018, to reacquaint the group with the Project and initiate the Real Estate Agreement between Metro and UCLA. Meetings are planned in December 2018 to finalize the coordination between the groups. Two real estate documents, 'Agreement for Construction Rights' and 'Construction Agreement and Right of Entry'

have been produced and are being circulated for review between the parties. These documents will contain the agreement between parties and the scope and easements required for the Project.

4.3 Regional and Local Agencies

4.3.1 Los Angeles County and City of Los Angeles

Metro has coordinated monthly with the County of Los Angeles (County) regarding work within the County jurisdiction, specifically modifications to Bonsall Avenue and Wilshire Boulevard associated with the Westwood/VA Hospital Station. During these meetings, Metro was notified that the County plans improvements to Wilshire Boulevard, Bonsall Avenue, and Federal Avenue. Accordingly, the construction schedules of the two projects were discussed. The County is considering delaying its improvements until after Metro completes construction of the WPLE Project or transferring the scope to Metro's contractor. A Master Cooperative Agreement is being circulated between the parties for signature as of October 2018. This will form the basis for the work Metro is undertaking within the County jurisdiction.

Coordination meetings with the City of Los Angeles Department of Transportation (LADOT) and the Traffic Section of Los Angeles County Public Works have occurred in support of the proposed traffic control plans required during construction of the Project. Section 3 includes various construction projects that would require review by LADOT and the Traffic Section of Los Angeles County Public Works. The following were discussed during coordination meetings:

- Traffic control plans for the proposed Southern California Edison underground electrical distribution conduits and vaults on Ohio Avenue and a portion of Federal Avenue (City). Council District 11 and LADOT have also been briefed on the proposed work plan for extended daytime hours.
- Traffic control plans for the proposed Southern California Edison underground electrical distribution conduits on Federal Avenue north of Texas Avenue (County) and the south side of Wilshire Boulevard adjacent to the U.S. Army Reserve and VA WLA Campus properties.
- Traffic control plans for Metro's Advanced Utility Relocation Contract for the Los Angeles Department of Water and Power (LADWP) water and electrical relocation plans at the Westwood/UCLA Station (LADOT).
- Traffic control plans for relocation of private utilities, including telecommunication conduits and vaults at the Westwood/UCLA Station (LADOT).
- Westwood/UCLA Station design/build construction contract requiring lane closures of Wilshire Boulevard between the northbound I-405 on/off-ramps and Selby Avenue. The proposed traffic control plan would require multiple stages during daytime, nighttime, and weekend hours, including some full street closures on Wilshire Boulevard, Gayley Avenue, and Westwood Boulevard during nights and weekends. Council District 5 and LADOT have provided input on the proposed traffic control plans.
- Proposed traffic improvements at Wilshire Boulevard and Bonsall Avenue, including the new traffic signals described in Section 2.3 (County).
- Peak-hour exemption restrictions coordinated around the UCLA academic calendar when possible for construction of the Westwood/UCLA Station end wall piles to minimize disruptions on Wilshire Boulevard.

- Peak hour exemptions will be provided by the contractor for other work in the area. These exemptions are valid typically for six months and cannot be arranged in advance.

Coordination meetings with the City of Los Angeles Bureau of Engineering (LABOE) have occurred. In October 2016, a meeting has held with senior staff to inform LABOE of the general project scope. Further meetings were held with LABOE on April 25, 2017, to discuss the relocation of major City facilities in Westwood and on October 23, 2017, to discuss a sewer relocation proposal. A Master Cooperative Agreement is in place with the City of Los Angeles, dated January 21, 2003. The Special Permitting Process for Section 1 of the WPLE Project is in place with LABOE and is being adopted for Section 3 of the Project.

In addition to the meetings, the City and County agencies have been provided with copies of the relevant project definition drawings from the contracts to provide formal comments. A master database has been produced by the Project to respond to comments; all comments have been addressed.

Meetings have also occurred with the Los Angeles Bureau of Street Services and the Los Angeles Bureau of Street Lighting regarding utility relocations.

Coordination also occurred with LADOT regarding the traffic study prepared for the Westwood/VA Hospital Station passenger drop-off area. In a letter dated October 1, 2018, LADOT accepted the study methodology, significance thresholds, and the analysis contained in the study. This letter is included in Appendix F of this memorandum.

Future meetings will be held with Los Angeles County to formalize the Master Cooperative Agreement between the groups. This is currently with the County Council for review. The work within the City of Los Angeles is subject to the existing approved Master Cooperative Agreement and will continue to be coordinated with LABOE staff during final design.

4.4 Utility Companies

Coordination with relevant utility companies within Section 3 of the Project was established from the outset, many of which continued existing relationships developed for Sections 1 and 2 of the Project.

Coordination has been ongoing with representatives of LADWP regarding the provision of permanent power to the Westwood/UCLA Station. These meetings have occurred on an as-needed basis. Meetings with LADWP have also focused on a construction conflict with an existing LADWP access hatch, which has been largely resolved. Metro has also met with LADWP on an as-needed basis regarding relocation of its facilities. Meetings have also occurred with LADWP regarding utility relocations.

Metro has met with Southern California Edison (SCE) at least monthly since June 2016. Meetings have focused on the provision of temporary power for construction activities at the Western VA construction staging area, including power for TBM operation, as well as the provision of permanent power for the Westwood/VA Hospital Station. The information presented in Section 2.9 is a result of these coordination efforts. A Method of Service study was prepared for the Project by SCE, at the Project's request, dated May 5, 2017. Further agreements are being discussed for the approved design, including California Public Utilities Commission Rule 14 – Shortage of Supply and Interruption of Delivery, for the new service that SCE is providing for both temporary and permanent power supply from the existing

Sawtelle substation. Metro is reviewing this rule and will provide a response to SCE regarding its acceptance shortly.

Additionally, coordination meetings have occurred with AT&T, Frontier, Verizon, and other communications companies, as well as SCG regarding utility relocations. Meetings have also occurred with the Metropolitan Water District (MWD) regarding tunneling under a water main under Sepulveda Boulevard.

Future coordination will include continuing monthly meetings with LADWP and SCE. The SCE plans will be developed to a high level of completion in later 2018 in readiness for the construction and will be sent to County of Los Angeles, City of Los Angeles and SCE for approval. Metro will continue to meet as required with the other utility companies. Meetings will be scheduled with MWD to discuss the coordination of Metro's project; these requirements have been added into the contract documents.

4.5 Section 106 Consultation

4.5.1 Consultation with Consulting Parties

The WPLE Project is subject to compliance with Section 106 of the NHPA and its implementing regulations (36 CFR 800). The Section 106 process requires federal agencies to consider the effects of their actions on historic properties and provide the Federal Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking. A key facet of the Section 106 process is consultation with individual consulting parties comprised of the State Historic Preservation Officer (SHPO), tribes, local governments, and specific interested individuals or organizations. Consultation for the WPLE Project began in 2009 in support of the Draft and Final EIS/EIR.

The project refinements are proposed in proximity to six historic resources: the WLA VA Historic District, which includes the Wadsworth Chapel (Catholic-Protestant Chapels, Veterans Administration Center) and News Stand (Streetcar Depot), properties individually listed in the NRHP, and the Los Angeles National Cemetery, a property determined individually eligible for listing in the NRHP, the Linde (Westwood) Medical Plaza, and the (Westwood) Federal Building.

As a result of project modifications and refinements, consultation was reinitiated by the FTA and Metro with the SHPO, ACHP, and the VA in summer 2017 to receive feedback on the proposed refinements. On July 11, 2017, FTA and Metro hosted a web-based conference call with SHPO, ACHP, and the VA that included a presentation of project refinements located in proximity to the Linde (Westwood) Medical Plaza and WLA VA Historic District, including the reasons for the refinements. The purpose of the meeting was to discuss potential effects to the Linde (Westwood) Medical Plaza and WLA VA Historic District, the potential measures required, and the end product for Section 106 consultation.

Regarding the project refinements within the WLA VA Historic District, members of the project team stated that they were mindful to assess potential effects to both built resources and the landscape. Although the cut-and-cover box associated with the Westwood/VA Hospital Station west crossover would affect trees within the historic district, the trees are considered as non-contributing landscape features. The team members confirmed that they would work with the VA regarding the restoration of landscaped areas when construction is complete.

In regard to the refinement to the Westwood/UCLA Station northeast entrance, Metro explained that adaptive reuse of the single-story retail space associated with the Linde (Westwood) Medical Plaza currently occupied by Chase Bank was proposed so that the space could be used as a full station entrance for the Westwood/UCLA Station. Staff presented the results of updated, extensive research indicating that a number of changes had occurred to the building that affected its historic fabric. These changes, predominantly made in 1982, removed a number of original contributing elements of the building. Meeting attendees agreed that updating the California Department of Parks and Recreation form regarding eligibility was an appropriate next step. The revised form was provided to SHPO on November 8, 2018 along with other materials provided in support of the updated Section 106 consultation.

Meeting attendees agreed that amending the MOA would be appropriate in light of the refinements. VA staff committed to working collaboratively and quickly with the project team.

Metro coordinated extensively with cultural resources staff from the VA, including the VA's Federal Preservation Officer (FPO), in support of compliance with Section 106. Consultation included a site visit on July 17, 2017, during which Metro discussed project elements within proximity to Section 106 resources on the VA WLA Campus, including the Los Angeles National Cemetery, a property individually eligible for listing in the NRHP. This site visit provided an opportunity for Metro to identify the location of project elements and to hear the VA's concerns from a Section 106 standpoint. Primarily, representatives of the VA were concerned with vibration impacts to resources during construction and visual impacts during operation of the Project. Metro's noise and vibration analyst participated in the site visit and answered questions from the VA staff. Representatives of the VA also discussed the potential of finding archaeological resources during construction.

To address the VA's concerns regarding archaeological resources, Metro conducted archaeological surveys on the VA WLA Campus within the footprint of construction activities as well as an adjacent Caltrans infiltration basin (also referred to as a Best Management Practice area) located west of Interstate I-405 and south of Wilshire Boulevard, which would be used for a construction staging area to identify locations of archaeological sensitivity. Metro prepared an archaeological survey approach focused on ground penetrating radar (GPR) surveys followed by focused magnetometry as a first step in identifying areas of potential archaeological sensitivity. The approach was shared with representatives of the VA and SHPO in fall 2017; written comments were received from the VA on December 5, 2017, and from SHPO on December 7, 2017. The approach was revised in response to these comments, and the revised approach was provided to the VA on December 12, 2017, and to SHPO on December 13, 2017. No further comments were received from either SHPO or the VA. The surveys were conducted between December 13 and 19, 2017, with additional surveys conducted between January 4 through 7, and January 12, 2018.

The VA requested additional information on the approach for further testing if such testing is required based on the results of the GPR and magnetometer surveys. Concurrently with the surveys, the project archaeologist prepared a testing plan that identified subsequent surveys if the GPR and magnetometer surveys identified targets of interest. The Phase I and Phase II testing approach was provided to the VA on December 29, 2017, with a revised version provided on January 3, 2018. No further edits were made to the testing approach because further revisions would occur in consultation with Section 106 consulting parties. Based on the results of the GPR surveys (summarized in Section 3.19.3 of this memorandum), FTA and Metro do not propose additional testing.

New information considered by Metro during the environmental reevaluation is a 2014 NRHP nomination for the WLA VA Historic District. The materials supporting the nomination provided detailed information on the historic properties within Subarea 2 of the WLA VA Historic District, as defined in the NRHP documentation, which was approved by VA's FPO. The Project would require construction beneath and within Subarea 2. This documentation was crucial when determining effects of the project refinements on contributing elements within the district, as well as to the district as a whole.

On January 17, 2018, Metro sent letters to consulting parties who participated in earlier project phases, as well as consulting parties identified by the VA. Specifically, these letters were provided to 1887 Fund, ACHP, City of Beverly Hills Historic Preservation Division, City of Los Angeles Office of Historic Resources, Beverly Hills Historic Society, Los Angeles Conservancy, Los Angeles City Historic Society, Tongva Ancestral Territorial Tribal Nation, Veterans Park Conservancy, State Historic Preservation Officer, and Muller Company (the property owner of the Linde (Westwood) Medical Plaza). A representative of the Muller Company responded to the letter provided by Metro indicating she was not aware of any archaeological sites, sacred sites, and/or traditional cultural properties located in the area of the revised Area of Potential Effect (APE). The technical team previously met with this representative as part of a field tour of the building to view building plans and other documents related to the Linde (Westwood) Medical Plaza. The Veterans Park Conservancy confirmed they have no additional comments.

A representative of the ACHP also responded to the letter and requested a meeting and a copy of the executed MOA. On February 5, 2018, FTA and Metro hosted a call with the SHPO and ACHP to discuss the Section 106 status and proposed next steps, with a focus on updating staff on progress regarding Section 106 for both built resources and archaeological investigations. ACHP requested to participate in the Section 106 process and will be a signatory to the amended MOA.

As part of the meeting held on February 22, 2018 (summarized in Section 4.1.1.1), FTA, Metro, and the VA also discussed historic preservation issues and next steps.

In January 2018, the SHPO alerted FTA and Metro that the (Westwood) Federal Building on the GSA property was determined to be eligible for listing in the National Register of Historic Places in December 2016. On March 13, 2018, FTA and Metro sent a letter to the GSA's FPO with a description of the WPLE Project in proximity to the Federal Building and requested comments on historic preservation issues. The GSA FPO responded to FTA and Metro on April 11, 2018, stating that GSA looked forward to reviewing the Effects Report and working with FTA and Metro throughout the duration of the Project. The FPO also provided a list of staff who should be included on correspondence.

On May 22, 2018, FTA and Metro hosted a teleconference with Section 106 consulting parties. Representatives of the following tribes, agencies, or organizations participated in the meeting: ACHP, SHPO, City of Beverly Hills Historic Preservation Division, the VA, Gabrieleño Band of Mission Indians – Kitz Nation, Gabrieleño/Tongva San Gabriel Band of Mission Indians, and Veterans Park Conservancy. FTA and Metro provided an update on the Project, including an overview of the project refinements and status of Section 106 evaluation for both historic and archaeological resources. FTA and Metro responded to comments received from the consulting parties. On May 25, 2018, the agenda, meeting summary, a copy of the presentation, and list of invitees was sent to all consulting parties invited to the May 22 meeting, with comments requested within two weeks. FTA and Metro did not receive comments from consulting parties requesting changes in the meeting summary or for additional meetings. On June

5, 2018, the VA provided a letter to FTA and all consulting parties with questions and comments related to the Section 106 evaluation for the WPLE Project. A response was provided to VA on October 5, 2018.

On June 19, 2018, Metro and FTA hosted a call with VA staff to discuss tree replacement and the potential effects related to permanent project-related features within the WLA VA Historic District. The team gave an in-person presentation and used a web-based platform to allow remote participants to view visual simulations of the proposed permanent features. The group determined that palm tree replacement would be preferred and that other trees that are part of the setting but not contributing elements could be replaced with appropriate but not necessarily identical trees since some species may not be ideal for the location. The group agreed that exact selections could be delayed with a process for selection and approval described in the amended MOA. The group also agreed that the permanent project features would not constitute an adverse effect due to their location and low profiles that resulted from minimization measures developed by the historic preservation and engineering teams.

On June 22, 2018, FTA sent letters to consulting parties via email with a letter sent via U.S. Postal Service on June 23, 2018, requesting comments on the revised APE for the Project (refer to Section 3.19.1 for further information). Two responses were received stating that there were no comments on the revised APE. The VA provided a comment on the revised APE in August 2018. On September 18, 2018, FTA provided the revised APE to SHPO for concurrence. In a letter dated October 15, 2018, SHPO stated that the expanded APE is sufficient for the undertaking, per 36 CFR Section 800.4(a)(1) and that FTA may have future responsibilities pursuant to 36 CFR 800 if unanticipated discoveries or a change in the project description or method of implementation were to occur. This letter from SHPO is included in Appendix F.

On July 5, 2018, a copy of the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) was provided electronically to consulting parties for review and comment. In addition, on July 5, 2018, a copy of the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) and the *Westside Purple Line Extension Project Section 3 Archaeological Extended Identification Report* (Metro 2018f) was provided electronically to tribes for review and comment. The VA provided written comments in August 2018; these comments were considered and incorporated into the Historic Properties Reassessment of Effects Report. The Veterans Park Conservancy responded that it did not have comments. The Federal Preservation Officer from GSA stated in an email dated July 17, 2017, that the GSA concurs with the determination that the WPLE Project will have no adverse effect on the historic characteristics of the (Westwood) Federal Building. The Historic Properties Reassessment of Effects Report and the updated California Department of Parks and Recreation form for the Linde (Westwood) Medical Plaza was provided to SHPO for review on November 8, 2018. SHPO concurred with the determination of No Adverse Effect to project refinements as a result of the project refinements on December 12, 2018. However, because of the demolition of Ace Gallery, the Project's previous adverse effect assessment is maintained.

On July 24, 2018, an update meeting occurred among FTA, Metro, and the VA to discuss initial concerns with the reassessment of effects report and updated environmental documentation for the Project. The VA noted that it held internal discussions regarding tree replacement, particularly the Canary Island palms within the Palm-Tree Grid and along Bonsall Avenue, and expressed a desire to speak with the SHPO regarding a substitute tree species so long as an adverse effect can still be avoided. The VA also requested monitoring certain buildings within the WLA VA Historic District for temporary emissions effects and encouraged increased public involvement with veterans groups. The exclusion of the News Stand (Streetcar Depot) from Section 106 documentation was raised by the VA.

In response, Metro provided information related to Section 106 progress and status during the public outreach meeting that occurred on July 26, 2018. Additionally, an effects assessment for the News Stand (Streetcar Depot) has been included in this documentation despite being located a substantial distance from project activities. Based on the review by a qualified architectural historian, the Project would have No Effect to the News Stand (Streetcar Depot).

A coordination meeting held on August 28, 2018, included FTA, VA, SHPO, ACHP, and Metro. During this meeting, FTA and Metro provided project updates to all parties and an overview of the effects determinations SHPO would see in the reassessment of effects. New information on the Western VA construction staging area, located within a small portion of the Palm-Tree Grid, were shared with meeting participants and included renderings of the area during construction and following construction from views within the WLA VA Historic District. The VA requested that the archaeological sensitivity model completed for the VA WLA Campus be used by Metro for the Project despite previous GPR surveys occurring on the campus; this model had been provided to Metro on August 20, 2018. Metro confirmed that the model had been supplied to the Project's archaeologists and the reports were being updated accordingly. The VA also requested information on the proposed tree storage location for the palms temporarily relocated during project construction. The meeting proceeded to a preliminary MOA discussion and the amendment process. Parties agreed that a standalone amended MOA document is preferred over revising the existing MOA and that FTA should be noted as lead federal agency and decision-maker for the Project. Metro requested that parties determine who will be signing the amended MOA and that all parties facilitate future reviews promptly due to the project schedule. Parties suggested that a single dispute resolution process within the MOA would be preferable, and the existing dispute resolution process could be amended or updated. Metro shared with the parties a proposed schedule and timeline for the amended MOA process, and document drafts will be shared with consulting parties for comment. The process is proposed to begin following SHPO concurrence on the reassessment of effects.

On September 11, 2018, the VA and Metro held a teleconference to discuss temporary Canary Island palm tree storage locations during project construction. Metro provided information regarding tree testing that had occurred to date, including magnesium and fusarium wilt testing. Based on information known at the time of that meeting, one tree in the Bonsall Avenue palm rows and seven trees in the Palm-Tree Grid are healthy. Metro shared its proposal for tree storage during construction, which includes temporarily replanting the palms in areas near the removal sites. Palms removed from the Bonsall Avenue rows will be replanted along Bonsall Avenue and maintained in a row while palms removed from the Palm-Tree Grid will be replanted within and adjacent to the Palm-Tree Grid. Metro indicated locations were chosen due to proximity and likelihood for successful transplanting, and palm trees will be tagged and tracked to ensure replanting in the former location. Metro noted that these locations were subject to further testing for fusarium wilt and other symptoms and subject to review by an arborist.

The VA discussed its archaeological sensitivity model and requested that it be consulted for tree relocation sites so that archaeological shovel testing or archaeological monitors to observe testing can occur. Metro agreed to include the archaeology monitors and noted that the request is similar to the requirement for other construction activities. The VA noted that the presence of tribal monitors would be required if requested by tribes. The VA also emphasized its role in the Native American Graves Protection and Repatriation Act process, stating that the VA must be notified first for certain archaeological discoveries in addition to the presence of human remains. The VA expressed support for

the storage plan. Metro noted that palm tree relocation and storage would be assessed similar to other project temporary effects for purposes of Section 106. Metro also committed to caring for the trees and providing irrigation during the relocation and construction processes. Parties agreed that procedures to address unforeseen circumstances regarding the palms that occur later in time could be included as an amended MOA stipulation.

A meeting was held with FTA, Metro, and VA on October 23, 2018, regarding the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c), use of the VA archaeological probability model, topics for inclusion in the MOA, and results of tree pathology studies undertaken on the VA WLA Campus. These parties also held a teleconference on October 30, 2018, to discuss potential content of the MOA and commitments that pertained to the WLA VA Historic District and are covered in other documents (e.g., construction specifications). Summaries of these meetings are included in Appendix F.

On November 1, 2018, VA approved the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c). On November 8, 2018, FTA provided the following materials to SHPO: *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c), *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f), arborist reports, correspondence with the VA, and a letter with the Finding of Effect for Section 3 of the project (the overall project Adverse Effect finding remains in place due to the demolition of Ace Gallery in Section 2). On December 12, 2018, SHPO concurred that no additional adverse effects to historic properties are anticipated as a result of the proposed project refinements within Section 3. The letters from FTA to SHPO and with SHPO's concurrence are included in Appendix F (note: VA concurrence on the Reassessment of Effects Report is included as an attachment to this letter in Appendix F).

FTA and Metro notified the SHPO on November 8, 2018 that the previous Section 4(f) *de minimis* impact determination that was made in the Final EIS/EIR for the WLA VA Historic District and the Linde (Westwood) Medical Plaza continues to apply to the WPLE Project. Required public and agency notification of FTA's intent to make a *de minimis* impact determination on these properties and consideration of comments was completed with circulation of the Final EIS/EIR.

Throughout the course of the Project as the refinements have been developed, FTA and Metro have also had meetings and discussions individually with the agencies listed above regarding project components and to receive feedback on design and avoidance and minimization measures. While these meetings may not be considered official consultation meetings, they uphold the spirit of the law by demonstrating a willingness to consult by seeking and incorporating feedback to avoid and minimize adverse effects. Given the varied interests of the consulting parties and the full schedules of those involved, this approach has worked closely with appropriate staff while allowing FTA and Metro to advance the project design. Internally, the Project's historic preservation team and engineers have worked closely to minimize potential adverse effects to historic properties.

Refer to Appendix C of the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018c) for correspondence and other coordination materials.

Future coordination will occur with Section 106 consulting parties in support of the amended MOA.

4.5.2 Tribal Consultation

On November 3, 2017, the Native American Heritage Commission provided contact information for individuals with knowledge of the project study area. On December 26, 2017, FTA sent letters to representatives of the following tribes: Fernandeno Tataviam Band of Mission Indians, Gabrielino-Tongva Tribe, Gabrielino Tongva Indians of California Tribal Council, Gabrielino/Tongva Nation, Gabrieleno Tongva San Gabriel Band of Mission Indians, San Fernando Band of Mission Indians, and Gabrieleno Band of Mission Indians – Kizh Nation. This letter invited the tribes to provide information on traditional cultural properties, sacred sites, and potential archaeological sites within the project area.

As of January 18, 2018, two tribes had responded with information on potential sites. Mr. Robert Dorame from the Gabrielino Tongva Tribe spoke with representatives of the FTA on January 9, 2018. He stated that an accurate record search was not performed (this is due to the reports/site records not filed at the South Central Coastal Information Center by VA consultants), and there are major Indian burial sites near Kuruvungna (Serra Springs) located southwest of the VA WLA Campus outside the Project's APE. He also stated that there is a high potential for artifacts west of I-405 and a dry creek bed is present near the helipad between the VA Main Hospital (Building 500) and U.S. Army Reserve building. Chairman Dorame also requested to be a cultural monitor during project construction. On May 31, 2018, Chairman Dorame met with FTA and Metro to provide additional information regarding the cultural sensitivity of the vicinity around the expanded APE. No specific information about archaeological sites, features, or resources that meet the definition of tribal cultural resources known to be present within the expanded APE was obtained.

A letter was also received from Mr. Andrew Salas of the Gabrieleno Band of Mission Indians – Kizh Nation on January 10, 2018. Mr. Salas requested consultation regarding the WPLE Project and stated that the Project is located within the tribe's ancestral territory. A meeting with Mr. Salas was held on February 15, 2018. The Kizh provided information about tribal use of the general WPLE Project Area, but did not provide specific information about archaeological sites, features, or resources meeting the definition of tribal cultural resources known to be present within the expanded APE. The Kizh requested a tribal monitor be present during construction of Section 3.

The Fernandeno Tataviam Band of Mission Indians responded via email to Cogstone on January 17, 2018, that the APE was outside its tribal boundary and suggested contacting members of the Gabrielino.

On May 22, 2018, the tribes, along with other stakeholders, were invited to participate in a Section 106 meeting. The meeting provided an overview of the Project, discussed changes to the APE, and provided a high-level proposed schedule for the completion of the environmental review and construction activities. Further information on this meeting is summarized in Section 4.5.1.

The San Fernando Band of Mission Indians responded by phone on June 7, 2018. Donna Yocum is now Chairwoman of the tribe as John Valenzuela passed away on November 16, 2017. Chairperson Yocum stated that the tribe defers to the local tribes that claim the downtown Los Angeles area.

Mr. John Tommy Rosas of the Tongva Ancestral Territorial Tribal Nation, responding to an email sent by the VA providing comments on the Section 106 meeting, stated on June 5, 2018, that the tribe continues to support the Project. He did not provide specific information about archaeological sites, features, or resources that meet the definition of tribal cultural resources known to be present within the expanded APE.

Refer to Appendix A of the *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018f) (included as Appendix B) for correspondence.

Future coordination with tribes will occur in support of the amended MOA.

4.6 Other Outreach

4.6.1 Linde (Westwood) Medical Plaza

Coordination has been ongoing with representatives of the Linde (Westwood) Medical Plaza regarding the refinement to the Westwood/UCLA Station entrance proposed on their property. The first meeting occurred on February 13, 2017, at which time Metro proposed shifting the station entrance from the location shown in the Final EIS/EIR to the retail space occupied by Chase Bank. Metro also met with representatives of the property owner on September 22, 2017, to discuss various entrance options proposed for the space currently occupied by Chase Bank.

Additionally, on December 21, 2017, Metro met with representatives of the property owner to discuss construction required on the property. Specifically, Metro and the property owner discussed operating hours for a magnetic resonance imaging (MRI) machine located on the second floor of the Linde (Westwood) Medical Plaza. Vibration during construction of the station entrance and station box could affect operation of the MRI, and a portion of the MRI-supporting equipment would need to be relocated prior to deconstruction of the Chase Bank building. In spring 2018, the property owner confirmed that the MRI is used Monday through Saturday from 6:30 a.m. to 8:00 p.m., with hours varying on Sunday. To avoid impacts to the MRI, construction activities that could generate vibration levels that affect operation of the MRI would, to the extent feasible, be scheduled for times when the MRI is not operational or as otherwise coordinated with the property owner.

A reacquaintance meeting with the building owner and other representatives was held on March 27, 2018. An update was provided to the group that included a discussion of the impacts to the existing tenants, including LA Fitness and the MRI tenants. The owner noted that several existing leases were in the process of being negotiated, separate from the Project, and that some tenant relocations would be occurring that may also support the project refinements. The property owner reported that the Chase Bank has shown interest in moving to a current vacant space within the same building. Email correspondence has been ongoing with the property owner regarding the MRI. Follow-up correspondence with the property owner stated that higher vibration levels would occur during demolition, piling, and compaction beginning in early 2022. Regular monthly meetings have occurred with the building owner starting in September 2018, and future meetings will include tenants and impacted parties.

Future coordination will include continuing the monthly meetings with the owner. A Draft Memorandum of Agreement has been drafted and will be agreed with the owner and Metro in 2019.

4.6.2 10900 Wilshire Boulevard

Coordination has occurred with representatives of 10900 Wilshire Boulevard regarding the southeast entrance of the Westwood/UCLA Station. In the Final EIS/EIR, a stair/escalator "half portal" was proposed within the building plaza area. Since this time, the plaza has been reconstructed and refurbished by Architect Michael Maltzan in 2015. The finishes, entrance stair, and ventilation of the basement were reconstructed, and a sculpture was added. The Final EIS/EIR scheme has been

reconfigured to minimize the impact to the building basement, which includes parking and a transformer enclosure. In addition, Metro proposes to replace the originally envisioned escalator with up to two elevators to provide better Americans with Disabilities Act accessibility. A meeting was held with representatives of one of the owners, Tishman Speyer, on January 18, 2018, and the current station configuration was presented. This meeting was followed up with the release of electronic CADD files to this group in February 2018. A further meeting was held on August 15, 2018, in which Tishman Speyer indicated it had concerns with the layout of their plaza and have requested Metro to investigate moving the elevators to maintain a more open plaza and replace the stair canopy with a different cover. These discussions are still ongoing and may result in just one elevator being placed in this half portal, but still meeting code and Americans with Disabilities Act regulations. The analysis contained within this technical report considers up to two elevators at this location. The conclusions would remain unchanged if only one elevator is provided. Further meetings have occurred on September 25, 2018, November 9, 2018 and December 5, 2018 in which the parties have been coordinating the design concepts.

The sculpture titled “The Rose” by artist Will Ryman located in front of 10900 Wilshire Boulevard would require relocation during construction; this relocation is being discussed with the property owner. The removal, storage, and relocation of the artwork are described in the construction specifications.

Future coordination will include continuing regular meetings with Tishman Speyer. The plans will be developed in late 2018 in readiness for a real estate agreement which is expected to be completed in 2019.

4.6.3 Outreach for Murals

As described in Section 2.4, the murals are painted on Los Angeles County property. The northeast mural wall would need to be removed to allow for construction of the vertical station circulation elements.

Metro began coordination with various stakeholders in July 2017 regarding potential relocation and/or refabrication of the northeast mural at the Bonsall Avenue underpass. As part of the Section 106 site visit described in Section 4.5 with VA staff, Metro’s Creative Services Manager for its Art Program presented research conducted on the murals, including their current condition. The murals were painted in 1995 through the National Veterans Foundation but were never fully completed. Based on research, the original artist (Peter Stewart, deceased in 1997) provided the outline for the murals with volunteer veterans filling in the areas; Mr. Stewart then added detail. Based on the current physical condition of the murals, issues such as fading and delamination of the murals would be highly visible by 2024 or 2026 when Section 3 of the WPLE Project would be in operation. Metro explained that when construction is complete, there would be insufficient room for both the northeast mural wall and the vertical circulation elements. Furthermore, the vertical circulation features would block views of the mural from the VA WLA north campus. Metro identified the embankment where relocation of the mural wall was proposed; the embankment is within County-maintained property directly across from the current location. It was agreed that the murals are not historic properties because they were painted in 1995 and, although they are important to the VA community, they do not have the exceptional importance required for assessing and listing properties less than 50 years of age. As the artist is deceased and does not appear to have any heirs, and the other participants in the creation of the mural were volunteers, the provisions of the California Art Preservation Act and the Visual Artists Rights Act governing the destruction or mutilation of work of art do not apply. As such, they would not be included as part of the Section 106 efforts for the Project.

On July 26, 2017, Metro staff met with Shad Meshad of the National Veterans Foundation on the site where the murals are located. They discussed the murals' history and significance, construction impacts, and possible mitigation. During the meeting it was learned that Mr. Meshad and Mr. Stewart both served in Vietnam—Mr. Stewart in the U.S. Navy and Mr. Meshad as a Psych Medical Services Officer. In 1989, Mr. Meshad began treating Mr. Stewart for post-traumatic stress disorder. Together, Mr. Stewart and Mr. Meshad proposed to the VA WLA Campus the idea of a mural honoring all the men and women who served in the military. Mr. Meshad expressed support for Metro's proposal to preserve the murals.

Metro also met with the Los Angeles County Arts Commission on October 5 and 26, 2017; the first meeting was on-site. During the October 5, 2017 meeting, the murals' history and significance, construction impacts, and possible mitigation were discussed. On October 26, 2017, attendees discussed treatments for the murals and stakeholders discussed relocation on the embankment across the street from the current location.

On January 3, 2018, Metro met with staff of the Los Angeles County Arts Commission and LA County Public Works in regard to relocating the northeast mural wall to an embankment maintained by the County. The mural would be reconfigured in a mosaic format with "hands on" participation from the veteran community. The Los Angeles County Arts Commission staff were receptive to this approach. Reconfiguring the impacted section into a mosaic are subject to the approval of the Los Angeles County Arts Commissioners and the Los Angeles County Board of Supervisors. The County would maintain the mural in perpetuity.

Metro Arts and Design had a follow-up meeting with senior leadership at the County Arts Commission Civic Art Program on May 17, 2018, to discuss mosaic reinterpretation of the mural for relocation onto County-controlled property. The proposal will be presented for formal approval by the Commission in September. Approval by the County Board of Supervisors will follow accordingly.

As stated in Section 4.1.1.2, Metro met with the CVEB on September 19, 2018, regarding the background of the murals, plans for outreach and "hands on" engagement with veterans to repurpose the impacted section of mural onto a County-controlled parcel on the VA WLA Campus, and next steps in terms of schedule, including demolition of the impacted area. The presentation was well received and the CVEB expressed interested in being a part of the process. The presentation provided at this meeting is included in Appendix C.

Future coordination will include continuing meetings with Los Angeles County Arts Commission and LA County Public Works in addition to VA and Veterans groups to develop an agreement on the final configuration and content of the murals, expected in 2019.

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5.0 PUBLIC OUTREACH

The following sections summarize public outreach undertaken by the Los Angeles County Metropolitan Transportation Authority (Metro) prior to the start of construction and during construction.

At the request of the Federal Transit Administration and the U.S. Department of Veterans Affairs (VA), public outreach was conducted in support of the project refinements evaluated in this technical memorandum. The June 21, 2018 and September 13, 2018 meetings summarized in the following section included information regarding the project refinements. Additionally, Metro is committed to working with the VA and participating in joint public outreach to discuss the project refinements proposed on the Veterans Affairs West Los Angeles (VA WLA) Campus. Further information on this outreach is included in Appendix D of this memorandum.

5.1 Outreach Prior to Start of Construction

Metro has provided the following presentations to various community groups since April 21, 2016:

- April 21, 2016: Presentation to Westwood Village Improvement Association regarding upcoming potholing and geotechnical work and the general project timeline. Attendees were generally supportive, although questions were asked about the level of engagement with the Westwood community during the construction process, particularly regarding coordination with local businesses. The presenter indicated Metro has a robust construction outreach program in place designed to gather community input to reduce impacts to the community. Approximate Attendance: 25-30
- May 4, 2016: Purple Line Extension Section 3 Community Meeting providing a general project overview and timeline, as well as a description of upcoming potholing and geotechnical work in the Westwood/University of California Los Angeles (UCLA) Station area. Questions from attendees focused on planned accessibility of the Westwood/UCLA Station for commuters, and in particular whether parking would be available for Metro patrons. Presenters indicated that parking would not be provided at any station along the Westside Purple Line Extension (WPLE) alignment and that a parking structure is not planned at the Westwood/UCLA Station. Attendees also asked questions regarding the level of engagement with the Westwood community during the construction process. The presenter indicated Metro has a robust construction outreach program in place designed to gather community input to reduce impacts to the community. Approximate Attendance: 50-60
- October 4, 2016: Presentation to Brentwood Community Council providing a general project overview and timeline. Questions focused on planned accessibility of the Westwood/VA Hospital Station for commuters, and in particular whether parking would be available for Metro patrons. The presenter indicated that Metro was working on engaging the leadership of the VA, but that ultimately parking facilities built on VA property would be subject to VA approval. The presenter further outlined Metro's First/Last Mile Initiative, which is designed to explore alternative means and methods for accessing Metro locations other than by single-occupant vehicle. Approximate Attendance: 40-50
- November 17, 2016: Presentation to Westwood Village Improvement Association regarding the Project's accelerated timeline based on the passage of Measure M. Attendees expressed surprise at how quickly the Project would be started but remained supportive. Questions were asked about the planned station entrances; the presenter indicated Metro was sensitive to the community's

concerns regarding the design of the entrance on the northwest corner of Wilshire and Westwood Boulevards (adjacent to the Linde (Westwood) Medical Plaza), but that currently the configuration of the entrance was consistent with what was approved in the environmental document.

Approximate Attendance: 25-30

- April 27, 2017: Panel participation at South Brentwood Residents Association Annual Meeting. The panel covered a number of issues in addition to the WPLE Project. Metro's participant outlined the Project's accelerated schedule, upcoming work to be completed, and Metro's First/Last Mile Initiative. Approximate Attendance: 150-200
- June 15, 2017: Presentation to Westwood Village Improvement Association providing a general project overview and timeline, as well as Metro's investigation into possible entrance configurations at the Westwood/UCLA Station. Attendees voiced support for maintaining an entrance on the south side of Wilshire Boulevard. The presenter indicated that at that time the entrances as described in the *Westside Subway Extension Final Environmental Impact Statement/Environmental Impact Report* (Final EIS/EIR) (Metro 2012a) were included in Metro's contract documents, although Metro was investigating the cost implications of expanding the half portal at the northwest corner of Wilshire and Westwood Boulevards (the entrance adjacent to the Linde (Westwood) Medical Plaza) into a full entrance. Approximate Attendance: 25-30
- July 12, 2017: Presentation to Westwood Neighborhood Council providing a general project overview and timeline, as well as Metro's investigation into possible entrance configurations at the Westwood/UCLA Station. Attendees voiced support for maintaining an entrance on the south side of Wilshire Boulevard. The presenter indicated that at that time the entrances remained as described in the Final EIS/EIR, although Metro was investigating the cost implications of expanding the half portal at the northwest corner of Wilshire and Westwood Boulevards (adjacent to the Linde (Westwood) Medical Plaza) into a full entrance. Attendees also asked questions regarding the level of engagement with the Westwood community during the construction process. The presenter indicated Metro has a robust construction outreach program in place designed to gather community input to reduce impacts to the community. Approximate Attendance: 30-35
- July 18, 2017: Presentation to Westwood Community Council providing a general project overview and timeline, as well as Metro's investigation into possible entrance configurations at the Westwood/UCLA Station. Attendees voiced support for maintaining an entrance on the south side of Wilshire Boulevard. The presenter indicated that at that time the entrances remained as described in the Final EIS/EIR, although Metro was investigating the cost implications of expanding the half portal at the northwest corner of Wilshire and Westwood Boulevards (adjacent to the Linde (Westwood) Medical Plaza) into a full entrance. Attendees also asked questions regarding the level of engagement with the Westwood community during the construction process. The presenter indicated Metro has a robust construction outreach program in place designed to gather community input to reduce impacts to the community. Approximate Attendance: 30-35
- August 2, 2017: Presentation to Westwood Village Improvement Association Transportation Committee to address Metro's investigation into possible entrance configurations at the Westwood/UCLA Station. Attendees voiced support for maintaining an entrance on the south side of Wilshire Boulevard. The presenter indicated that at that time the entrances remained as described in the Final EIS/EIR, although Metro was investigating the cost implications of expanding the half portal at the northwest corner of Wilshire and Westwood Boulevards (adjacent to the Linde (Westwood) Medical Plaza) into a full entrance. Approximate Attendance: 4-6

- October 18, 2017: Presentation at Veterans Advocacy Town Hall (refer to Section 4.1.1.1 for additional information on this meeting). Approximate Attendance: 60-70
- October 25, 2017: Presentation to Westwood Hills Property Owners Association providing a general project overview and timeline, as well as Metro's investigation into possible portal configurations at the Westwood/UCLA Station and upcoming utility relocation work. Attendees voiced support for maintaining an entrance on the south side of Wilshire Boulevard. The presenter indicated that at that time the entrances remained as described in the Final EIS/EIR, although Metro was investigating the cost implications of expanding the half portal at the northwest corner of Wilshire and Westwood Boulevards (adjacent to the Linde (Westwood) Medical Plaza) into a full entrance. Attendees also asked questions regarding the level of engagement with the Westwood community during the construction process. The presenter indicated Metro has a robust construction outreach program in place designed to gather community input to reduce impacts to the community. Approximate Attendance: 130-140
- November 28, 2017: Purple Line Section 3 Community Meeting providing a general project overview and timeline, as well as a description of upcoming utility relocation work. Attendees asked questions regarding the level of engagement with the Westwood community during the construction process. The presenter indicated Metro has a robust construction outreach program in place designed to gather community input to reduce impacts to the community. Approximate Attendance: 60-70
- February 6, 2018: Presentation to Wilshire Corridor Board Presidents and Managers providing a general project overview and timelines, as well as a description of the advance utility relocation work at the Wilshire/Westwood Station. Attendees, who represent residents along the Wilshire Corridor, asked questions about parking at stations, underground easements, and timelines for opening. They were also interested in advance notification and the way information is disseminated. Approximate Attendance: 35-45.
- March 22, 2018: Purple Line Section 3 Westwood Community Meeting providing a general project overview and timeline, as well as a description of upcoming utility relocation work at the Wilshire/Westwood Station. Attendees asked questions regarding the timing of utility relocation, the hours of utility relocation, noise mitigation measures, and emergency access, as well as proposed bus detours and their anticipated effects on traffic. The presenter explained the process of utility relocation and the necessity to complete that work at night in Westwood, as well as how Metro plans to mitigate noise at the source. The presenter also explained the bus detour plans and the collaborative efforts that went into developing them. Approximate Attendance: 60-70
- June 21, 2018: Purple Line Section 3 Westwood Community Meeting providing a summary of the project refinements made in Section 3 of the WPLE Project as part of the pre-construction meeting. The refinements throughout Section 3 were described. The presentation also included a discussion of effects to historic properties (e.g., Linde (Westwood) Medical Plaza and West Los Angeles Veterans Affairs Historic District (WLA VA Historic District), including impacts to trees. Attendees asked how the Westwood/VA Hospital Station passenger drop-off area would be accessed and for further clarification on impacts to trees. Other questions were related to Section 2 of the Project. Approximate Attendance: 60
- September 13, 2018: Purple Line Section 3 Westwood Community Meeting providing updates on environmental topics, advance utility relocation, and upcoming construction schedules. The

audience had questions about underground easements and future station connectivity. The next meeting will be held in December. Approximate Attendance: 50-60

- October 24, 2018: Purple Line Section 3 Los Angeles County Board of Supervisors, District 3 providing field deputy with a broad overview of WPLE Project, with a specific focus on Section 3 advance utility work and outreach to impact to Section 3 stakeholders. The presentation also included an overview of the planned reconfiguration of the underground electrical system at Federal Avenue, Ohio Avenue, and Wilshire Boulevard. In return, the District 3 Field Deputy provided information on key stakeholder groups and suggested outreach approach and strategies. Attendance: One Field Deputy
- November 1, 2018: Purple Line Section 3 Westwood Wilshire Corridor Property Managers & Presidents Meeting providing a general project overview and timeline and an update on the status of advance utility relocation work in progress for the Westwood/UCLA Station. Attendees asked questions regarding the timing of utility relocation, the hours of utility relocation and noise mitigation measures. Attendees also asked about Metro's plans for constructing parking lots adjacent to Purple Line stations for transit riders. The presenters provided responses to all inquiries and directed those interested in obtaining more information to relevant Metro websites and online reports. Approximate attendance: 30-35
- November 7, 2018: Purple Line Section 3 Brentwood Home Owners Association and Brentwood Community Council providing a general project overview and timeline and a general update on the status of advance utility relocation work along Wilshire Boulevard. The presentation focused on providing information on the planned reconfiguration of the SCE underground electric system along Federal Avenue, Ohio Avenue, and Wilshire Boulevard. Attendees' questions centered around traffic congestion and detours as well as parking challenges. NOTE: This was not a joint meeting with the Brentwood Home Owner's Association and the Brentwood Community Council. Rather the Brentwood Home Owners Association meeting was attended by several board and general members of the Brentwood Community Council. Approximate Attendance: 35-40
- November 15, 2018: Purple Line Section 3 PLE Section 3 Quarterly Community Meeting providing a general project overview, including schedules and milestones, as well as specific information on the status and location of advance utility relocation work along Wilshire Boulevard. Attendees' questions were mainly directed toward learning about completion dates for the Westwood/UCLA and Westwood/VA Hospital Stations and about VA station parking and passenger drop-offs. Approximate Attendance: 35-40
- November 28, 2018: Purple Line Section 3 West Los Angeles/Sawtelle Neighborhood Council providing a general project overview and timeline, with a specific focus on presenting information on the upcoming reconfiguration of the underground electrical system at Federal Avenue, Ohio Avenue, and Wilshire Boulevard. Reference resources in the form of printed project information was left for Attendees. The WPLE Section 3 information was presented during the "Public Partnerships" segment of the meeting, which did not allow for audience comments or questions. Metro's Construction Relations team will provide a more comprehensive presentation and obtain attendees feedback at the West Los Angeles/Sawtelle Neighborhood Council's January meeting. Approximate Attendance: 30-35

Sample presentations from these meetings are included in Appendix C to this memorandum. As shown, the presentation included information on the project refinements included in this memorandum,

including but not limited to, the alignment at the VA WLA Campus (Section 2.2) and the full entrance adjacent to the Linde (Westwood) Medical Plaza (Section 2.6).

Beginning in fall 2017, Metro also provided presentations to various stakeholders and community groups within Section 3 of the Project regarding advanced utility relocations. As part of these presentations, Metro provides an overview of Section 3 of the Project, including information on the project refinements included in this memorandum. A sample presentation from one of these meetings is included in Appendix C to this memorandum.

5.2 Outreach during Construction

It is of utmost importance to Metro that all stakeholders are informed about the Project. Briefings are used to engage stakeholders in advance of construction. The team briefs the following stakeholders regularly:

- Los Angeles City Council
- Los Angeles and local chambers of commerce
- Homeowners associations
- Los Angeles Unified School District
- U.S. Department of Veterans Affairs
- Educational institutions and faith-based organizations
- Residents
- Business owners
- Property owners
- Emergency responders
- Medical facilities
- Major employment centers

Metro has developed a Community Outreach and Engagement Plan for all sections of the WPLE Project. This plan is currently being implemented for construction activities on Sections 1 and 2 of the Project. A goal of the outreach plan is to understand the cultural resources and inventory of community assets by utilizing diverse methods for reaching stakeholders in advance of major project milestones. Information is provided when construction is occurring in the public right-of-way or is impactful, or for activities that have a long duration. Shared details include activity, work hours, duration, and impacts. Both traditional and non-traditional outreach methods would be used within the project area. These methods include construction notices distributed through electronic communications, including through social media and on the project website, door-to-door distribution, and at community centers and commercial buildings. Additionally, Metro disseminates project information through community meetings, digital communication (e.g., Facebook, Twitter, project website), press releases, and traffic alerts.

Stakeholders are informed in advance of construction activities occurring through a construction look-ahead that provides a description of activities, including location, anticipated start time, and projected duration. The construction look-ahead enables stakeholders throughout the Project to plan ahead and

make accommodations as necessary in advance of construction. The look-ahead is updated as new information becomes available and is available at public meetings and on the project website.

To address concerns raised by the public during construction, Metro maintains a 24-hour/7-day-a-week hotline. Direct access for after-hours construction-related issues is also provided. Metro also provides onsite coordination to address specific construction-related impacts with stakeholders, such as those related to driveway closures or utility disruptions.

To minimize impacts to businesses during construction, “Businesses Open During Construction” signage will be provided to all affected local businesses. Additional directional or wayfinding signage will be created and customized with input from city staff and local businesses as needed.

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**APPENDIX A WESTSIDE SUBWAY EXTENSION MITIGATION
MONITORING AND REPORTING PLAN**

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Westside Purple Line Extension

*Final Supplemental Environmental Impact Statement and
Section 4(f) Evaluation
Appendix A: Updated Mitigation Monitoring and Reporting Plan*



U.S. Department
of Transportation
Federal Transit
Administration

APPENDIX A—UPDATED 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.

The mitigation monitoring plan published with the Final EIS/EIR has been revised based on the Final SEIS for Section 2. The revisions to the original mitigation monitoring plan are shown in red.

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
Transportation			
<p>Mitigation:</p> <p>T-1—Coordination with Property Owners</p> <p>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.</p>	Verify coordination	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>T-2—Parking Monitoring and Community Outreach</p> <p>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.</p> <p>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.</p>	Report conditions and verify plan.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Operations

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>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.</p>			
<p>T-3—Residential Permit Parking Program</p> <p>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.</p> <p>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.</p>	Verify funding.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Operations

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>T-4—Consideration of Shared Parking Program</p> <p>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.</p> <p>For six months following the opening of service, Metro will monitor off-street 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.</p>	Report conditions and verify plan.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Operations
<p>T-5—Install Crossing Deterrents</p> <p>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.</p>	Review and verify plans.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>T-6—Install High-Visibility Crosswalk/Crossing Deterrents</p> <p>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.</p>	Review and verify plans.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>T-7—Install High-Visibility Crosswalk</p> <p>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.</p>	Review and verify plans.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>T-8—Install High-Visibility Crosswalk</p> <p>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.</p>	Review and verify plans.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>T-9—Provide consistency with General Plan Designation Sidewalk Width Adjacent to Metro- Controlled Parcels</p> <p>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-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.</p>	Review and verify consistency	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>T-10—Provide consistency with General Plan Designation Sidewalk Width Coordination with Jurisdictions</p> <p>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.</p>	Verify coordination	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior to Construction
<p>T-11—Provide High Visibility Crosswalk Treatments</p> <p>Metro will provide highly visible crosswalk treatments at intersections affected by LPA construction, following the Metro Rail Design Criteria.</p>	Review and verify plans	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>T-12—Meet Federal, State, Local Standards for Crossing</p> <p>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.</p>	Verify identification and coordination	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior to Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>T-13—Meet Metro Rail Design Criteria Minimums for Bicycle Parking</p> <p>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:</p> <ul style="list-style-type: none"> ■ 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	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>T-14—Study Bicycle Parking Demand & Footprint Configuration</p> <p>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.</p>	Monitor bicycle parking demand around stations.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Operations

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>T-15— Determine Alternative Sites for Bicycle Parking</p> <p>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:</p> <ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>T-16—Study Bus-Rail Interface</p> <p>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.</p>	Verify study completion	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>TCON-1—Traffic Control Plans</p> <p>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 Brea Avenue, Fairfax Avenue, La Cienega Boulevard, Rodeo Drive, Beverly Drive, Canon Drive, Century Park East, Avenue of the Stars, Westwood Boulevard,</p>	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>Veteran Avenue, Sepulveda Boulevard, I-405 ramps to/from eastbound Wilshire Boulevard, and Bonsall Avenue. Traffic control plans will encompass the following:</p> <ul style="list-style-type: none"> ■ 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 <p>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.</p>			
<p>TCON-2—Designated Haul Routes</p> <p>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:</p> <ul style="list-style-type: none"> ■ 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. 	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<ul style="list-style-type: none"> ■ Establish truck haul headways to avoid platoons of trucks upon local arterial streets and freeways. Establish a vehicle dispatching system at construction 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. 			
<p>TCON-3—Emergency Vehicle Access</p> <p>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.</p>	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>TCON-4—Transportation Management Plan</p> <p>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:</p> <ul style="list-style-type: none"> ■ 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 	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
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.			
<p>TCON-5—Coordination with Planned Roadway Improvements</p> <p>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.</p>	Review and verify plans.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Planning, Final Design and Construction
<p>TCON-6—Temporary Bus Stops and Route Diversions</p> <p>Construction impacts to local and regional transit operations (e.g., Metro Bus, 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.</p>	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>TCON-7—Parking Management</p> <p>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.</p>	Review and verify plans.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>TCON-8—Parking Monitoring and Community Outreach</p> <p>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.</p>	Report conditions and verify plan.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>TCON-9—Construction Worker Parking</p> <p>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.</p>	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction
<p>TCON-10—Pedestrian Routes and Access</p> <p>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 maintained throughout construction.</p>	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design and Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>TCON-11—Bicycle Paths and Access</p> <p>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.</p>	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ 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			
<p>Mitigation: The following measures will be implemented to ensure impacts related to displacements and acquisitions are avoided or further minimized.</p> <p>CN-1—Relocation Assistance and Compensation</p> <p>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.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Before Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CN-2—Propose Joint-use Agreements</p> <p>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.</p>	Verify coordination with owners	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Before Final Design
<p>CN-3—Compensation for Easements</p> <p>For easements, Metro will appraise each property to determine the fair market value 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.</p>	Verify coordination	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ 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			
<p>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.</p> <p>VIS-1—Minimize Visual Clutter</p> <p>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.</p>	Review and integrate guidance in system design	Metro/Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Before Final Design

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>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.</p>	Have arborist prepare tree removal plan	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Before Construction
<p>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.</p>	Review and verify Final Design plans	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>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.</p>	Verify coordination with surrounding communities	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Before Final Design
Air Quality			
The LPA will not exceed the National Ambient Air Quality Standards, the California 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.	N/A	N/A	N/A
Climate Change			
<p>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:</p> <p>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.</p>	Review and integrate where possible into Final Design	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Before Final Design
<p>CC-2—Energy Conservation Energy conservation will be implemented throughout design and construction.</p>	Review and verify implementation	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Before and during Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CC-3—Promote Transit Ridership</p> <p>Metro will continue to promote transit ridership through marketing and educational programs.</p>	<p>Verify implementation of Public Outreach Campaign</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Before, during and after Final Design, Construction, and project implementation
<p>CC-4—Green Power</p> <p>Metro will use green power when/where available and priced competitively with other energy sources.</p>	<p>Verify compliance</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
Noise and Vibration			
<p>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:</p> <p>VIB-1—Use of High Compliance Direct Fixation Resilient Rail Fasteners</p> <p>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:</p> <ul style="list-style-type: none"> ■ Wilshire Ebell Theatre at Site V8 (Figure 4-38) ■ Saban Theatre at Site V25 (Figure 4-38) <p>Revised Mitigation Measure</p> <ul style="list-style-type: none"> ■ High compliance direct fixation resilient rail fasteners are no longer required to mitigate operational vibration at the Wilshire Ebell Theatre. ■ High compliance direct fixation resilient rail fasteners will be incorporated into trackwork design at the Wilshire/La Cienega tangent and crossover tracks from Sta. 565+17 to 573+72, to reduce the predicted ground-borne noise at the Saban Theatre by 7 dBA. The extents of the recommended mitigation shall 	<p>Review and verify plans.</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
include the entire Wilshire/La Cienega No. 10 Double Crossover and Wilshire/La Cienega Station.			
<p>VIB-2—Use of a Low Impact Crossover</p> <p>A low impact crossover, such as a moveable point frog or a spring-loaded frog, will be used in the design of the following crossover, which will reduce ground-borne noise by 5 to 6 dBA:</p> <ul style="list-style-type: none"> ■ Wilshire/La Brea No. 10 Double Crossover for the apartments at Site V16 (Figure 4-38) <p style="color: red;">Revised Mitigation Measure</p> <ul style="list-style-type: none"> ■ A low impact crossover at the Wilshire/La Brea No. 10 Double Crossover, is no longer necessary to mitigate vibration for the Avalon Wilshire Apartments. 	Review and verify plans.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>VIB-3—Use of Ground-borne Noise Minimization Techniques</p> <p style="color: red;">If the distance between the top of rail and the BHHS Building C foundation is less than 40 feet, an isolated track slab or other similar technology will be incorporated into the project design to reduce ground-borne noise to levels that do not exceed FTA Category 3 ground-borne noise threshold at BHHS Building C.</p>	Review and verify plans.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ 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

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
Geologic Hazards			
<p>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.</p> <p>GEO-1—Seismic Ground Shaking</p> <p>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. During Final Design, site-specific PSHAs 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 (ACI 318) by the American Concrete Institute.</p>	Review and verify plans	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>GEO-2—Fault Crossing Tunnel, Fault Rupture, Tunnel Crossing</p> <p>LPA—Century City Constellation option</p> <p>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:</p> <ul style="list-style-type: none"> ■ Prevent collapse of the tunnel to ensure tunnel safety ■ Maintaining structural continuity of tunnel ring ■ Preventing flow of water and soil 	Verify completion of studies and incorporation of the recommended design measure into Final Design.	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<ul style="list-style-type: none"> ■ Establishing the tunnel size to maintain tunnel clearances and provide a guideway for derailed trains to decelerate without impact <p>Several preliminary design approaches or combinations have been considered and will be further developed in Final Design:</p> <ul style="list-style-type: none"> ■ 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. 			
<p>GEO-3—Operational Procedures during Earthquake</p> <p>In addition to design measures implemented on the existing Red line, Metro 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.</p>	Verify safety measures are implemented	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Operations

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>GEO-4—Liquefaction and Seismic Settlement</p> <p>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.</p>	Review and verify plans	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>GEO-5— Hazardous Subsurface Gas Operations</p> <p>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 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:</p> <ul style="list-style-type: none"> ■ 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. 	Review and verify plans	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>GEO-6—Hazardous Subsurface Gas Structural Design</p> <p>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</p>	Review and verify plans	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>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.</p> <ul style="list-style-type: none"> ■ 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 ground conditions for materials such as rubber gaskets used for tunnel segment linings. Testing programs will examine: <ul style="list-style-type: none"> ▶ Segment leakage—gasket seal under pressure before, during, and after seismic movements. This will include various gasket materials and profiles (height and width). ▶ Gasket material properties—effective life and resistance to deterioration when subjected to man-made and natural contaminants, including methane, asphaltic materials, and hydrogen sulfide. ▶ Alternative products to High Density Polyethylene products such as poly-rubber gels, now in use in ground containing methane in other cities. ▶ Methods for field testing high-density polyethylene joints. These are now being used for landfill liners and water tunnels under internal water pressure. 			

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>GEO-7—Tunnel Advisory Panel Design Review</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
Hazardous Materials			
<p>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:</p> <p>HAZ-1—Disposal of Groundwater</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction ■
<p>HAZ-2—Emergency Response Procedure</p> <p>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.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ 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

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
Water Quality			
<p>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 water quality or hydrology impacts.</p> <p>WQ-1—Drainage Control Plan</p> <p>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.</p>	Verify completion of drainage plan	Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>WQ-2—Runoff Treatment</p> <p>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:</p> <ul style="list-style-type: none"> ■ 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 	Verify compliance and implementation in final design plans	Metro	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>through an under drain system to a conventional stormwater conveyance system. Porous pavement is typically applicable only in low-traffic areas.</p> <ul style="list-style-type: none"> ■ 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 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			
<p>Mitigation: These measures further describe those Metro currently uses or will implement to further ensure that there are no adverse impacts.</p> <p>SS-1—Passenger Safety I Implement public safety awareness and employee training program.</p>	Verify coordination and Public Outreach	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior operations
<p>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</p>	Verify compliance and implementation in Final Design Plans	Metro	<ul style="list-style-type: none"> ■ City of Los Angeles ■ Metro ■ Final Design/Project Implementation
<p>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</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>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.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>SS-5—Methane and Hydrogen Sulfide Gas Leak Protection</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
Design in accordance with Metro Fire/Life safety criteria, Metro ventilation criteria, and according to the findings in the <i>Westside Subway Extension Geotechnical and Hazardous Materials Technical Report</i> (Metro 2010i) and with special design, construction and operational attention to the gassy ground tunnels and stations.			■ 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	Metro	■ 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	Metro	■ 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	■ Metro ■ Metro ■ Final Design and 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.	Verify Compliance	Metro	■ Metro ■ Metro
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			Before Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>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.</p>			
Historic, Archeological, and Paleontological Resources			
<p>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.</p> <p>Implementation of mitigation measure (AR-1) will reduce construction impacts to undocumented archaeological resources, including human remains.</p> <p>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.</p> <p>HR-1—Treatment to Avoid Adverse Effects</p> <p>Design Phase Planning. The project would be designed in adherence to the <i>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</i> 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:</p> <ul style="list-style-type: none"> ■ 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 	<p>Verify compliance</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ California Department of Parks and Recreation Office of Historic Preservation ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>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.</p> <p>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 <i>Secretary of the Interior's Standards for the Rehabilitation of Historic Properties</i>.</p>			
<p>HR-2—Treatment to Resolve Adverse Effect</p> <p>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-recording 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.</p> <p>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 the materials and permit Metro to proceed with demolition of the adversely-affected property.</p> <p>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</p>	Verify Compliance	Metro	<ul style="list-style-type: none"> ■ 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
<p>other appropriate national and local repositories and archives, as identified by Metro.</p> <p>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.</p>			
<p>HR-3—Construction Starting Beyond 2019</p> <p>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.</p> <p>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 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</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ California Department of Parks and Recreation Office of Historic Preservation ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
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.			
<p>PA-1—Memorandum of Understanding</p> <p>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.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ California Department of Parks and Recreation Office of Historic Preservation ■ Metro ■ Final Design
Construction (Archaeological, Historic and Paleontological Resources)			
<p>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:</p> <p>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.</p> <p>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.</p> <p>AR-1—Unanticipated Discoveries and Consultation with Native American Individuals, Tribes and Organizations and Treatment of Cultural Remains and Artifacts</p> <p>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</p>	Verify compliance with mitigation monitoring plan	Metro	<ul style="list-style-type: none"> ■ 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
<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>			
<p>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</p>	<p>Hire a qualified historic preservation consultant</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ California Department of Parks and Recreation Office of Historic Preservation ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>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 measures for cut and fill, and measures to prevent differential settlement meet the Secretary of the Interior’s <i>Standards for the Treatment of Historic Properties</i>. 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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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</p>			

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>and plant adult-aged replacement trees of the same species to rehabilitate the historic landscape.</p> <p>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 monitoring to ensure protection of historic fabric and compliance with the <i>Guidelines for the Treatment of Cultural Landscapes</i>.</p>			
<p>PA-2—Early Fossil Recovery</p> <p>Metro will seek early approval to begin fossil recovery in advance of construction if feasible.</p>	<p>Seek early approval from California Department of Parks and Recreation Office of Historic Preservation</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ California Department of Parks and Recreation Office of Historic Preservation ■ Metro ■ Prior to construction
<p>PA-3—Retain the Services of a Qualified Principal Paleontologist</p> <p>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.</p>	<p>Verify compliance and completion of monitoring report</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ California Department of Parks and Recreation Office of Historic Preservation ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>PA-4—Development of a Paleontological Resources Monitoring and Mitigation Plan (PRMMP)</p> <p>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.</p>	Verify completion of PRMMP and compliance with PRMMP	Metro	<ul style="list-style-type: none"> ■ California Department of Parks and Recreation Office of Historic Preservation ■ Metro ■ Construction
<p>PA=5—Required Activities for Recovered Fossils in the PRMMP</p> <p>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.</p>	Verify compliance with PRMMP	Metro	<ul style="list-style-type: none"> ■ California Department of Parks and Recreation Office of Historic Preservation ■ Metro ■ Construction
<p>PA-6—Preparation of a Report on Paleontological Resources Recovered</p> <p>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.</p>	Verify report has been prepared	Metro	<ul style="list-style-type: none"> ■ 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
<p>PA-7—Curation of Identified and Prepared Fossils</p> <p>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.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ 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			
<p>Mitigation: The implementation of mitigation measures T-1, T-2, T-3, and T-4 will help reduce the magnitude of parking impacts.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro <p>Final Design and Prior to Construction</p>
Construction (Land Use)			
<p>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.</p>	Review and verify plans.	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro <p>Final Design and Construction</p>
Construction (Community and Neighborhoods)			
<p>CON-1—Signage</p> <p>Signage to indicate accessibility to businesses will be used in the vicinity of construction activity.</p> <p>In addition, implementation of mitigation measures TCON-1, TCON-2, TCON-3, TCON-4, TCON-7, TCON-8, TCON-10 and TCON-11 will reduce construction impacts to communities and neighborhoods.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
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)			
<p>Mitigation: To ensure impacts related to construction activities are minimized, the following mitigation measures will be implemented:</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>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 or outdoor areas that are used at night such as cafes, plazas, and other gathering areas where users may stay for an extended period of time and is integral to the enjoyment of the land use. 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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-5—Screening of Construction Staging Areas</p> <p>Construction staging areas will be screened where possible, to reduce visual effects on adjacent viewers</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
Construction (Air Quality)			
<p>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.</p> <p>CON-6—Meet Mine Safety (MSHA) Standards</p> <p>Tunnel locomotives (hauling spoils and other equipment to the tunnel heading) will be approved by Metro to meet mine safety (MSHA) standards.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-7—Meet SCAQMD Standards</p> <p>Metro and its contractors will set and maintain work equipment and standards to meet SCAQMD standards, including NOx.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-8—Monitoring and Recording of Hazardous Gasses at Worksites</p> <p>Monitoring and recording of hazardous gas levels at the worksites will be conducted. In areas of gassy soil conditions, hazardous gas levels in the working environment will be continually monitored and recorded. Construction will be altered as required to maintain a safe working atmosphere. The working environment will be kept in compliance with Federal, State, and local regulations, including SCAQMD and Cal/OSHA standards.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-9—No Idling of Heavy Equipment</p> <p>Metro specifications will require that contractors not unnecessarily idle heavy equipment.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-10—Maintenance of Construction Equipment</p> <p>Metro will require its contractors to maintain and tune engines per manufacturer’s specifications to perform at EPA certification levels, where applicable, and to</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
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.			
<p>CON-11—Prohibit Tampering of Equipment Metro will prohibit its contractors from tampering with engines and require continuing adherence to manufacturer’s recommendations.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>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.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>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. In addition, equipment will be placed to minimize dust and exhaust away from outdoor areas where feasible. Refinements to construction mitigation measures may be incorporated during the Final Design phase, prior to the preparation of construction bid documents.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-14—Measures to Reduce the Predicted PM₁₀ Levels Mitigation measures such as watering, the use of soil stabilizers, etc. will be applied to reduce the predicted PM₁₀ levels to below the SCAQMD daily construction threshold levels. A watering schedule will be established to prevent soil stockpiles from drying out.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-16—Dust Control During Transport</p> <p>Trucks will be covered to control dust during transport of spoils.</p> <p>Revised Mitigation Measure</p> <ul style="list-style-type: none"> Trucks will be covered to control dust during transport of spoils of have 6” freeboards above the top of the hauled load. 	Verify compliance	Contractor	<ul style="list-style-type: none"> Metro Metro Construction
<p>CON-17—Fugitive Dust Control</p> <p>To control fugitive dust, wind fencing and phase grading operations, where appropriate, will be implemented along with the use of water trucks for stabilization of surfaces under windy conditions.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> Metro Metro Construction
<p>CON-18—Street Watering</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> Metro Metro Construction
<p>CON-19—Spillage Prevention for Non-Earthmoving Equipment</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> Metro Metro Construction
<p>CON-20—Spillage Prevention for Earthmoving Equipment</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> Metro Metro Construction
<p>CON-21—Additional Controls to Reduce Emissions</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> Metro Metro Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-90—AERMOD Verification</p> <p>The estimated maximum localized pollutant levels are based on a series of assumptions made about contractor’s equipment and schedule. These levels will be verified, through additional AERMOD modeling, using the actual equipment and schedule proposed by the contractor prior to start of construction. Based on the results of the verification, the contractor will be mandated to alter operating procedures/schedule/equipment if an exceedance of the applicable standards is predicted. Contractor will be required to keep a log of construction equipment used during construction along with hours of operation of each specific piece of equipment to ensure that modeled assumptions are verifiable based on field activity. It is expected that the contractor will supply plans and field data on a quarterly basis.</p>	Verify Compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-97—MERV 16-rated Filters</p> <p>Install MERV 16-rated filters on the air intakes at the Beverly Hills High School temporary classroom site and the medical rehabilitation facility. As these areas are predicted to potentially experience air quality levels above the SCAQMD PM₁₀ significance threshold for a limited time period, the installation of these filters is recommended during this time period. MERV 16-rated filters are designed to control particulate contamination in the size range of 0.3 – 1.0 microns, which is expected to reduce PM₁₀ and PM_{2.5} levels within the buildings by over 95 percent.</p>	Verify Compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
Construction (Climate Change)			
<p>Mitigation: Implementation of air quality mitigation measures CON-6 through CON-13 will further reduce climate change impacts due to construction.</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
Construction (Noise and Vibration)			
<p>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:</p> <p>CON-22—Hire or Retain the Services of an Acoustical Engineer</p> <p>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 below criteria levels in Metro Baseline Specifications Section 01565, Construction Noise and Vibration Control.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-23—Prepare a Noise Control Plan</p> <p>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.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-24—Comply with the Provisions of the Nighttime Noise Variance</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-25—Noise Monitoring</p> <p>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. Periodic noise level measurements will be conducted during construction at the exterior of the Beverly Hills High School temporary classrooms.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-26—Use of Specific Construction Equipment</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-27—Noise Barrier Walls for Nighttime Construction</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-28—Comply with Local Noise Ordinances</p> <p>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 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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ 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
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	<input type="checkbox"/> Metro <input type="checkbox"/> Metro <input type="checkbox"/> Construction
CON-30—Use of Noise Control Devices Noise-control devices that meet original specifications and performance will be used.	Verify compliance	Contractor	<input type="checkbox"/> Metro <input type="checkbox"/> Metro <input type="checkbox"/> 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	<input type="checkbox"/> Metro <input type="checkbox"/> Metro <input type="checkbox"/> 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	<input type="checkbox"/> Metro <input type="checkbox"/> Metro <input type="checkbox"/> Construction
CON-33—Use of Electrically Powered Equipment Electrically powered equipment will be used to the extent practical.	Verify compliance	Contractor	<input type="checkbox"/> Metro <input type="checkbox"/> Metro <input type="checkbox"/> 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	<input type="checkbox"/> Metro <input type="checkbox"/> Metro <input type="checkbox"/> 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	<input type="checkbox"/> Metro <input type="checkbox"/> Metro <input type="checkbox"/> Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-36—Limited Use of Horns, Whistles, Alarms, and Bells</p> <p>Use of horns, whistles, alarms, and bells will be limited for use as warning devices, as required for safety.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction/Project Implementation
<p>CON-37—Requirements on Project Equipment</p> <p>All noise-producing project equipment, including vehicles that use internal 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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-38—Limited Audibility of Project Related Public Addresses or Music</p> <p>Any LPA-related public address or music system will not be audible at any adjacent sensitive receiver.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-39—Use of Haul Routes with the Least Overall Noise Impact</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-40—Designated Parking Areas for Construction-Related Traffic</p> <p>Non-noise-sensitive designated parking areas for LPA-related traffic will be used.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-41—Enclosures for Fixed Equipment</p> <p>Enclosures for fixed equipment, such as TBM slurry processing plants, will be required to reduce noise.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-91—Construction Noise Minimization at Medical Rehabilitation Facility</p> <p>If needed to comply with City of Los Angeles noise ordinances nighttime noise limits at the medical rehabilitation facility, the following noise-control measures or similar approaches will be used in Area 3:</p> <ul style="list-style-type: none"> ■ Fully enclose the compressor plant, ventilation plant, grout plant, foam plant, machine shop, and electrical shop. ■ All equipment used from 9 p.m. to 7 a.m. Monday through Friday, 6 p.m. to 8 a.m. Saturdays, and anytime on Sunday including boom crane and front-end loader shall be low emission equipment as required by Metro Specification Section 01 56 19, Construction Noise and Vibration Control, Parts 3.01 and 3.04, and Table 4. ■ Retrofit the boom crane and front end loader to be used during nighttime (9 p.m. to 7 a.m. Monday through Friday, 6 p.m. to 8 a.m. Saturdays, and anytime on Sunday) operations with a hospital-grade muffler and additional damping and insulation added to the engine compartments. ■ Install a supplemental 11-foot-high moveable noise barrier at the Area 2 shaft and muck bin to further shield noise from the front-end loader and crane operations. 	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-92—Additional Noise Control Measures at Century City Constellation</p> <p>If needed to comply with City of Los Angeles or City of Beverly Hills noise ordinances at the Century City Constellation Station construction sites, the Contractor shall be responsible for providing additional noise control measures and/or limiting the equipment and construction activities to reduce the construction noise at these sites to comply with the noise level limits by implementing the following or similar measures:</p> <ul style="list-style-type: none"> ■ Install a supplemental 11-foot-high moveable noise barrier at the Area 2 shaft and muck bin to further shield noise from the front-end loader and crane operations. ■ Moveable noise barriers that can be located within the construction site in close proximity to the equipment and activities that are exceeded the impact thresholds. The moveable noise barriers shall be constructed in accordance with Metro’s Specification Section 01 56 19, Construction Noise and Vibration Control, Article 	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>2.03, Moveable Noise Barriers. The height of the moveable noise barrier shall be a minimum of 12 feet.</p> <ul style="list-style-type: none"> ■ Noise control curtains that can be tented over the area where the noisy equipment is operating. The noise curtain shall be constructed in accordance with Metro’s Specification Section 01 56 19, Construction Noise and Vibration Control, Article 2.04, Noise Control Curtains ■ Replacing the standard engine exhaust muffler with a hospital grade engine silencer for stationary cranes, front end loaders, dozers, and any other diesel powered equipment operating during nighttime hours. ■ The compressor plant, ventilation plant, grout plant, foam plant, machine shop and electrical shop are to be fully enclosed. ■ Equipment operating during the daytime hours will not exceed the noise level limits defined as low noise emission equipment by Metro’s Specification Section 01 56 19. This equipment will be tested every six months by the Contractor at maximum governed rounds per minute under full load conditions to verify the Metro-specified low noise emission levels are not exceeded. 			
<p>CON-93—Backup Alarms</p> <p>All equipment operating during nighttime hours at all construction sites shall use low impact backup alarms. The low impact back-up alarms shall comply with CCR Title 8, Section 1592, Warning Methods. For equipment that must comply with CCR Title 8, Section 1592(a), equip these vehicles with compliant white sound, broadband and multi-frequency type back-up alarm devices. For equipment subject to the requirements of CCR Title 8, Section 1592(b) the Contractor may choose to equip with automatic back-up audible alarms. Such alarms shall only be of a compliant white sound, broadband or multi-frequency back-up alarm type device.</p> <p>The compliant white sound, broadband and multi-frequency type back-up alarm device shall be a self-adjusting, “smart” reversing, alarm that continually adjusts to 5 dB above ambient. Acceptable manufacturers are Brigade, ECCO or approved equal. The compliant white sound, broadband and multi-frequency type back-up alarm device shall be rated as medium duty or heavy duty, as the field conditions and/or usage would dictate.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-94—Haul Truck Noise Emission Limits</p> <p>Limit trucks operating off-site between the hours of 12:00 midnight and 5:00 AM to the extent feasible. Trucks that must operate during these hours should be fitted with equipment such as high grade engine exhaust silences and engine casing sound insulation or other equivalent devices.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-95—Vibration Control for Tunnel Train</p> <p>If ground-borne noise limits or ground-borne vibration limits are exceeded, the contractor will be required to take action to reduce noise and/or vibrations to acceptable levels. Such action could include: 1. A durable resilient system to support the tunnel train tracks. Such as system would include: a. Resilient mat under the tracks b. A resilient grommet or bushing under the heads of any track fasteners. 2. The hardness of the resilient mat should be in the 40 to 50 durometer range and be about 1 to 2” thick, depending on how heavily loaded the cars would be. 3. The Contractor shall select the mat thickness so that the rail doesn’t bottom out during a train pass by. 4. Reduce the speed of the tunnel trains. 5. Maintain the tunnel train track and train wheels in good order to reduce potential vibration impacts, including keeping gaps between track sections to a minimum and frequent maintenance to avoid wheel flats.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-96—Vibration Monitoring Plan</p> <p>The Contractor is required to submit a Vibration Monitoring Plan prepared, stamped, and administered by the Contractor's Acoustical Engineer. As part of the implementation of this plan, vibration monitoring will be performed at the historic Sterling Plaza/Bank of California, Union Bank Building, and AAA Building closest to the locations where equipment and/or construction activities generate a substantial amount of ground-borne vibration. Vibration monitoring will consist of continuous measurements at the building façade closest to the construction activities. All vibration monitors used will be equipped with an “alarm” feature to provide notification if the 0.2 PPV vibration damage risk threshold has been approached or exceeded.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>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:</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-44—Alternative Demolition Methods Demolition methods will be selected to minimize noise and vibration impact where possible.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-45—Restriction on Use of Vibratory Rollers and Packers Use of vibratory rollers and packers will be avoided near vibration sensitive areas.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>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 acceptable levels. Such action could include reducing the muck train speed, additional rail and tie isolation, and more frequent rail and wheel maintenance.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
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	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
Construction (Geologic Hazards)			
<p>Mitigation: The following measures will be implemented to reduce impacts related to subsidence and settlement due to tunneling.</p> <p>CON-47—Use of Pressurized-Face TBMs for Tunnel Construction</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-48—Preconstruction Survey, Instrumentation, and Monitoring</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-49—Additional Geotechnical Exploration</p> <p>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.</p>	Verify completion of research	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Final Design
<p>CON-50—Additional Methods to Reduce Settlement</p> <p>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:</p> <ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-51—Techniques to Lower the Risk of Exposure to Hydrogen Sulfide</p> <p>The primary method for reducing exposure to subsurface gases is dilution through the ventilation system. 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 through use of enclosed tunneling systems such as pressure-face TBMs, 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</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>cross-passage excavation areas and where open excavation and limited dewatering may be conducted such as emergency exit shafts and low-point sump excavations.</p> <p>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.</p>			
<p>CON-52—Measures to Reduce Gas Inflows</p> <p>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 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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-53—Oil Well Locations and Abandonment</p> <p>Pre-construction geophysical surveys will be conducted to screen further for unmapped abandoned oil wells along the tunnel alignment. It is anticipated that the geophysical surveys will be performed along the proposed tunnel alignment prior to construction in the areas of known oil production and mapped or otherwise suspected wells. This survey will incorporate techniques such as ground-penetrating radar and electromagnetic testing procedures to screen for oil well casings and other subsurface obstructions along the tunnel alignment. These procedures could be implemented from the ground surface, in horizontal holes drilled using horizontal directional drilling techniques at the tunnel elevation, or a combination of both methods. Shallow excavations may be made to expose and observe anomalies that are detected.</p> <p>Where the tunnel alignment cannot be adjusted to avoid well casings, the California Department of Conservation (Department of Oil, Gas and Geothermal Resources) and a re-abandonment specialty contractor will be contacted to determine the appropriate method of re-abandoning 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. If an unknown well is encountered during construction, the contractor will notify Metro, Cal/OSHA, and COGGR , and proceed in accordance with state requirements.</p>	Verify completion of research on oil locations	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior to Construction
<p>CON-54—Worker Safety for Gassy Tunnels</p> <p>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).</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
Construction (Hazardous Waste and Materials)			
<p>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.</p> <p>CON-55—Site Assessments</p> <p>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 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.</p>	Verify completion of ESA and sampling	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior to Construction
<p>CON-56—Soil Reuse</p> <p>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.</p>	Verify compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior to Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-57—Sampling During Construction</p> <p>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:</p> <ul style="list-style-type: none"> ■ 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	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-58—Soil Testing</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-59—Personal Protection</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-60—Contaminated Groundwater</p> <p>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.</p>	<p>Verify completion of testing of suspect contaminated groundwater</p>	<p>Metro/Contractor</p>	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-61—Health and Safety Plan</p> <p>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.</p>	<p>Verify completion of health and safety plan and compliance</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-62—Storage of Contaminated Materials</p> <p>Hazardous or contaminated materials will be properly stored to prevent contact with precipitation and runoff.</p>	<p>Verify compliance</p>	<p>Contractor</p>	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-63—Monitoring the Environment</p> <p>An effective monitoring and cleanup program will be developed and implemented for spills and leaks of hazardous materials</p>	<p>Verify compliance</p>	<p>Metro</p>	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-64—Equipment Repair and Maintenance</p> <p>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</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-65—Removal of Chemical Residue</p> <p>Any significant chemical residue on the construction sites will be removed.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ construction
Construction (Ecosystems/ Biological Resources)			
<p>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.</p> <p>CON-66—Biological Survey</p> <p>Two biological surveys will be conducted, one 15 days prior and a second 72 hours 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.</p>	Verify completion of biological surveys	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-67—Compliance with City Regulations</p> <p>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,</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
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.			
<p>CON-68—Tree Pruning</p> <p>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.</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-69—Avoidance of Migratory Bird Nesting Season</p> <p>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.</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
Construction (Hydrology and Water Resources)			
<p>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.</p> <p>CON-70—Methods to Control Contaminated Groundwater</p> <p>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.</p>	Verify mitigation is completed during project design and engineering.	Metro	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Final Design

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-71—Plan if Contaminated Groundwater is Encountered</p> <p>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.</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>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:</p> <p>CON-72—Erosion and Sediment Control Plan</p> <p>An erosion and sediment control plan will be established prior to construction. The plan will include the following BMPs as appropriate:</p> <ul style="list-style-type: none"> ■ 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	Metro	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>CON-73—Landscape and Construction Debris</p> <p>Landscape and construction debris will be periodically and consistently removed.</p>	Monitor compliance	Metro	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Final Design

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-74—Use of Non-Toxic Herbicides or Fertilizers</p> <p>Non-toxic alternatives will be employed for any necessary applications of herbicides or fertilizers.</p>	Monitor compliance	Metro	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>CON-75—Use of Temporary Detention Basins</p> <p>Temporary detention basins will be installed to remove suspended solids by settlement.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>CON-76—Water Quality Monitoring</p> <p>Water quality of runoff will be periodically monitored before discharge from the site and into the storm drainage system</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>Mitigation: BMPs for tunnel construction activities will include, but are not limited to, the following measures.</p> <p>CON-77—Use of Stormwater Runoff BMPs</p> <p>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.</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-78—Measures to Reduce the Tracking of Sediment and Debris</p> <p>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 vehicles.</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>CON-79—Cleaning of Equipment</p> <p>Onsite rinsing or cleaning of any equipment will be performed in contained areas and rinse water will be collected for appropriate disposal.</p>	Verify compliance	Metro/Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>CON-80—Construction Site Water Collection</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction
<p>CON-81—Soil and Building Material Storage</p> <p>Soil and other building materials (e.g., gravel) stored onsite must be contained and covered to prevent contact with stormwater and offsite discharge.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ California State Water Resources Control Board (SWRCB) ■ Metro ■ Construction

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
Construction (Parks and Community Facilities)			
<p>Mitigation: In addition to the measures for communities and neighborhoods, the following measures will avoid and minimize impacts to parks and community facilities.</p> <p>CON-82—Communication with Schools</p> <p>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.</p>	Verify coordination	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior to construction
<p>CON-83—Work with Transportation, Police, Public Works, and Community Service Departments</p> <p>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.</p>	Verify coordination and compliance	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior to Construction
<p>CON-84—Instructional Rail Safety Programs for Schools</p> <p>Metro will provide at no charge to school districts an instructional rail safety program with materials to all affected elementary middle and high schools.</p>	Verify coordination and implementation of Public Outreach Program	Metro	<ul style="list-style-type: none"> ■ City of Los Angeles ■ Metro ■ Prior to Construction and project implementation
<p>CON-85—Informational Program to Enhance Safety</p> <p>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.</p>	Verify coordination and implementation of Public Outreach Program	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

Appendix A—Updated Mitigation Monitoring and Reporting Plan for Section 2

Mitigation Measures	Monitoring Action	Party Responsible for Implementing Mitigation	Enforcement Agency Monitoring Agency Timeframe
<p>CON-86—Traffic Control</p> <p>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.</p>	Verify compliance	Contractor	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction
<p>CON-87—Designation of Safe Emergency Vehicle Routes</p> <p>Safe emergency vehicle routes will be designated around construction sites. The identification of the routes will be coordinated with other agencies.</p>	Verify coordination	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Prior to Construction
Construction (Economic and Fiscal)			
<p>CON-88—Minimize Disruption of Access to Businesses</p> <p>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.</p> <p>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.</p>	Verify inclusion into project design and implementation	Metro	<ul style="list-style-type: none"> ■ Metro ■ Metro ■ Construction

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APPENDIX B TECHNICAL STUDIES

Note: Reports will be provided as separate files

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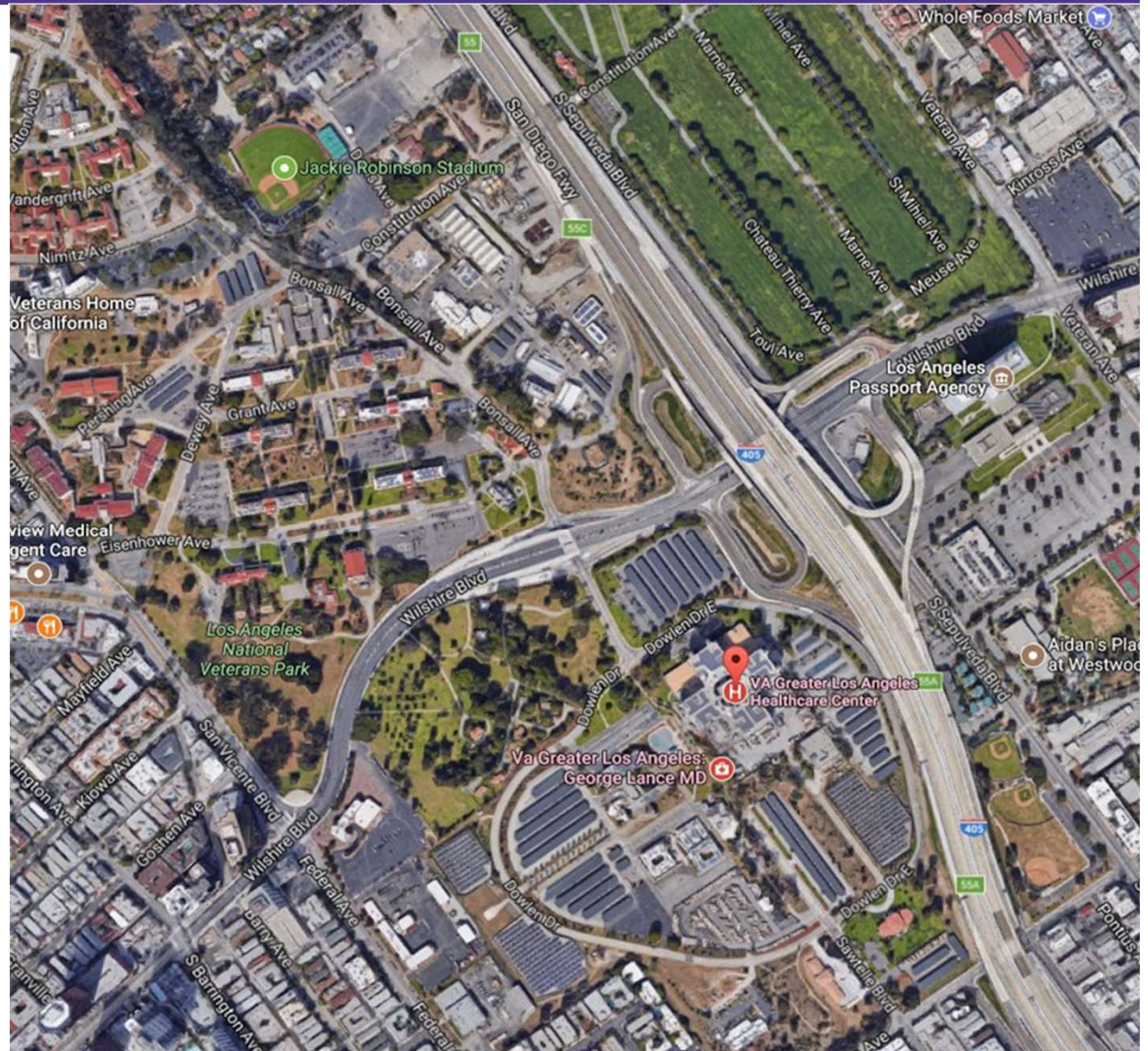
APPENDIX C SAMPLE PUBLIC OUTREACH PRESENTATIONS

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Vets Advocacy Town Hall

Purple Line Subway
Extension Overview

October 18, 2017



Purple Line Benefits for Veterans

- A vital transportation link for the emerging Veteran Community
- Improve access to/from VA campus for:
 - Patients and Residents
 - Their family and friends
 - VA Staff
- It will provide improved connections to:
 - The regional transit network
 - Jobs and educational opportunities
 - Cultural and entertainment centers
- When complete: **25 minute travel time** to downtown



Metro

Purple Line Status

*Subject to change. The PLE project team is working to deliver the project consistent with Measure M

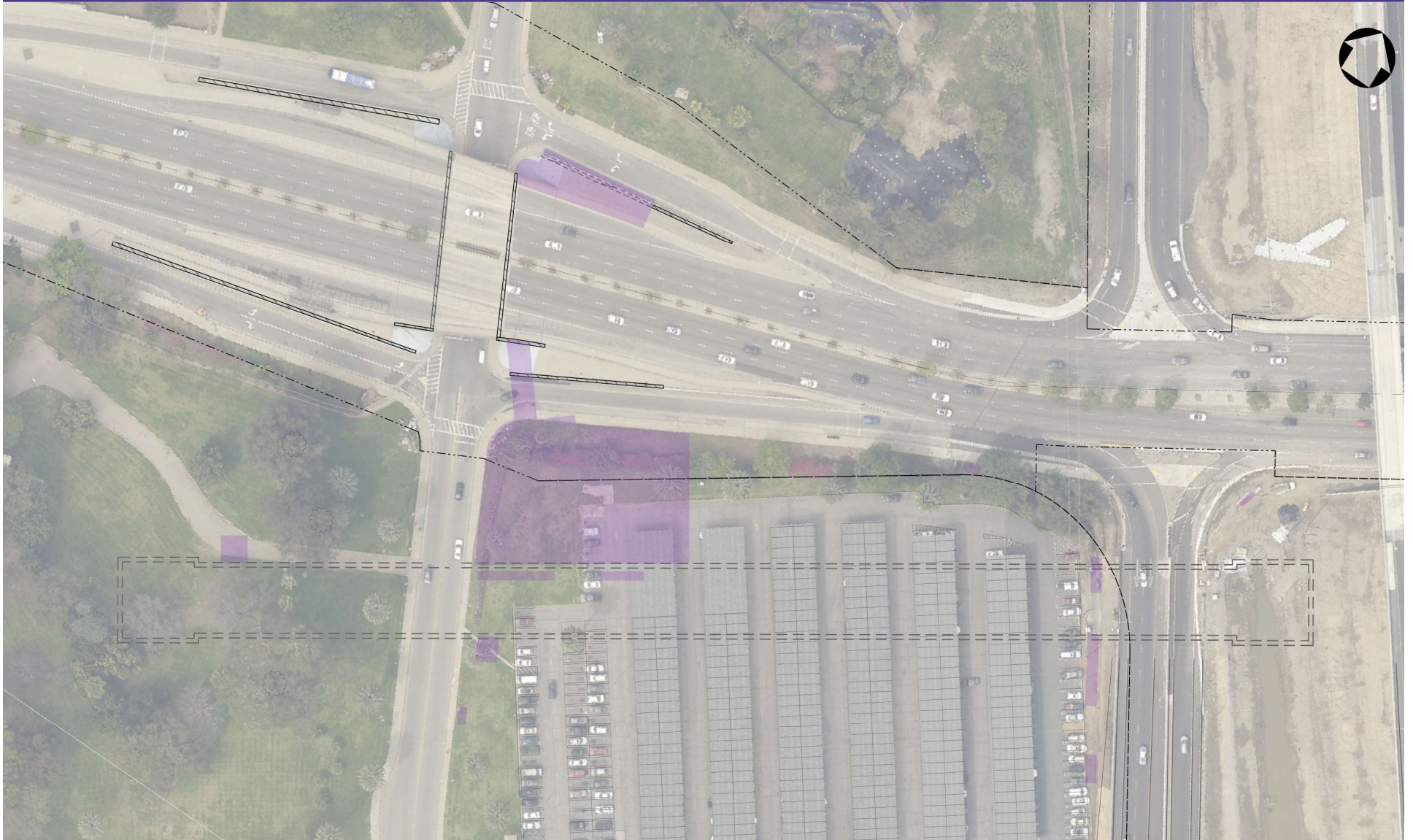
	Under Construction	Forecasted Schedule	
Section	Section 1	Section 2	Section 3
Length	3.92 Miles	2.59 Miles	2.59 Miles
New Stations	Wilshire/La Brea Wilshire/Fairfax Wilshire/La Cienega	Wilshire/Rodeo Century City/ Constellation	Westwood/UCLA Westwood/VA Hospital
Pre-Construction Activities	Complete	2016 - 2018	2016-2018
Construction	2014 - 2023	2017 – 2024*	2018 – 2024*
Operations	2023	2024*	2024*

Coordination with VA

- VA's Current Draft Master Plan includes the station
- Metro and VA working closely:
 - To ensure the station is consistent with the Master Plan
 - Prepare for construction
 - Complete necessary due diligence
 - Provide effective outreach
- During construction:
 - Maintain access
 - Provide information to keep the community fully informed
- Metro and VA will work together to conduct outreach throughout construction to ensure everyone is well informed



VA West Los Angeles Station



Metro's Commitment to the Veteran Community

We're not just building a train station, we're building a relationship with you

- Disabled Veterans Business Enterprise Program
- Veterans Womens Advocacy Committee
- Veterans Hiring Initiative
- Vetsgo511.com



Stay in Touch

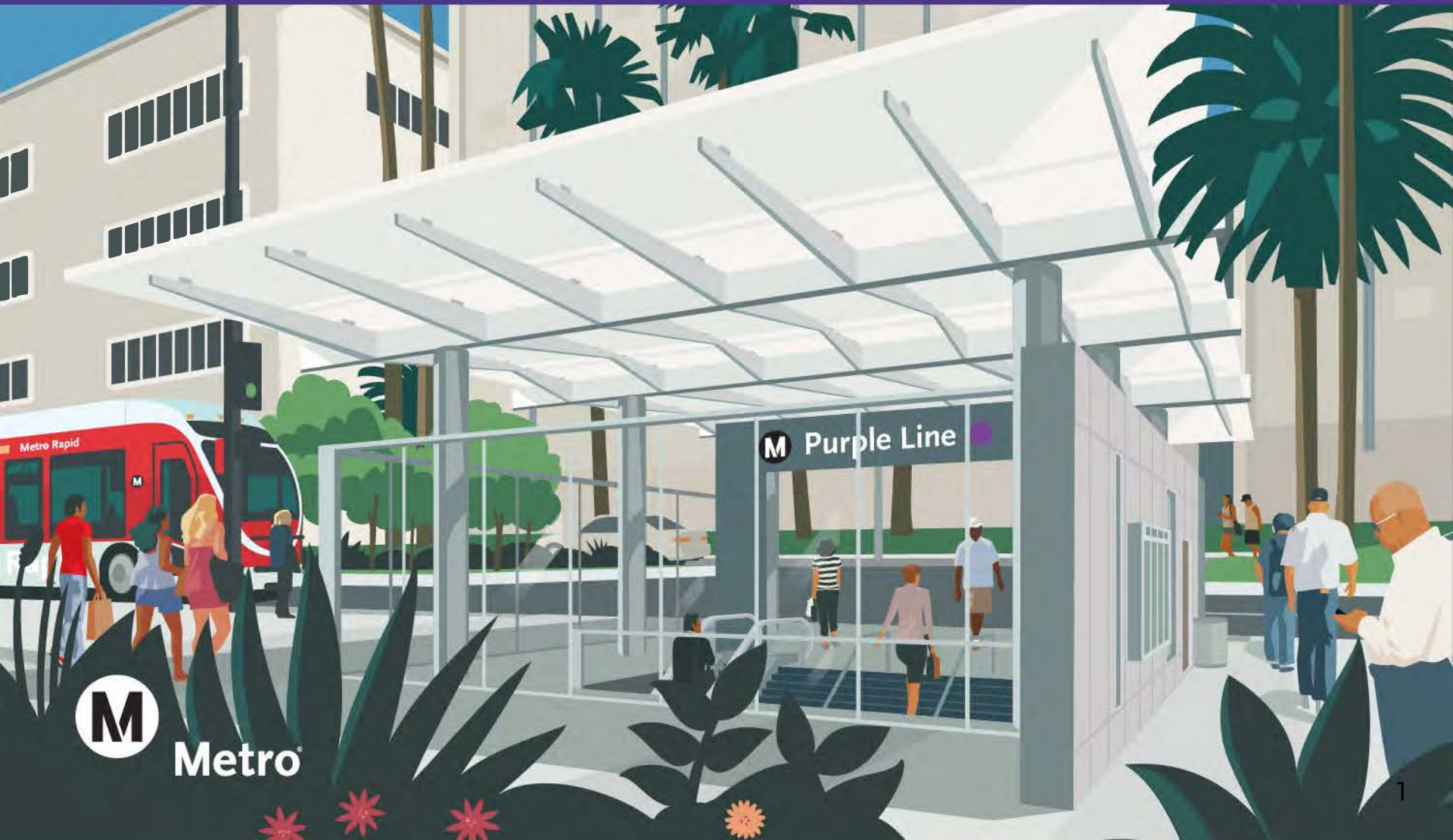
Eric Geier
Metro
Community Relations Manager
geiere@metro.net
(213) 922-4229



Purple Line Extension

Section 3 Community Meeting

November 28, 2017



Agenda

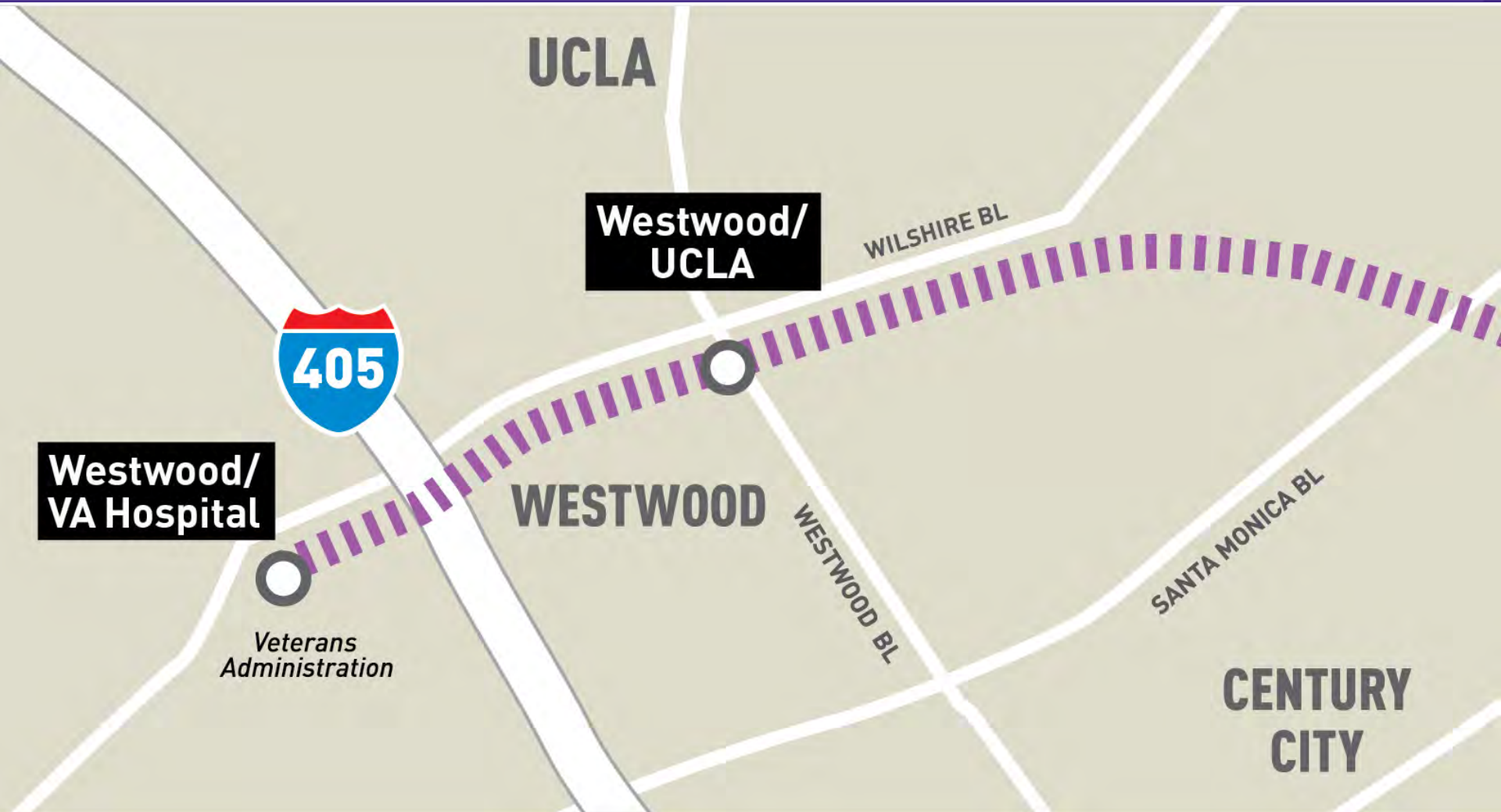
Sections 3

- Station Overview
 - Westwood/UCLA
 - VA
- Advance Utility Relocation
 - Schedule
 - Location



Purple Line Extension

Section 3 Alignment



Sections 1, 2 & 3 Status

**Subject to change. The PLE project team is working to deliver the project consistent with Measure M*

Section	Forecasted Schedule		
	Section 1	Section 2	Section 3
Length	3.92 Miles	2.59 Miles	2.59 Miles
New Stations	Wilshire/La Brea Wilshire/Fairfax Wilshire/La Cienega	Wilshire/Rodeo Century City/ Constellation	Westwood/UCLA Westwood/VA Hospital
Pre-Construction Activities	2014-2015	2016 - 2018	2016 – 2018
Construction	2015 - 2023	2018 – 2025	2018 – 2026
Operations	2023	2025	2026

Typical Subway Station Entrance



Landscaping at
Station Plaza

Entry Pavilion

Metro Station
Identifier

Metro Info
Cases

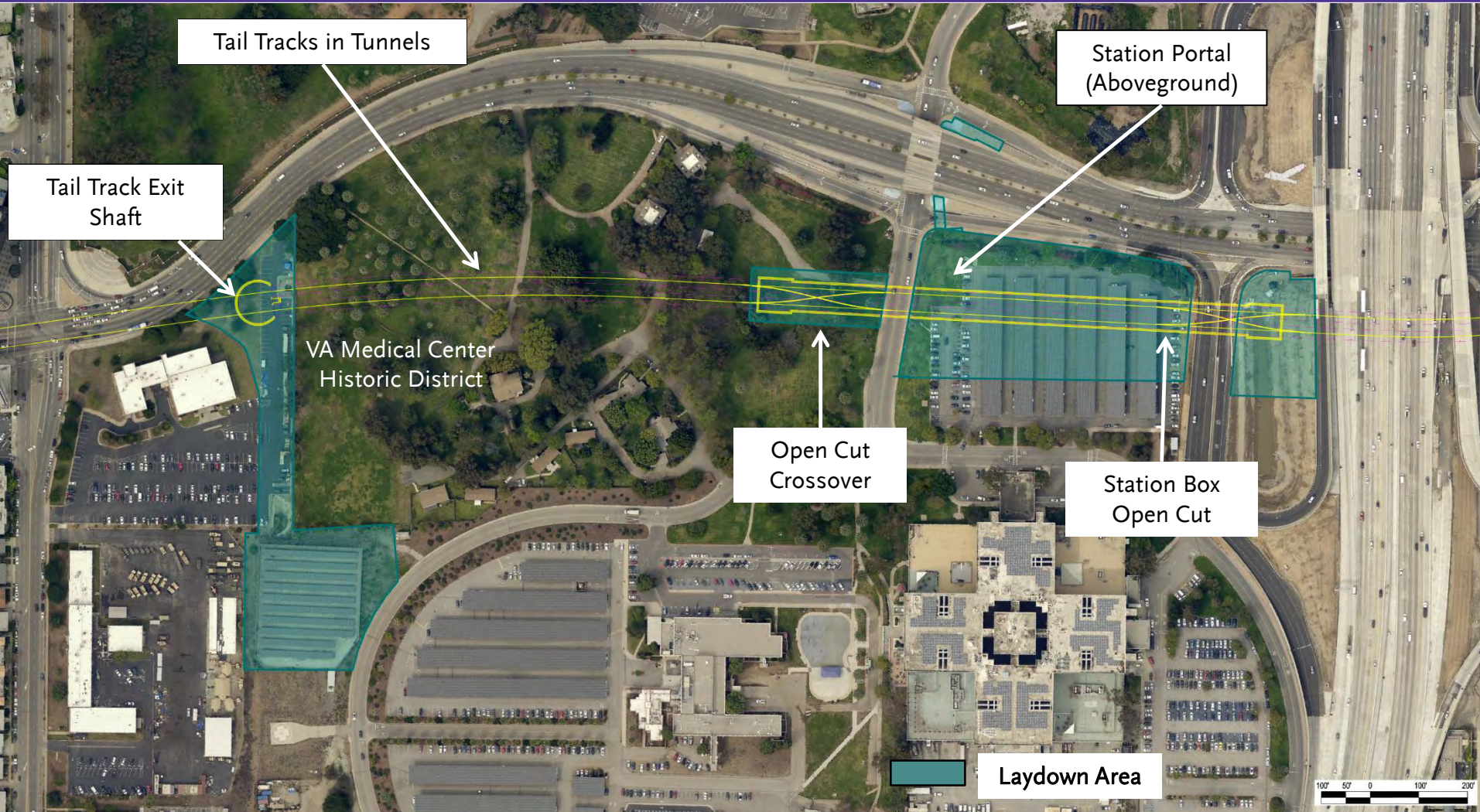
Westwood/UCLA

Station Box



Westwood/VA Hospital

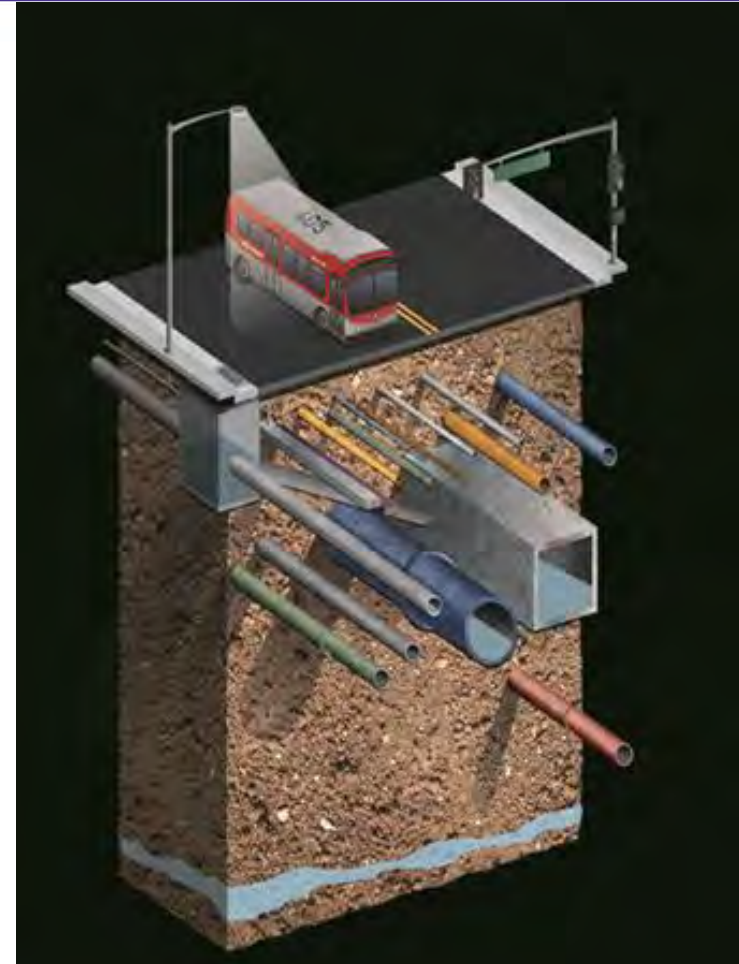
Station Area



Pre-Construction

Advanced Utility Relocation (AUR)

- **Utility relocations:**
 - Clear the way for station construction
 - Telecom, gas, water, power, sewer
 - Ensure continued utility service
 - January 2018-December 2019
 - Proposed Hours:
 - Monday-Friday: 9pm - 6am
 - Weekend Work: Friday 9pm - Monday 6am
- **Typical process:**
 - Hours and traffic plans approved by City of Los Angeles
 - Maintain at least one lane of traffic in each direction on Wilshire
 - Truck/crew leave and lanes reopen at the end of each work period
 - Noisiest activities include saw-cutting and jack-hammering



Rendering of AUR work



Metro

Pre-Construction

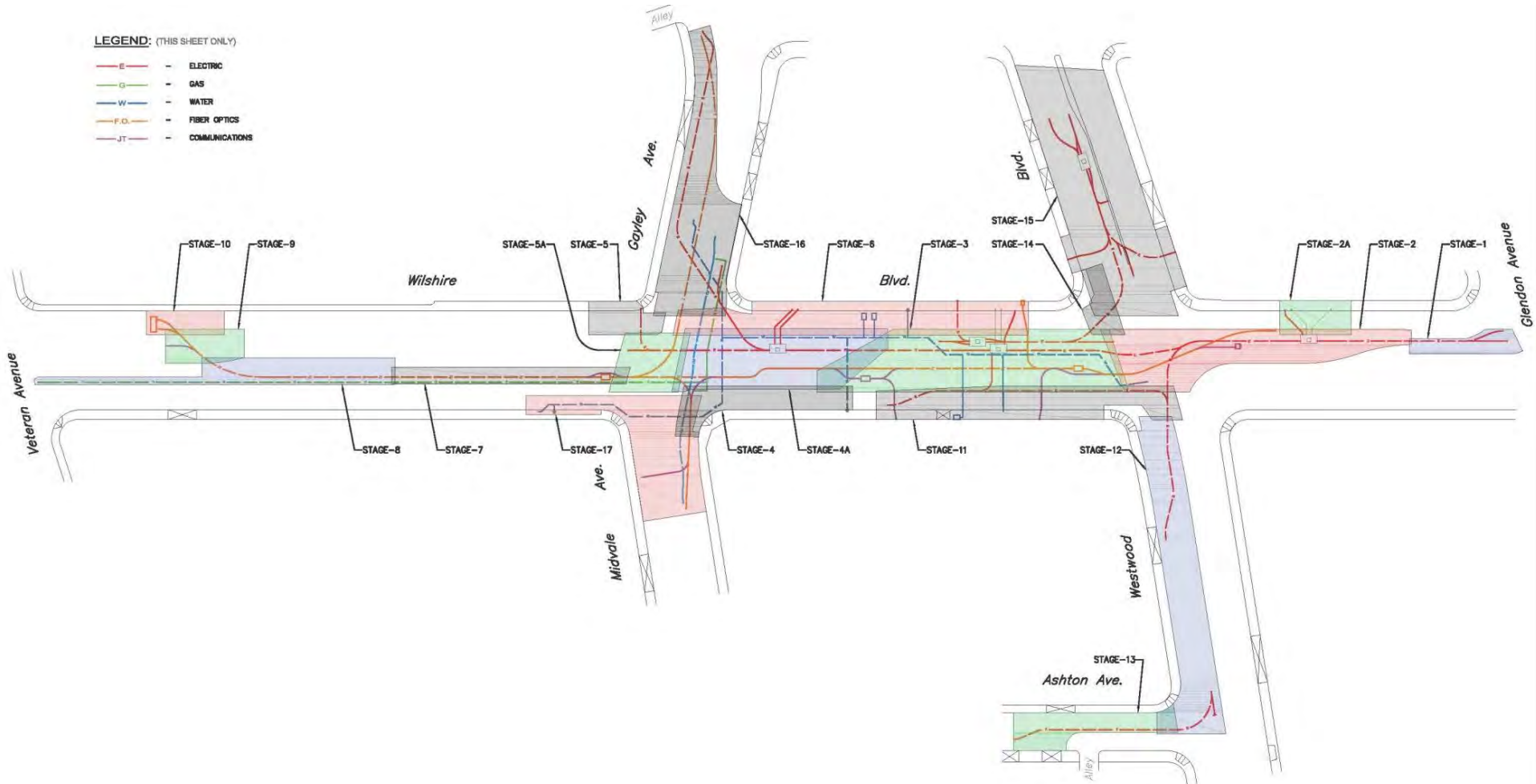
Advanced Utility Relocation (AUR)



Examples of AUR work

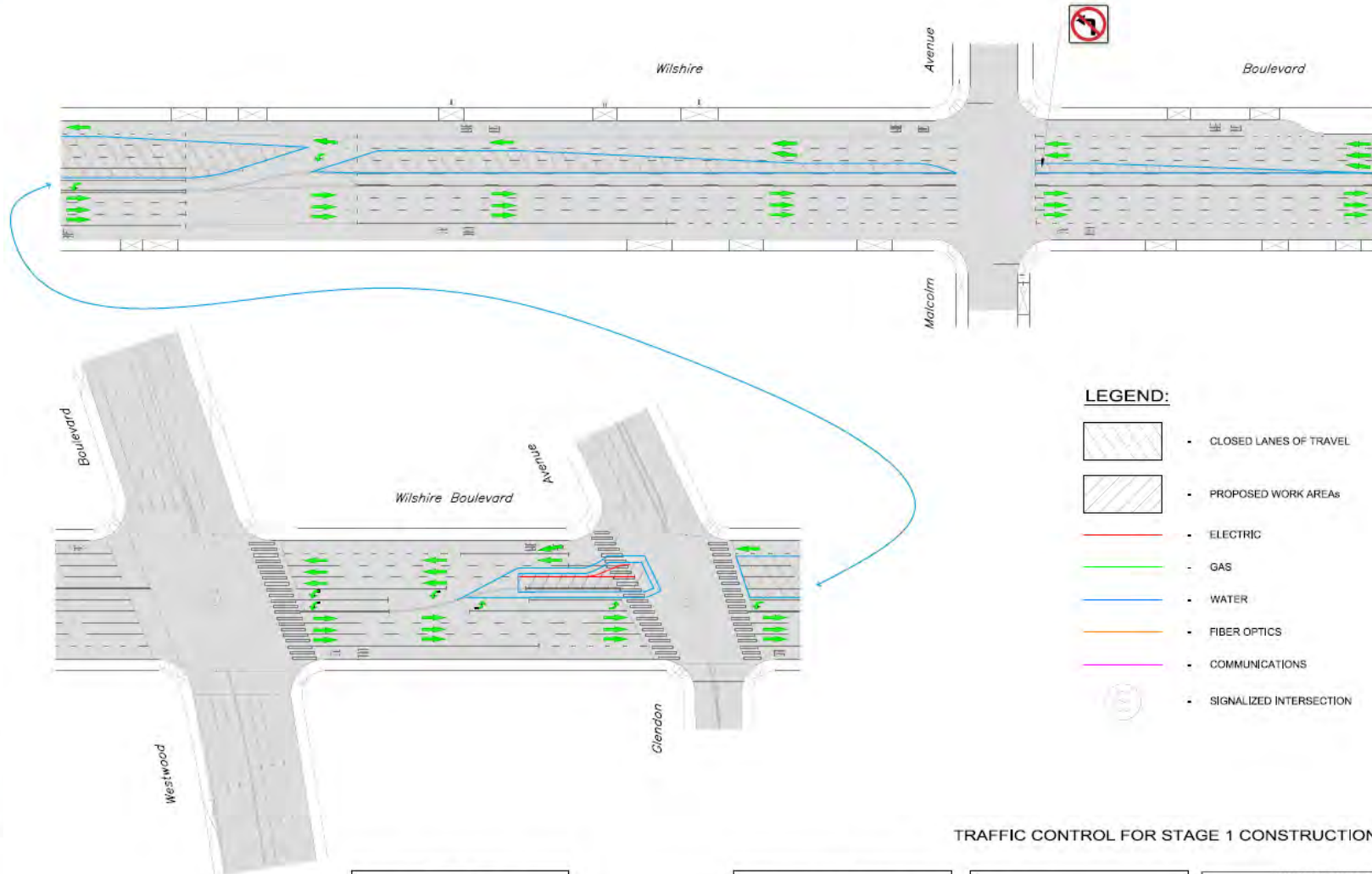
Advanced Utility Relocation (AUR)

Westwood/UCLA Station



Stage 1: 9 days

Weeknights 9pm - 6am



TRAFFIC CONTROL FOR STAGE 1 CONSTRUCTION

DRAFT

DURATION: 9 DAYS

DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

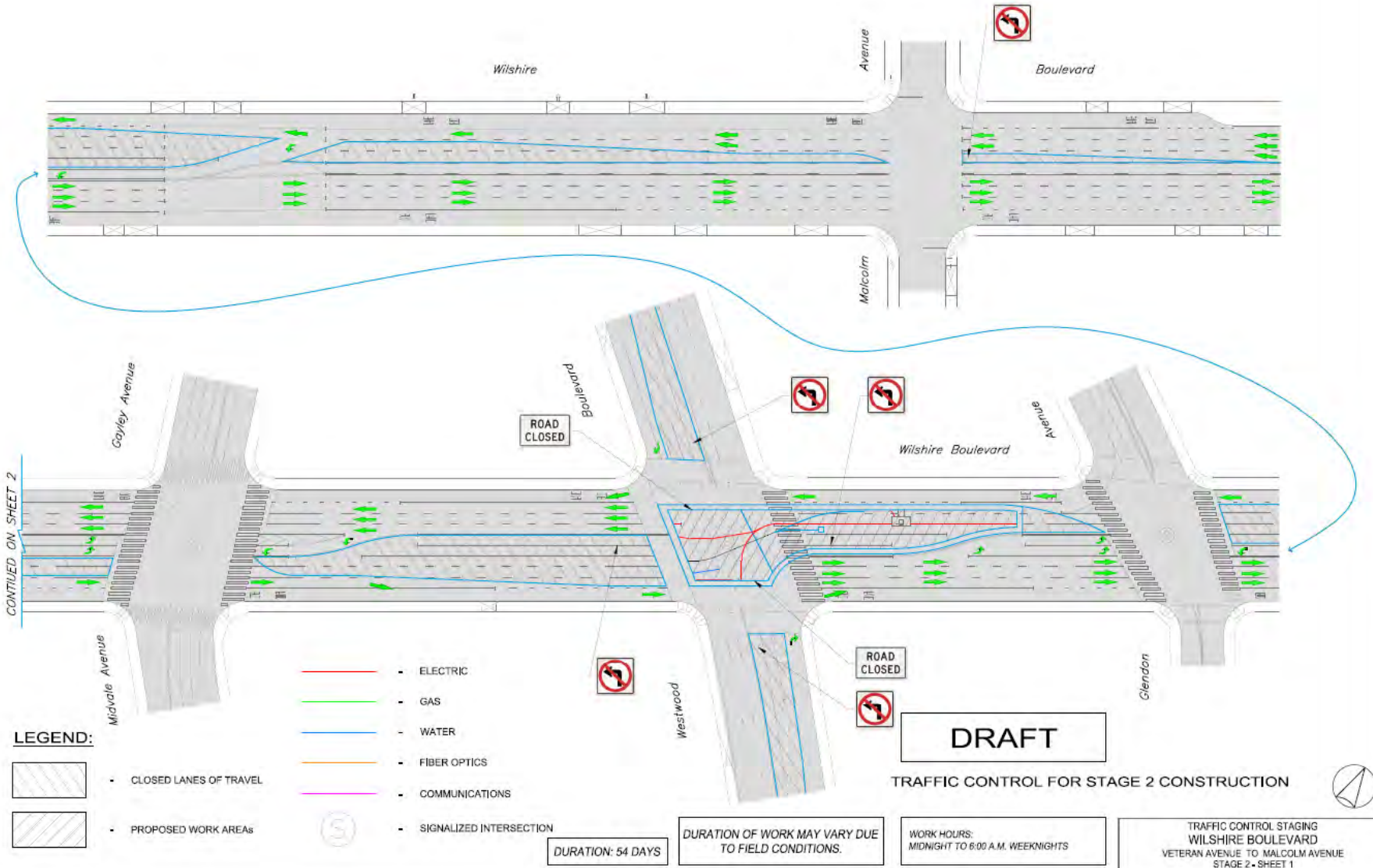
WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
WESTWOOD BOULEVARD TO MALCOLM AVENUE
STAGE 1 - SHEET 1



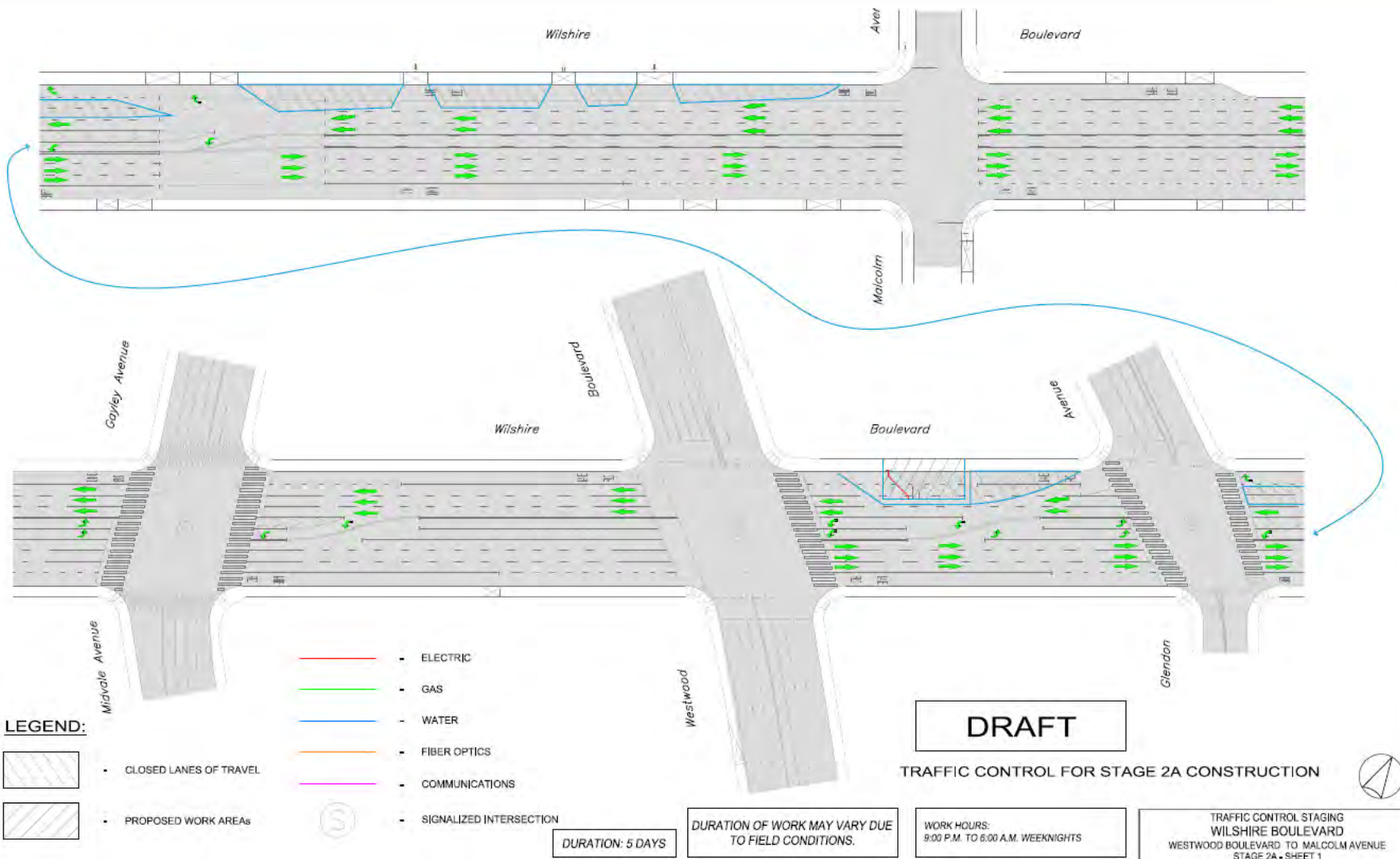
Stage 2: 54 days

Weeknights 9pm - 6am



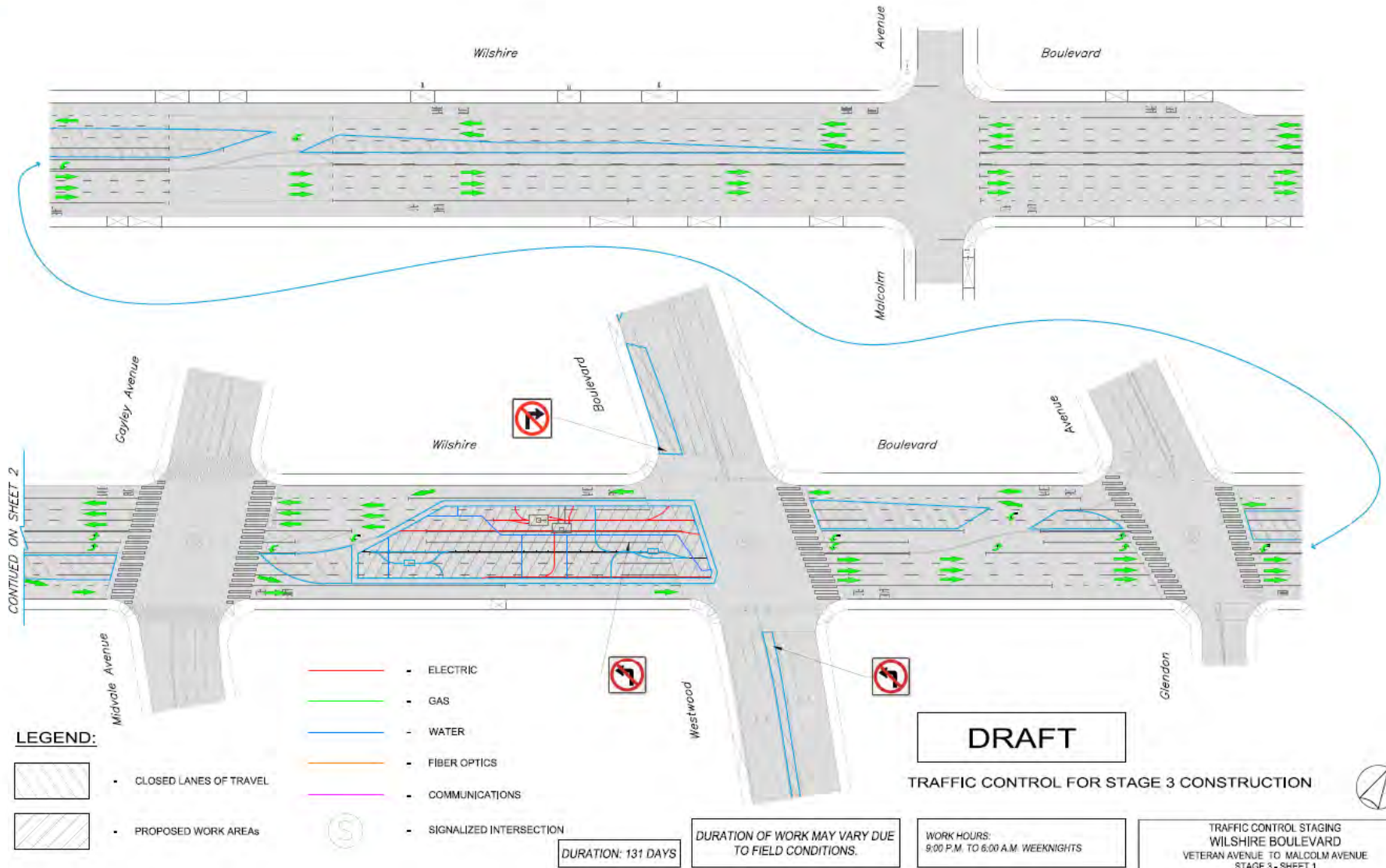
Stage 2A: 5 days

Weeknights 9pm - 6am



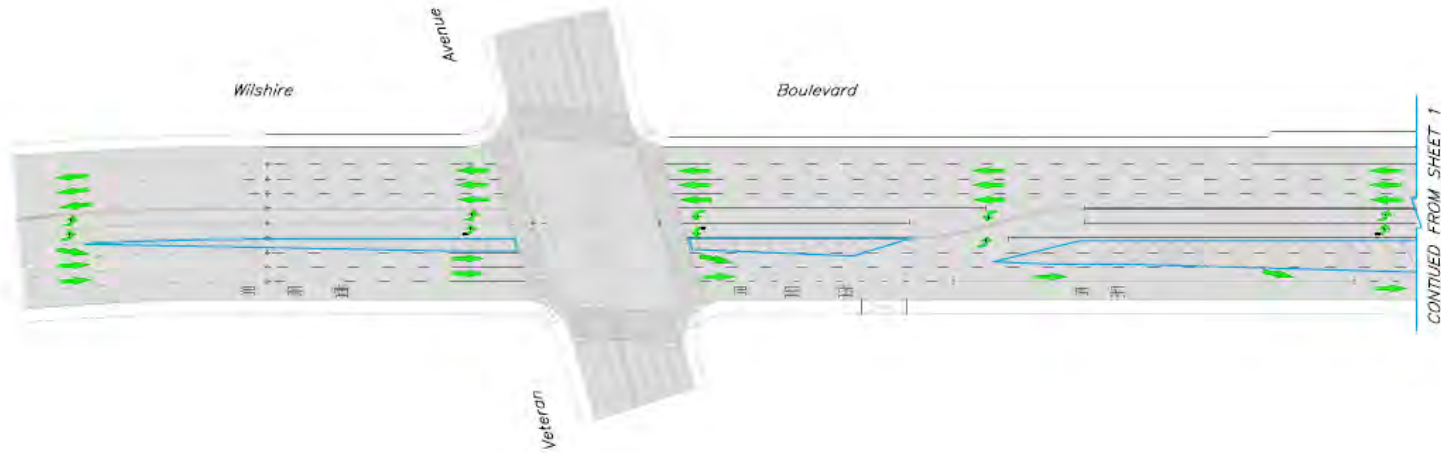
Stage 3: 131 days

Weeknights 9pm - 6am






Stage 3: 131 days

Weeknights 9pm - 6am



LEGEND:

-  CLOSED LANES OF TRAVEL
-  PROPOSED WORK AREAS

-  - ELECTRIC
-  - GAS
-  - WATER
-  - FIBER OPTICS
-  - COMMUNICATIONS
-  - SIGNALIZED INTERSECTION

DRAFT

TRAFFIC CONTROL FOR STAGE 3 CONSTRUCTION



DURATION: 131 DAYS

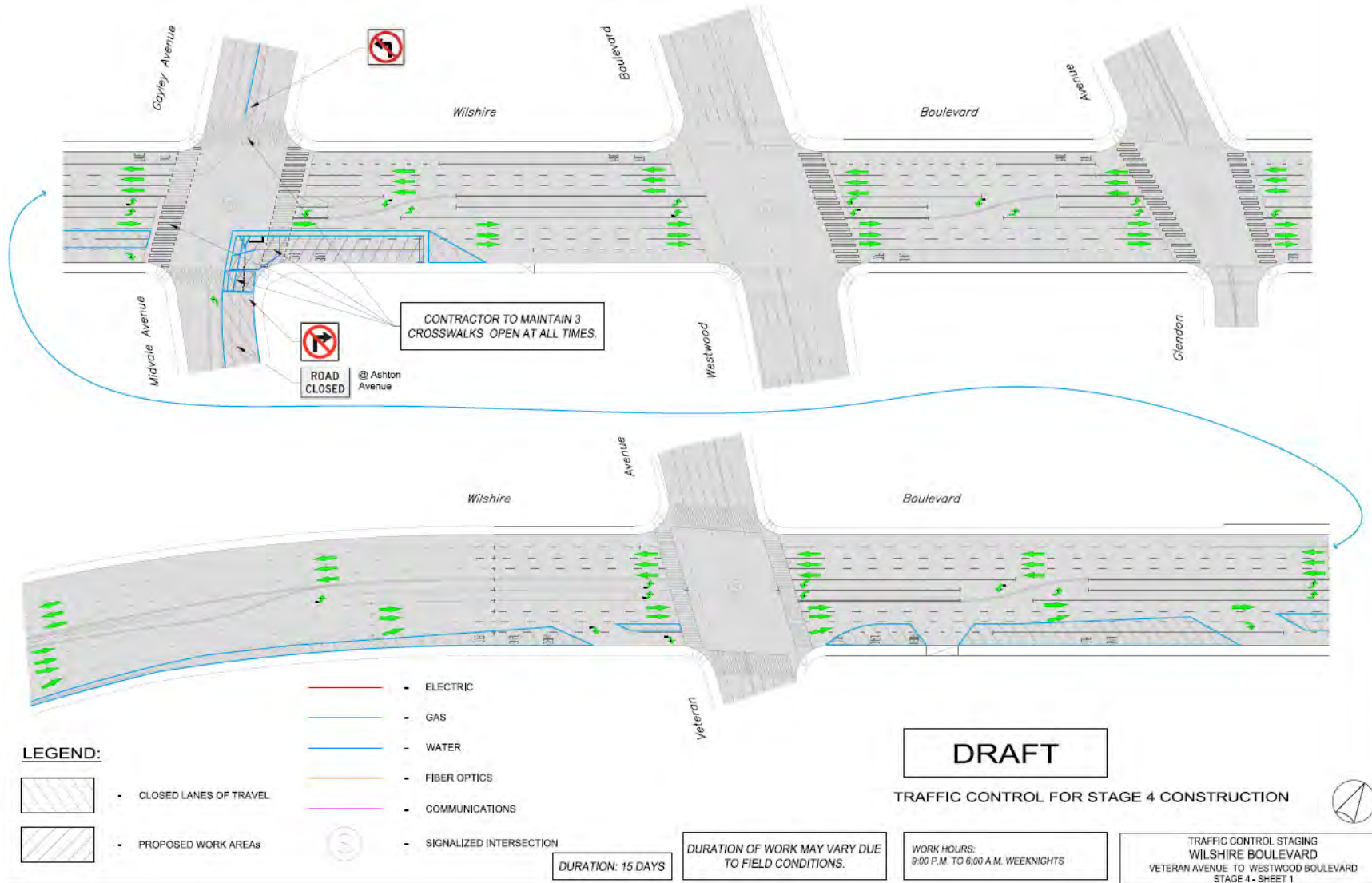
DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
VETERAN AVENUE TO MALCOLM AVENUE
STAGE 3 - SHEET 2

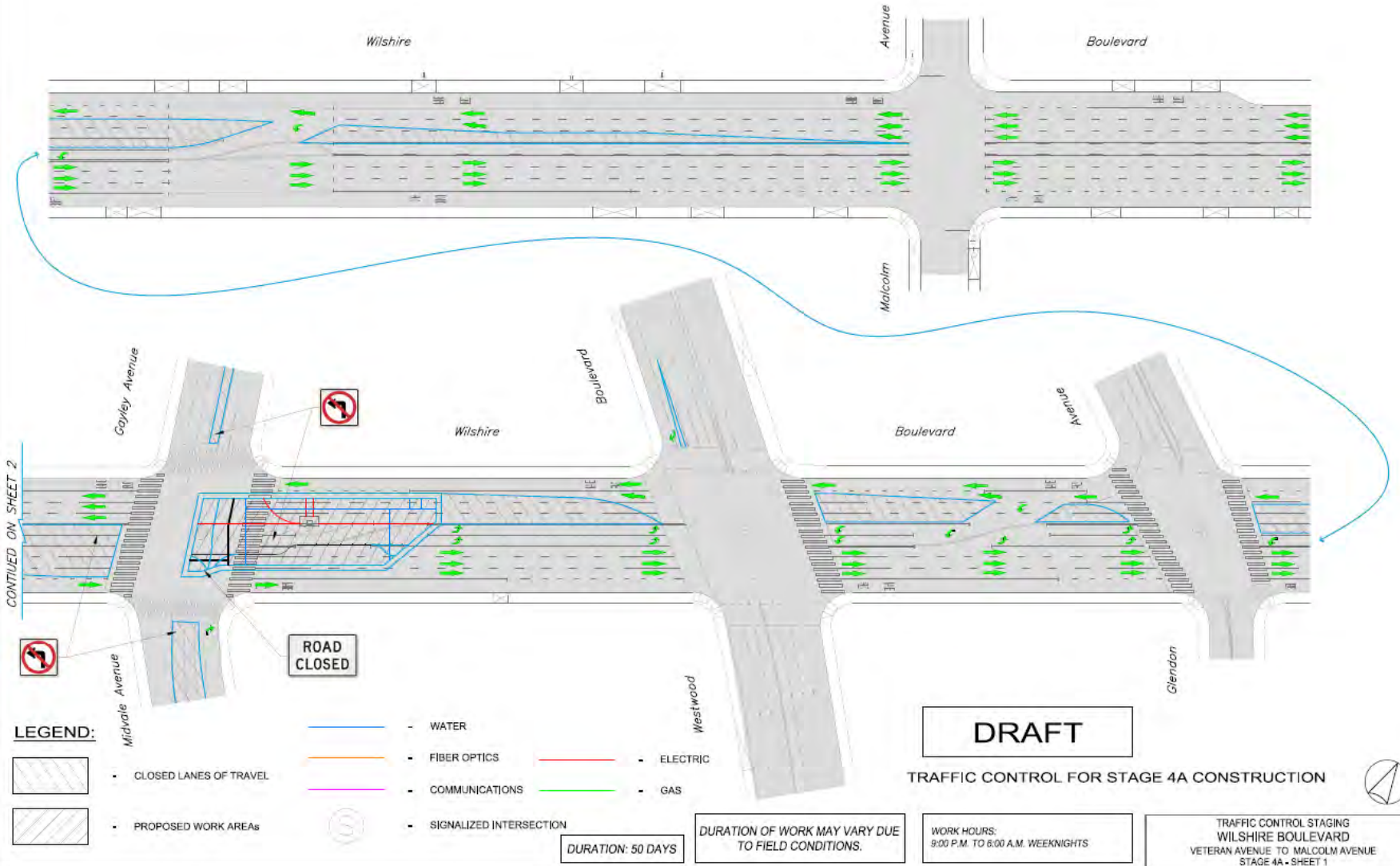
Stage 4: 15 days

Weeknights 9pm - 6am



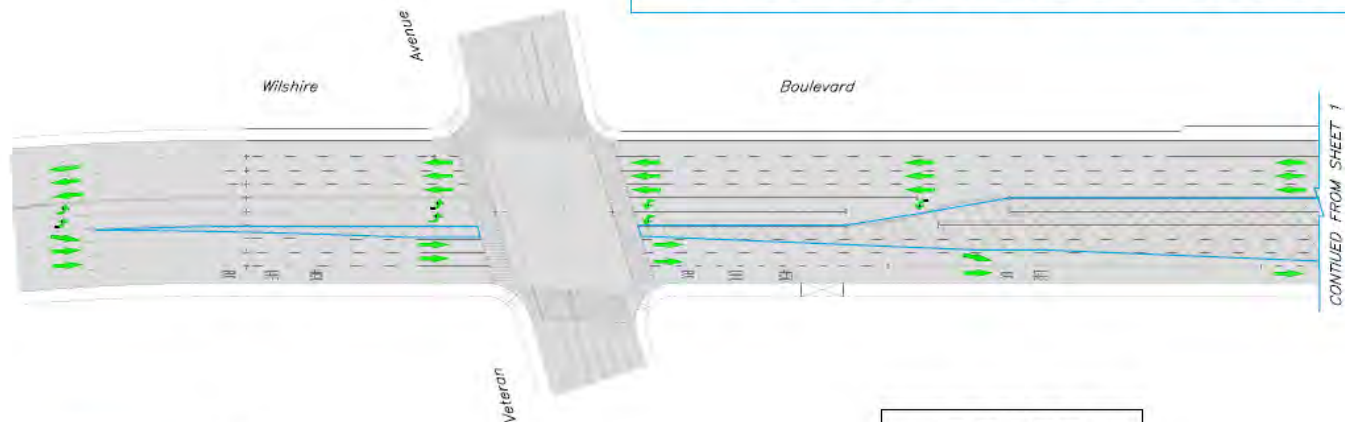
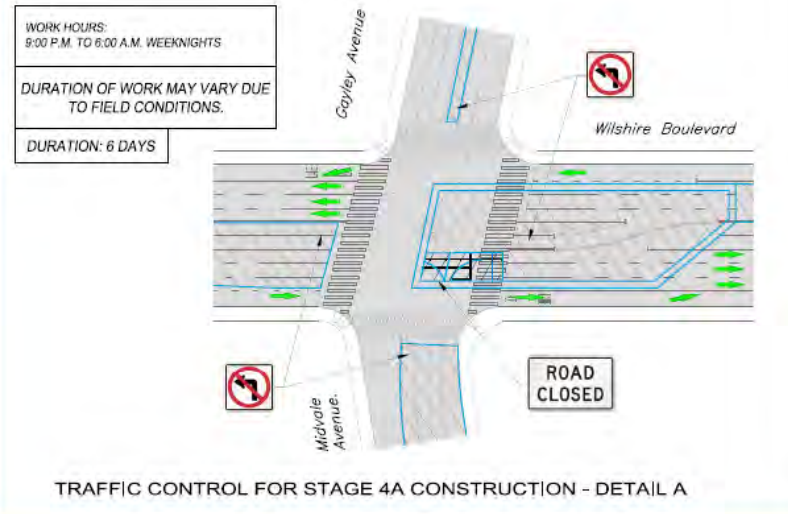
Stage 4A: 50 days

Weeknights 9pm - 6am





Stage 4A: 50 days

Weeknights 9pm - 6am



LEGEND:

-  - CLOSED LANES OF TRAVEL
-  - PROPOSED WORK AREAS

-  - WATER
-  - FIBER OPTICS
-  - ELECTRIC
-  - GAS
-  - COMMUNICATIONS
-  - SIGNALIZED INTERSECTION

DURATION: 50 DAYS

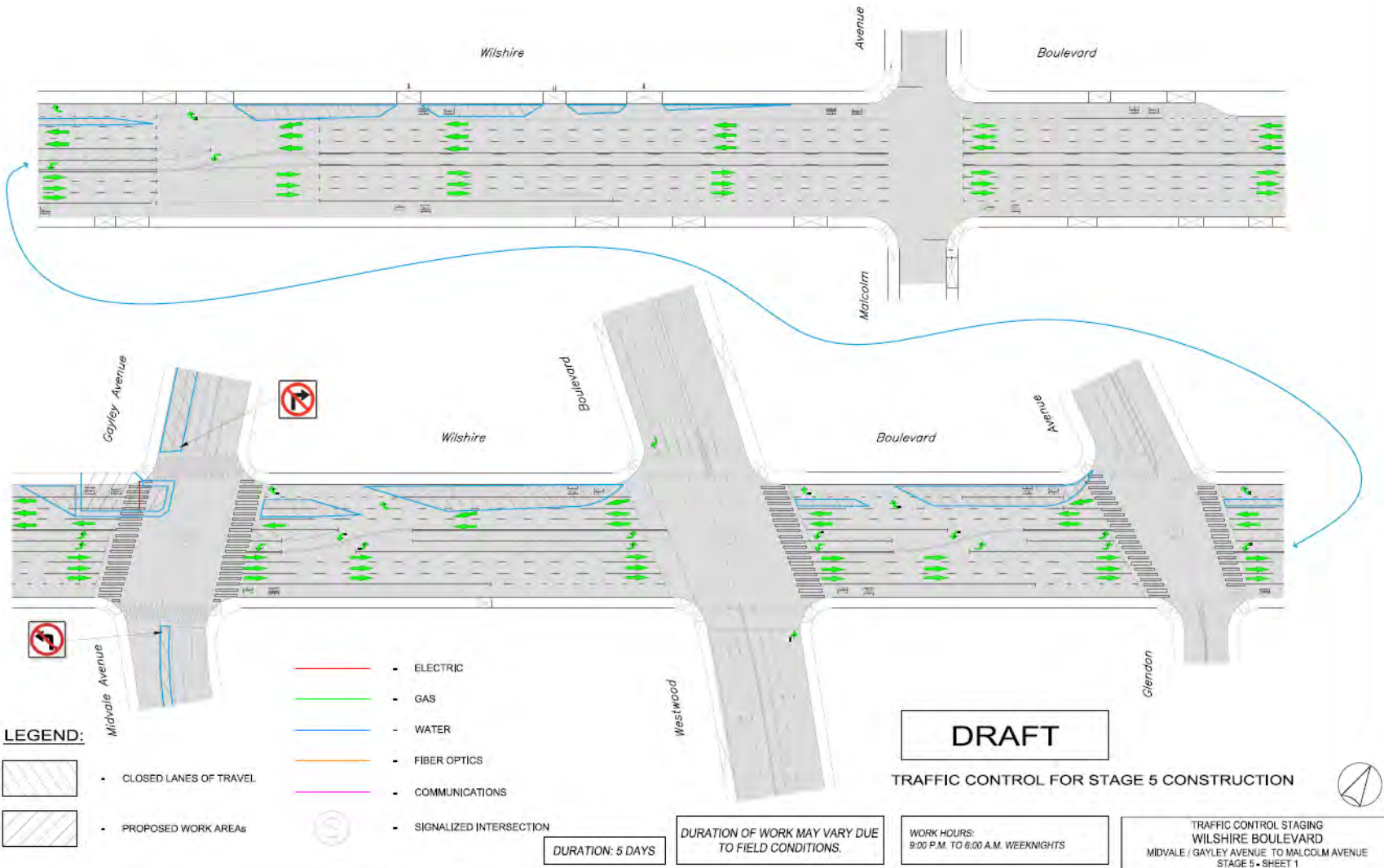
DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
VETERAN AVENUE TO MALCOLM AVENUE
STAGE 4A - SHEET 2

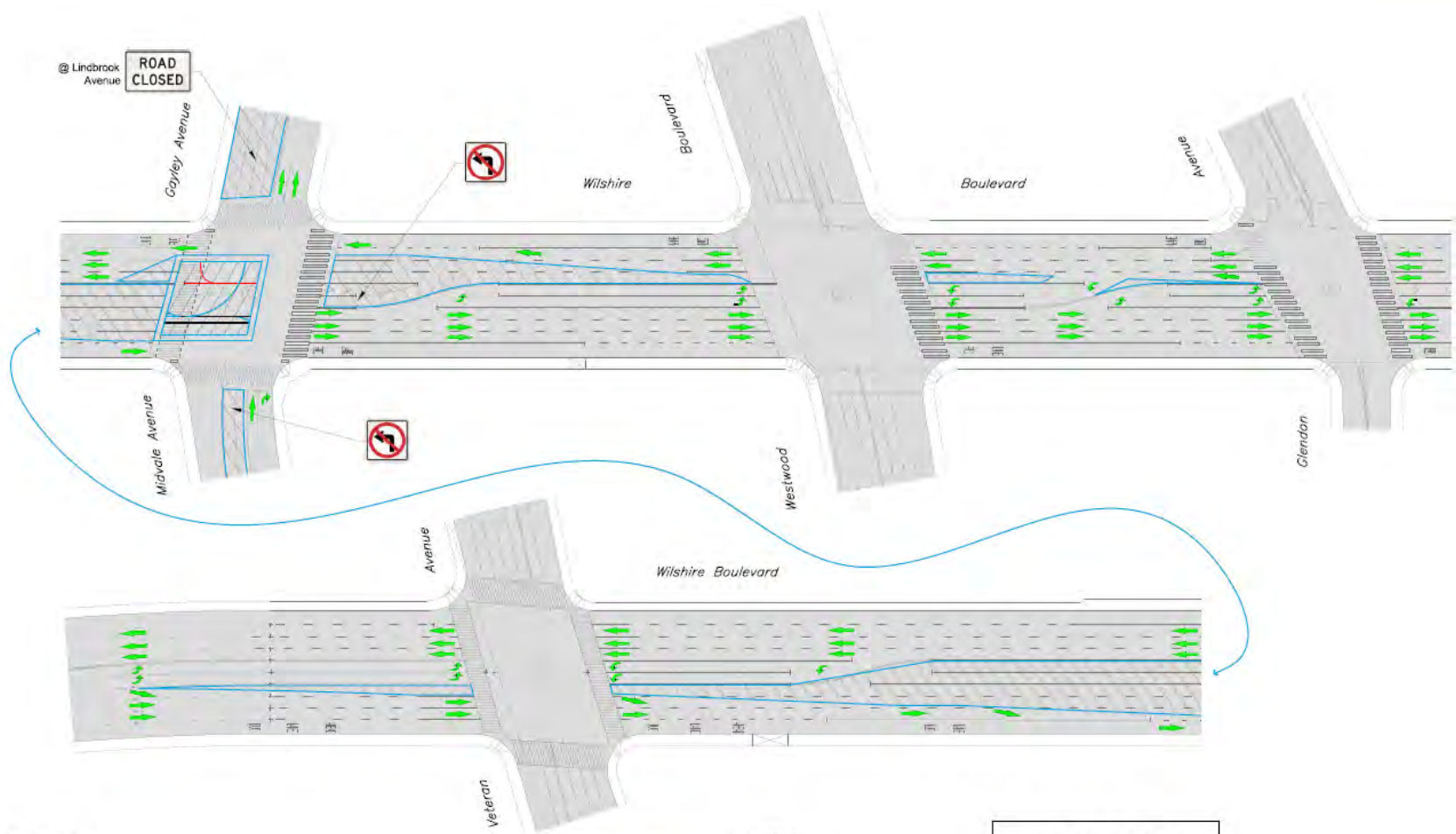
Stage 5: 5 days



Weeknights 9pm-6am









Stage 5A: 24 days

Weeknights 9pm - 6am



- LEGEND:**
-  CLOSED LANES OF TRAVEL
 -  PROPOSED WORK AREAS

-  FIBER OPTICS
-  COMMUNICATIONS
-  SIGNALIZED INTERSECTION
-  ELECTRIC
-  GAS
-  WATER

DURATION: 24 DAYS

DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

DRAFT

TRAFFIC CONTROL FOR STAGE 5A CONSTRUCTION

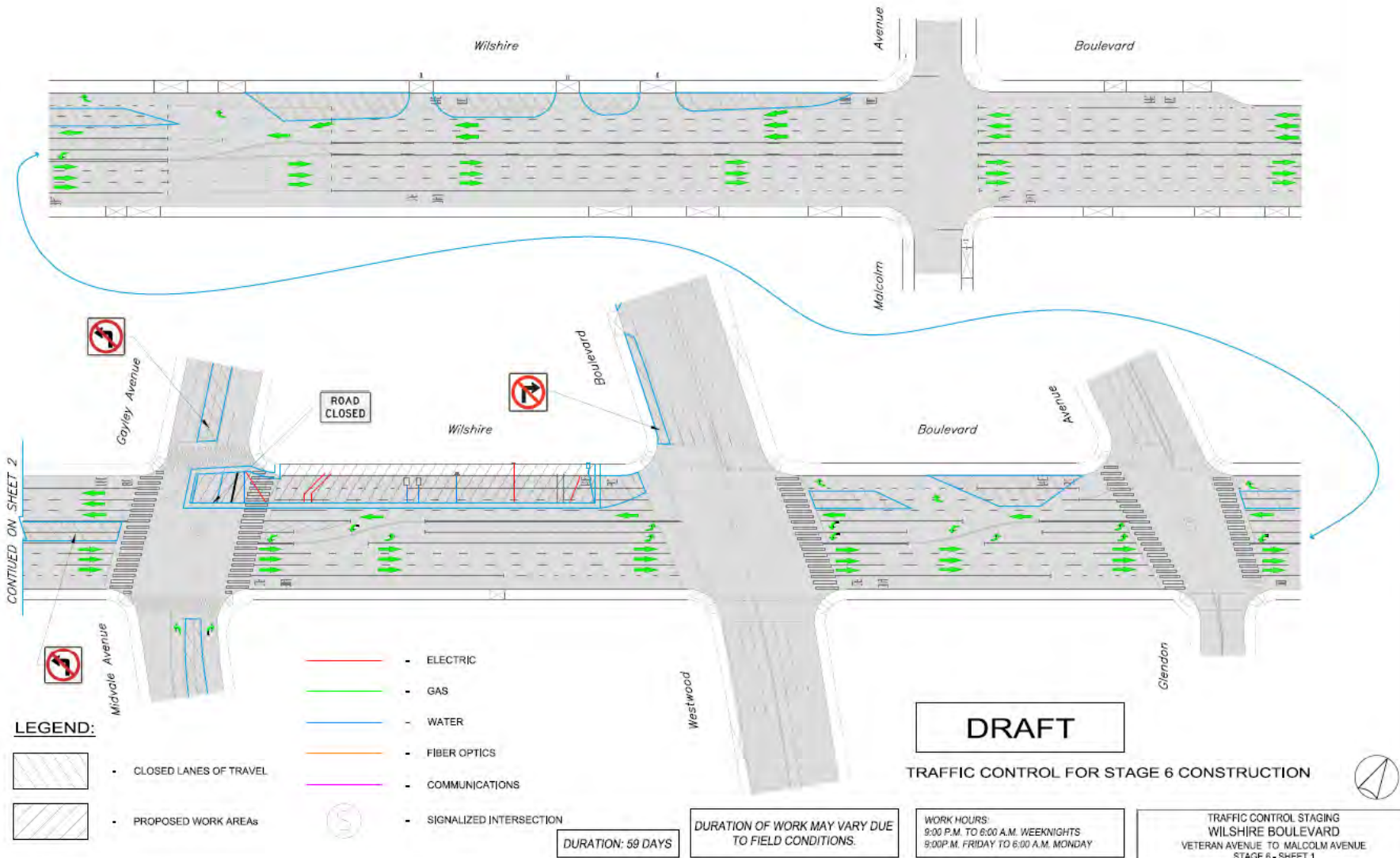
WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
VETERAN AVENUE TO GLENDON AVENUE
STAGE 5A - SHEET 1



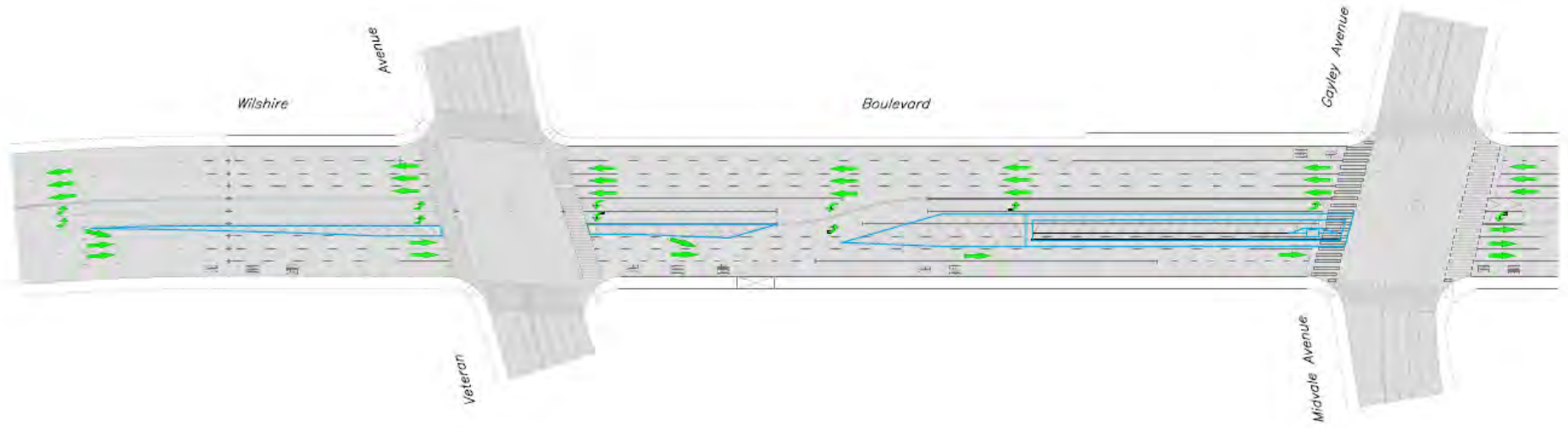
Stage 6: 59 days

Weeknights 9pm-6am / 9pm Friday to 6am Monday








Stage 7: 38 days

Weeknights 9pm-6am / 9pm Friday to 6am Monday



LEGEND:

-  CLOSED LANES OF TRAVEL
-  PROPOSED WORK AREAS

-  - ELECTRIC
-  - GAS
-  - WATER
-  - FIBER OPTICS
-  - COMMUNICATIONS
-  - SIGNALIZED INTERSECTION

DRAFT

TRAFFIC CONTROL FOR STAGE 7 CONSTRUCTION

DURATION: 38 DAYS

DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

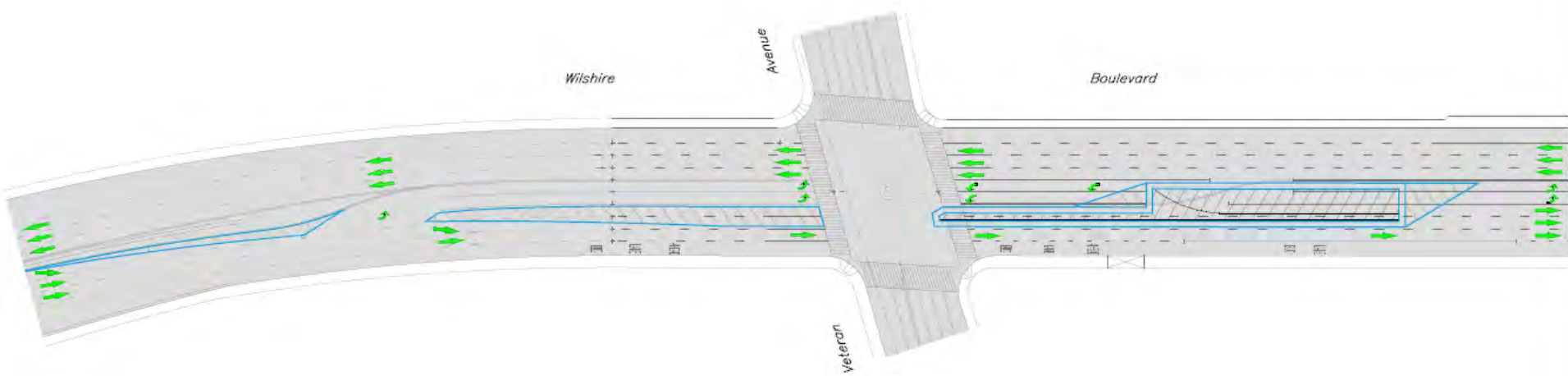
WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS
9:00 P.M. FRIDAY TO 6:00 A.M. MONDAY

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
VETERAN AVENUE TO MIDVALE / GAYLEY AVENUE
STAGE 7 - SHEET 1











Stage 8: 33 days

Weeknights 9pm-6am / 9pm Friday to 6am Monday



LEGEND:

-  - CLOSED LANES OF TRAVEL
-  - PROPOSED WORK AREAS

-  - ELECTRIC
-  - GAS
-  - WATER
-  - FIBER OPTICS
-  - COMMUNICATIONS
-  - SIGNALIZED INTERSECTION

DRAFT

TRAFFIC CONTROL FOR STAGE 8 CONSTRUCTION



DURATION: 33 DAYS

DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

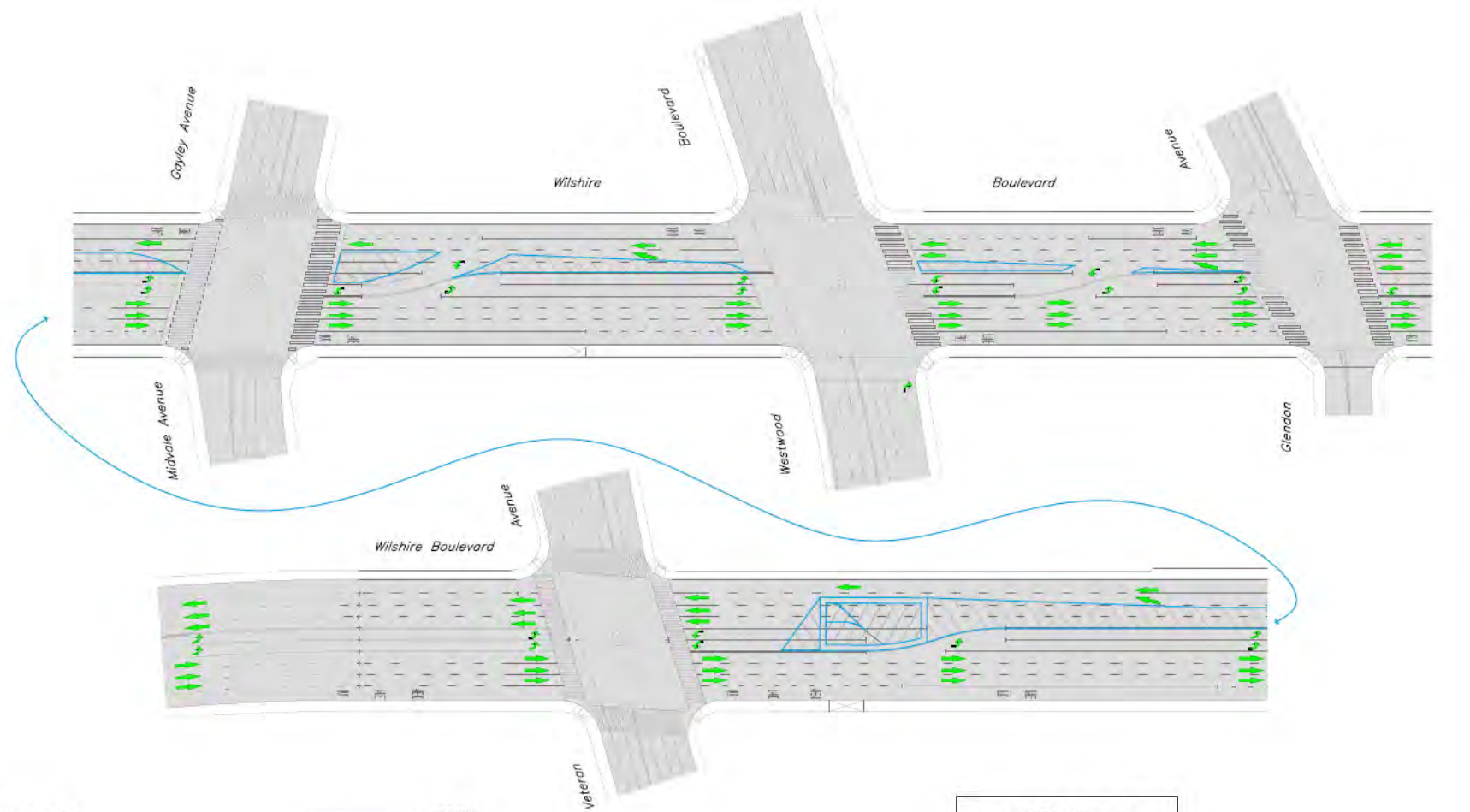
WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS
9:00 P.M. FRIDAY TO 6:00 A.M. MONDAY

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
VETERAN AVENUE TO MIDVALE / GAYLEY AVENUE
STAGE 8 - SHEET 1











Stage 9: 10 days

Weeknights 9pm-6am / 9pm Friday to 6am Monday



LEGEND:

-  - CLOSED LANES OF TRAVEL
-  - PROPOSED WORK AREAS

-  - WATER
-  - FIBER OPTICS
-  - COMMUNICATIONS
-  - SIGNALIZED INTERSECTION
-  - ELECTRIC
-  - GAS

DRAFT

TRAFFIC CONTROL FOR STAGE 9 CONSTRUCTION



DURATION: 10 DAYS

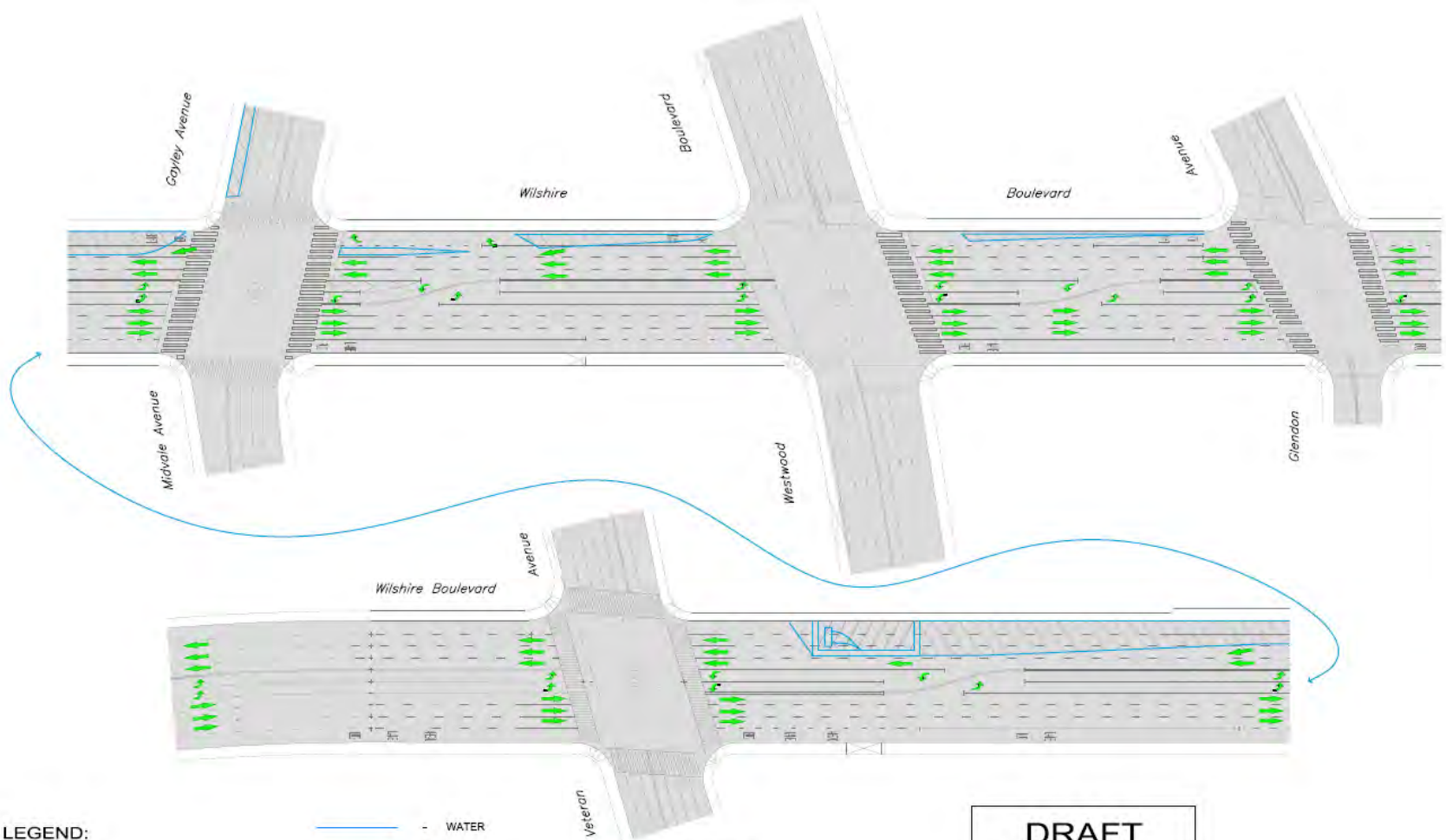
DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS
9:00 P.M. FRIDAY TO 6:00 A.M. MONDAY



TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
VETERAN AVENUE TO GLENDON AVENUE
STAGE 9 - SHEET 1






Stage 10: 23 days

Weeknights 9pm-6am / 9pm Friday to 6am Monday



LEGEND:

-  - CLOSED LANES OF TRAVEL
-  - PROPOSED WORK AREAS

-  - WATER
-  - FIBER OPTICS
-  - ELECTRIC
-  - GAS
-  - SIGNALIZED INTERSECTION

DRAFT

TRAFFIC CONTROL FOR STAGE 10 CONSTRUCTION



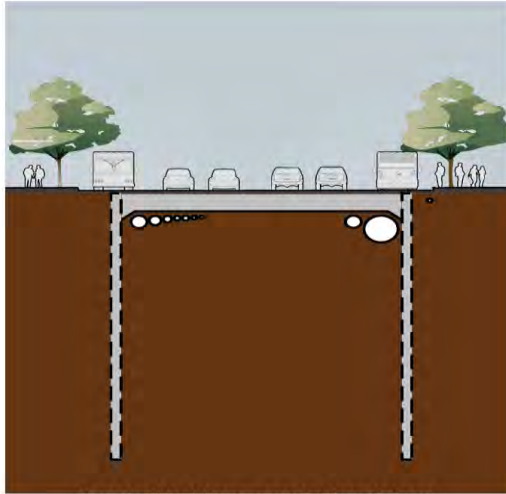
DURATION: 23 DAYS

DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

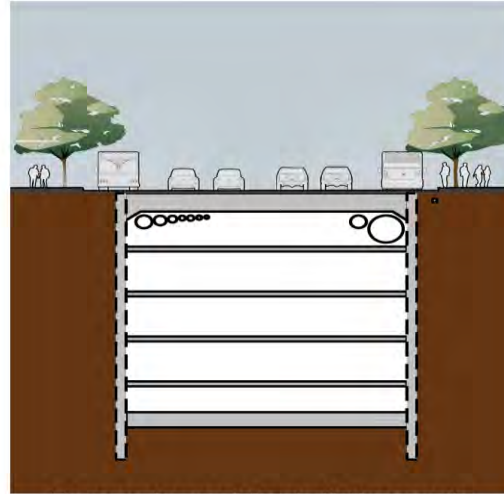
WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS
9:00 P.M. FRIDAY TO 6:00 A.M. MONDAY

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
VETERAN AVENUE TO GLENDON AVENUE
STAGE 10 - SHEET 1

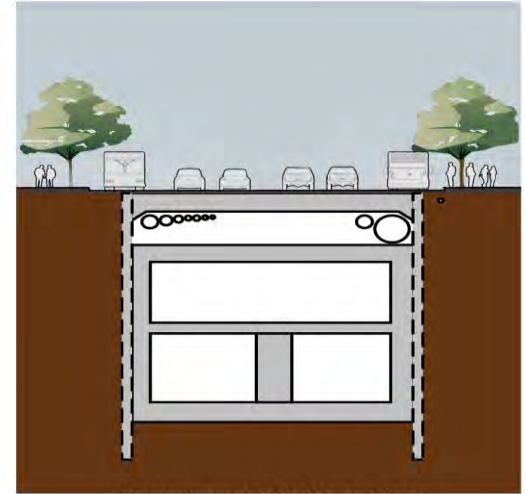
Station Construction Overview



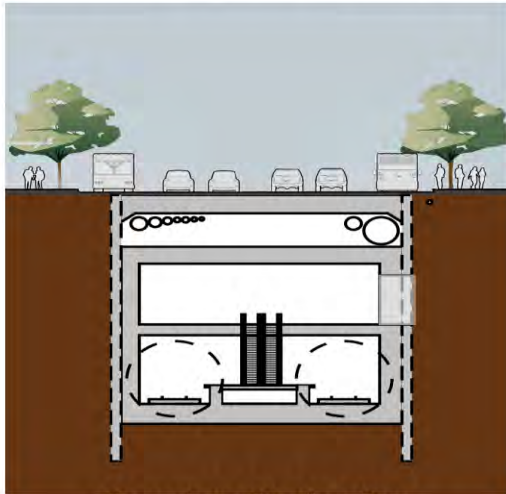
Install Piles and Decking



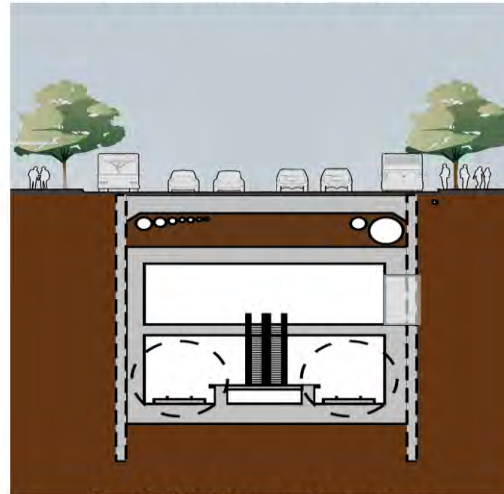
Excavate and Install Supports
(from beneath decking)



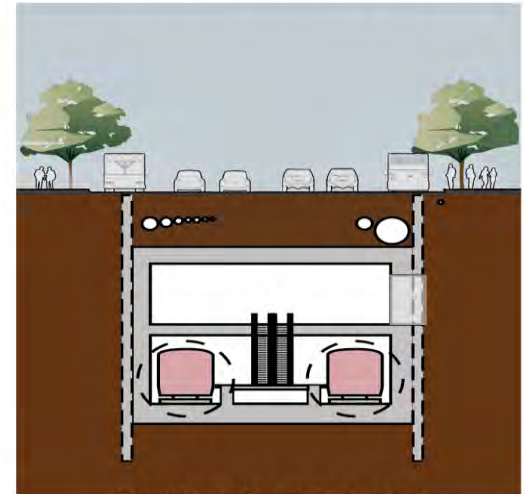
Construct Station Box



Complete Station Box



Backfill Above Structure



Remove Decking and
Restore Street

Next Community Meeting

Section 3

Construction Community Meeting

March 2018

6pm – 7:30pm

Location TBD



Stay in Touch



213.922.6934



purplelineext@metro.net



metro.net/purplelineext



@purplelineext



facebook.com/purplelineext



Metro



Purple Line Extension

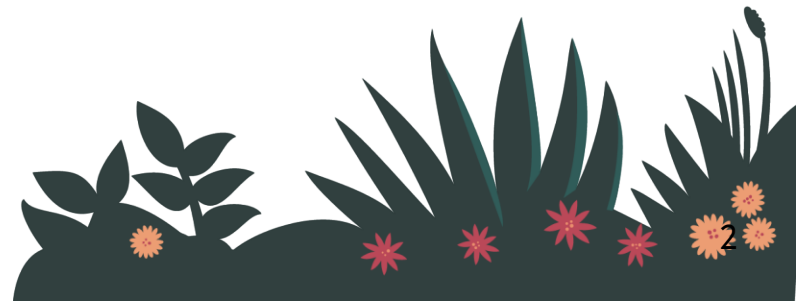
Wilshire Corridor Board Presidents and Managers

Tuesday, February 6, 2018



Agenda

- **Purple Line Extension (PLE)**
 - Sections Overview
- **Westwood/UCLA**
 - Map and Schedule
 - Advance Utility Relocation
- **Westwood/VA Hospital**
 - Map



Sections 1, 2 & 3 Status

**Subject to change. The PLE project team is working to deliver the project consistent with Measure M*

	Forecasted Schedule		
Section	Section 1	Section 2	Section 3
Length	3.92 Miles	2.59 Miles	2.59 Miles
New Stations	Wilshire/La Brea Wilshire/Fairfax Wilshire/La Cienega	Wilshire/Rodeo Century City/ Constellation	Westwood/UCLA Westwood/VA Hospital
Pre-Construction Activities	2014-2015	2016 - 2018	2018 - 2020
Construction	2015 - 2023	2018 – 2025	2019 – 2026
Operations	2023	2025	2026

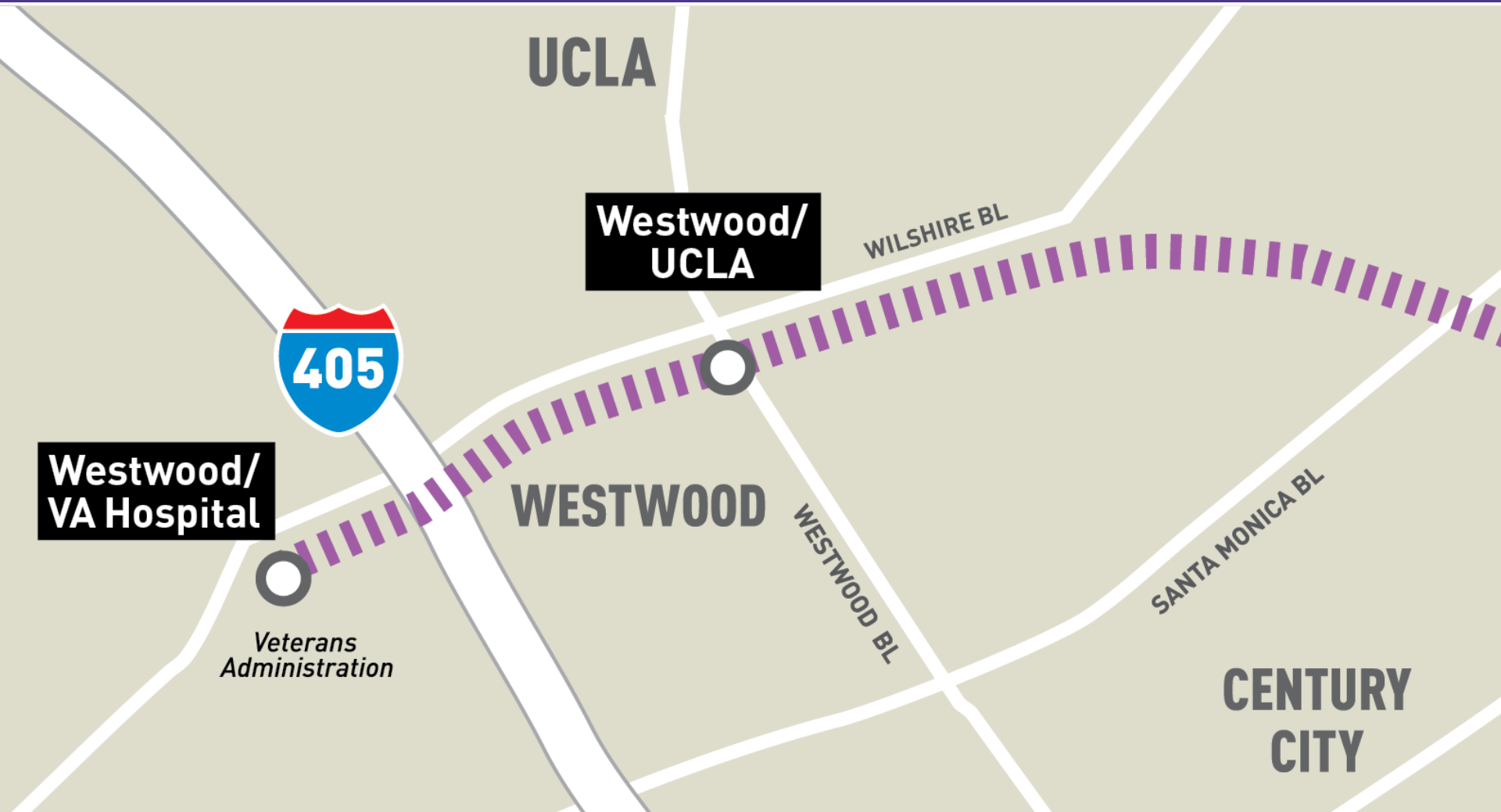
Purple Line Extension

Project Alignment



Purple Line Extension

Section 3 Alignment



Westwood/UCLA

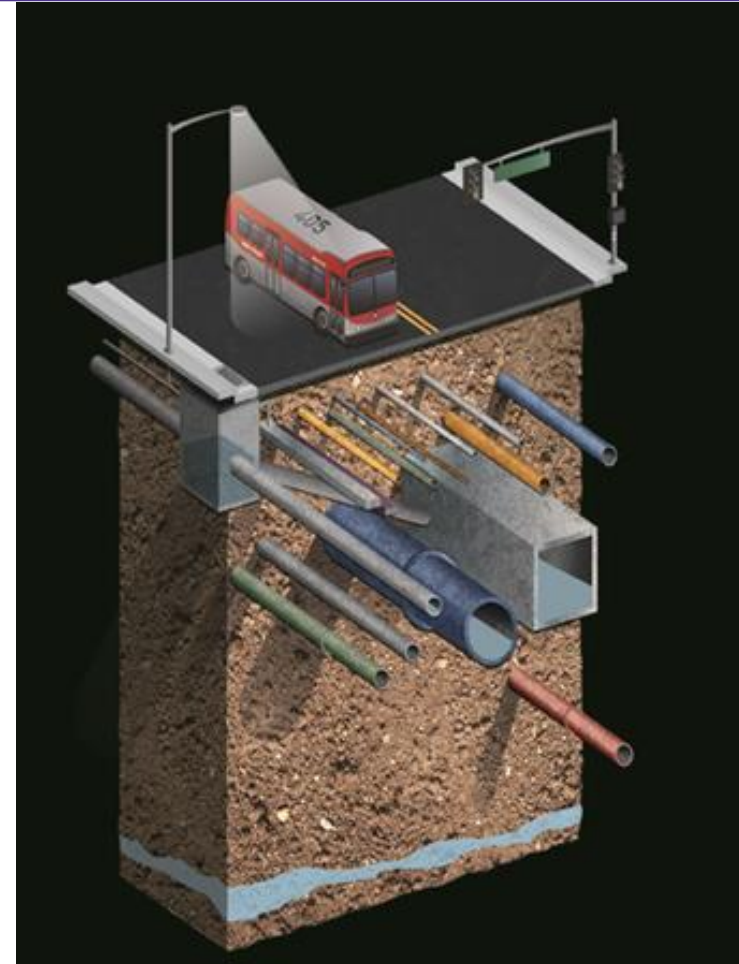
Station Box



Pre-Construction

Advanced Utility Relocation (AUR)

- **Utility relocations:**
 - Clear the way for station construction
 - Telecom, gas, water, electricity, sewer
 - Ensure continued utility service
 - April 2018 – April 2020
 - Proposed Hours:
 - Monday-Friday: 9pm - 6am
 - Weekend Work: Friday 9pm - Monday 6am
- **Typical process:**
 - Hours and traffic plans approved by City of Los Angeles
 - Maintain at least one lane of traffic in each direction on Wilshire
 - Truck/crew leave and lanes reopen at the end of each work period
 - Noisiest activities include saw-cutting and jack-hammering



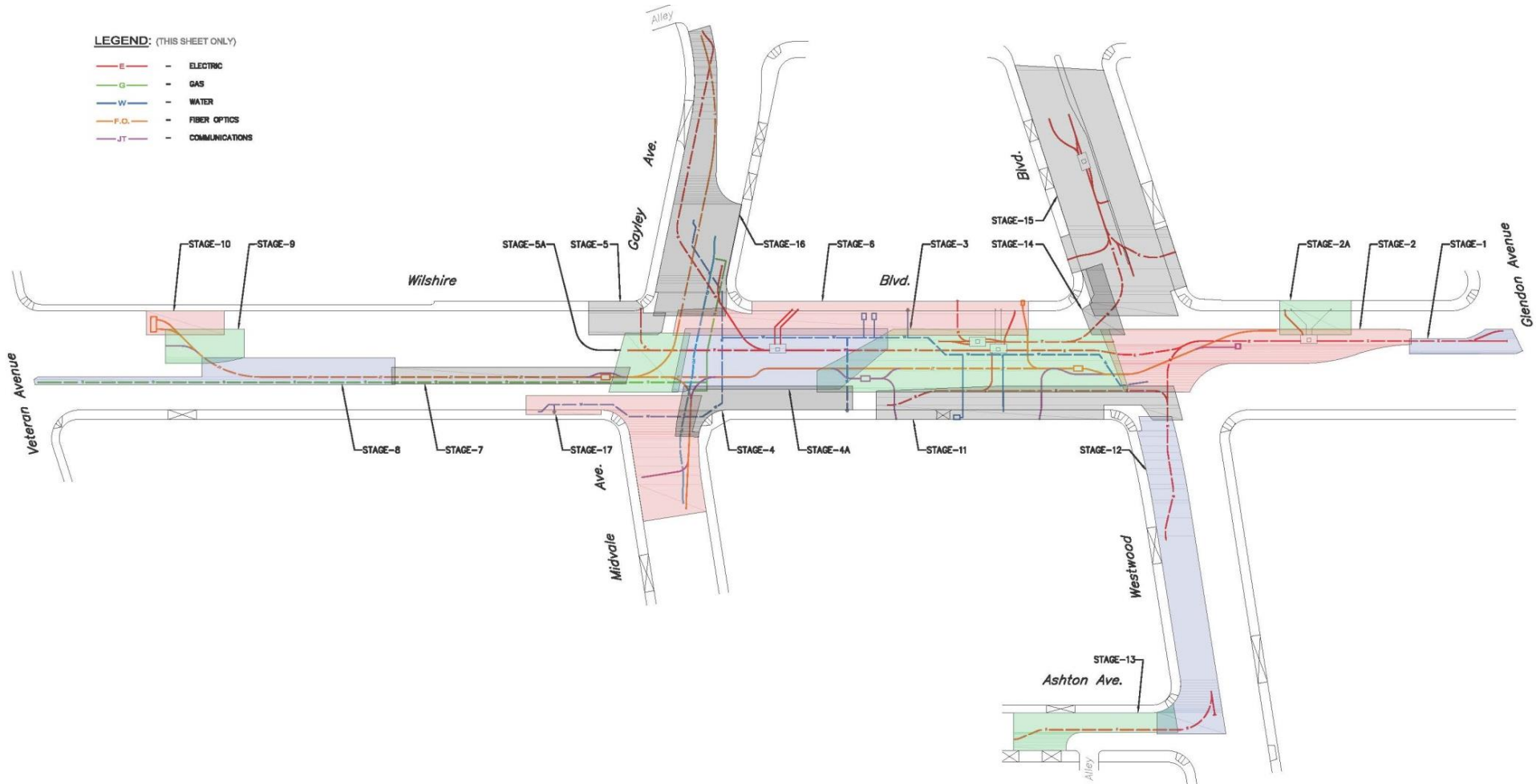
Rendering of AUR work



Metro

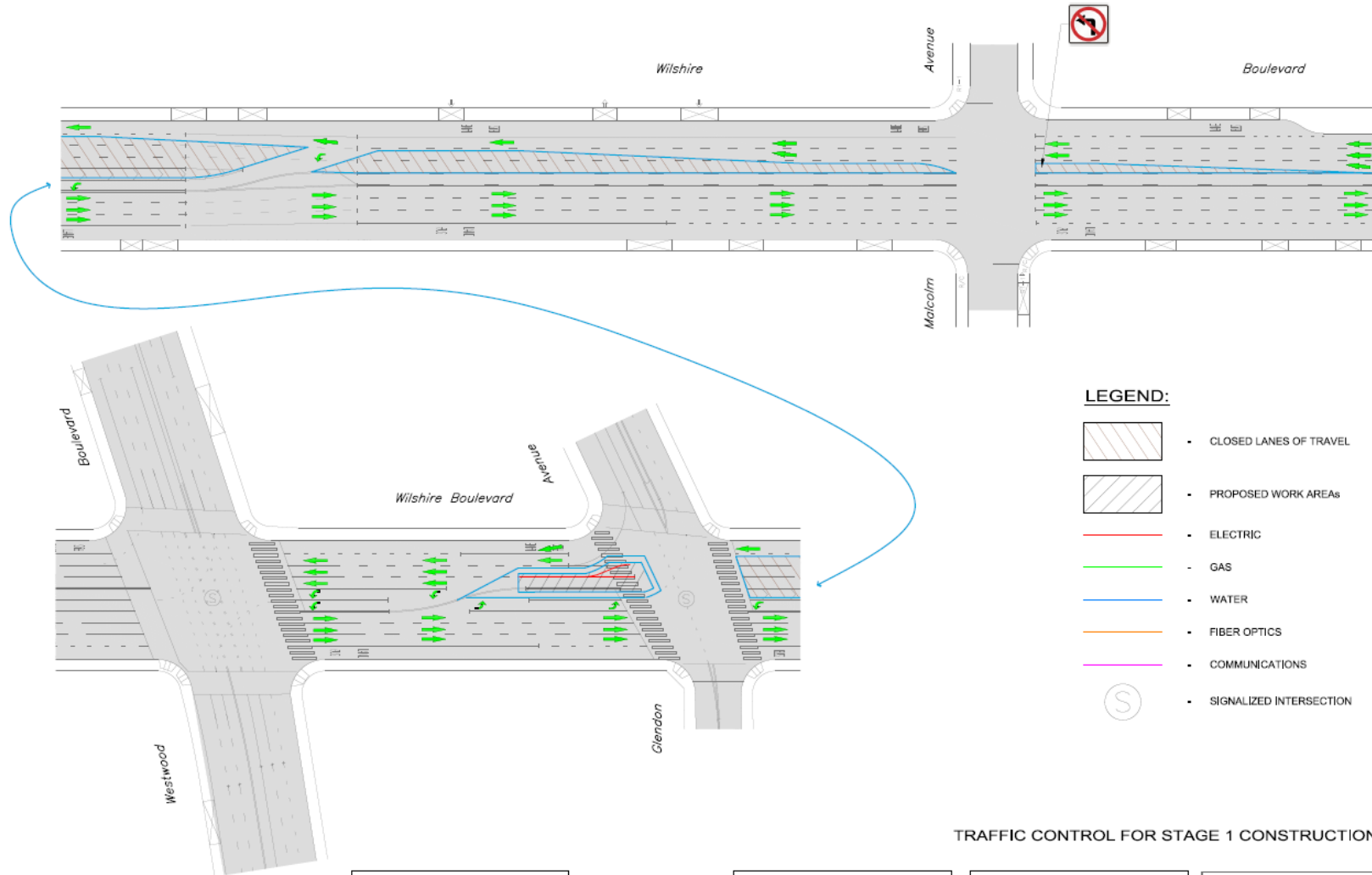
Advanced Utility Relocation (AUR)

Westwood/UCLA Station











Stage 1: 9 days

Weeknights 9pm - 6am



LEGEND:

-  CLOSED LANES OF TRAVEL
-  PROPOSED WORK AREAS
-  ELECTRIC
-  GAS
-  WATER
-  FIBER OPTICS
-  COMMUNICATIONS
-  SIGNALIZED INTERSECTION

TRAFFIC CONTROL FOR STAGE 1 CONSTRUCTION

DRAFT

DURATION: 9 DAYS

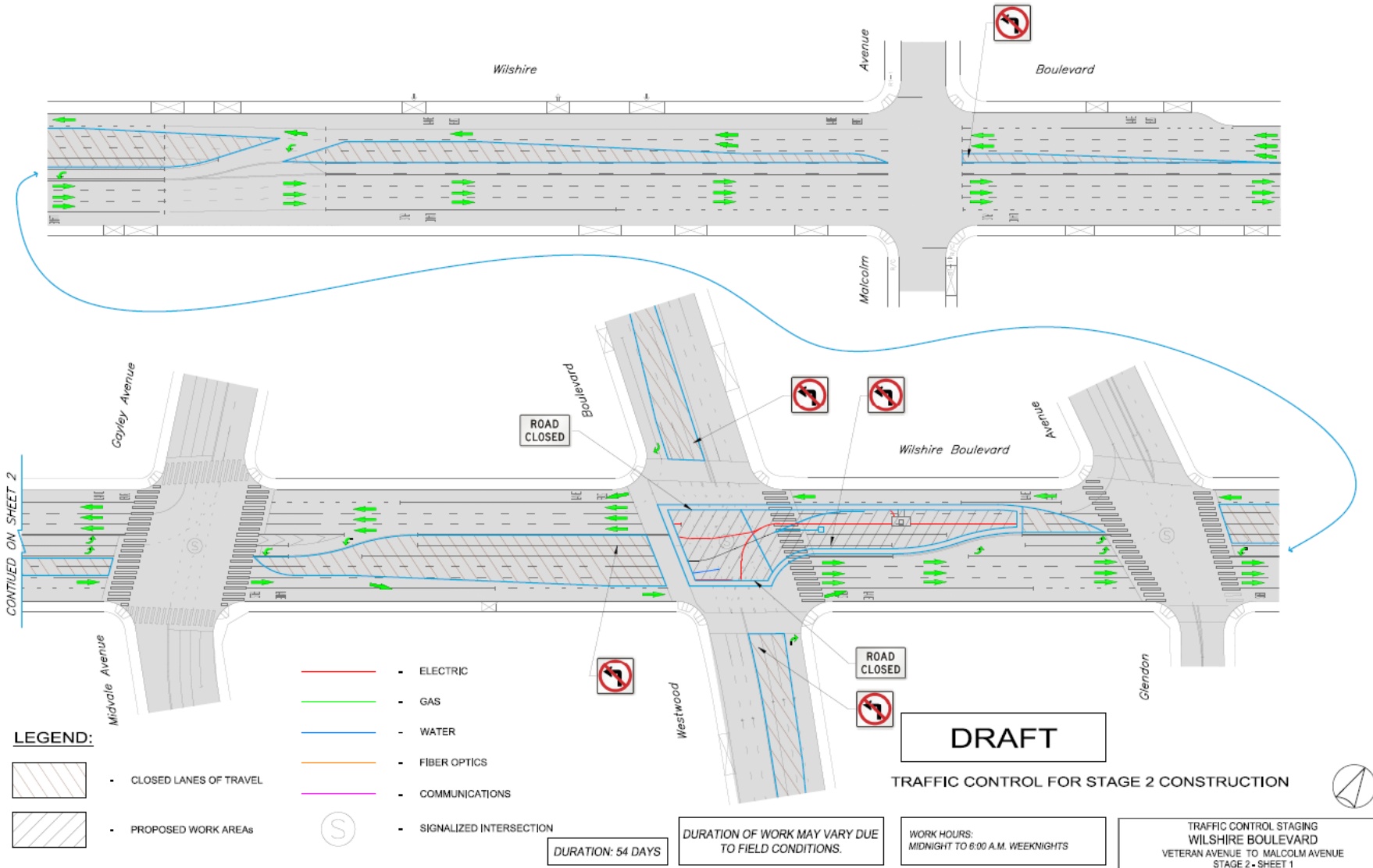
DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
WESTWOOD BOULEVARD TO MALCOLM AVENUE
STAGE 1 - SHEET 1

Stage 2: 54 days

Weeknights 9pm - 6am



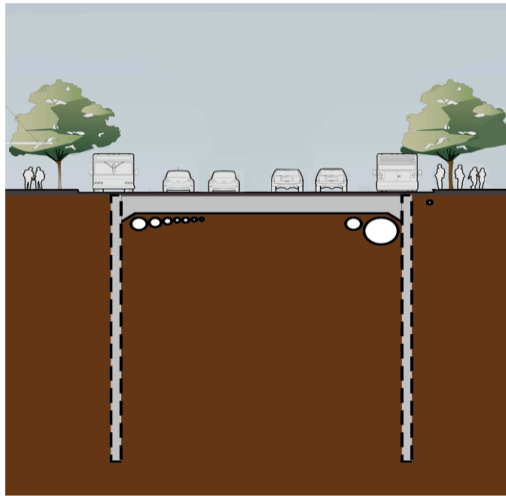
Pre-Construction

Advanced Utility Relocation (AUR)

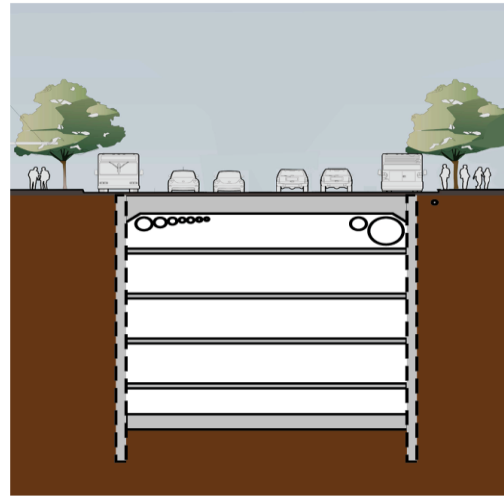


Examples of AUR work

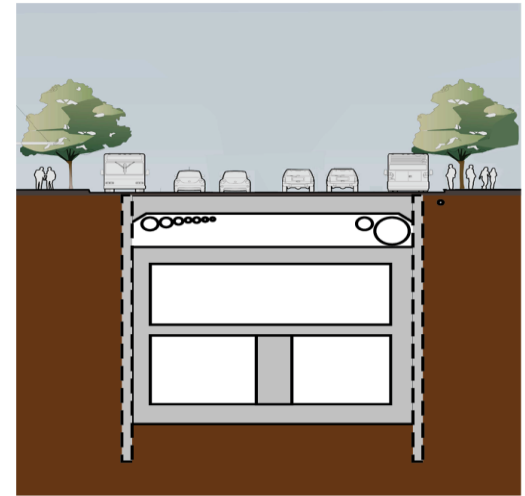
Station Construction Overview



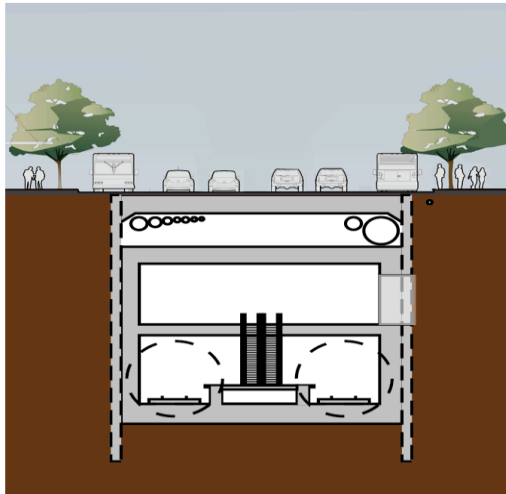
Install Piles and Decking



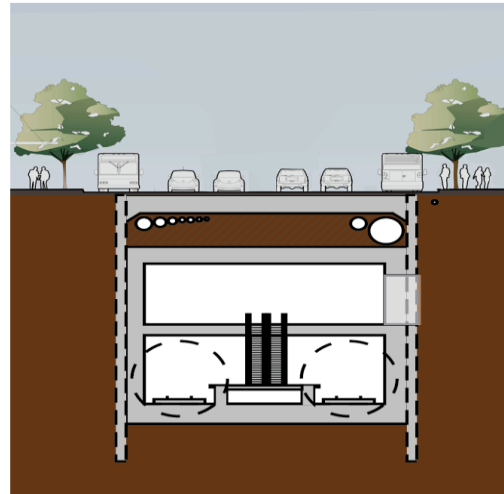
Excavate and Install Supports
(from beneath decking)



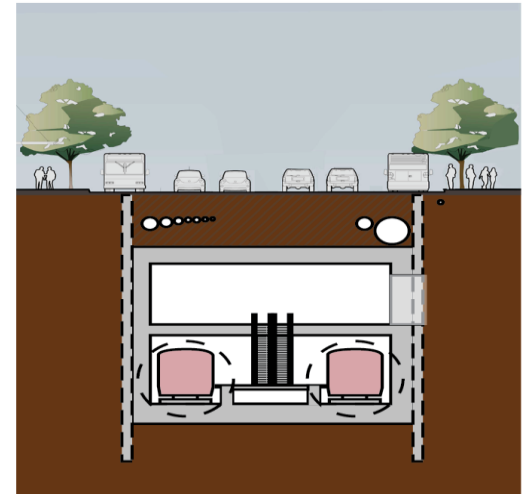
Construct Station Box



Complete Station Box



Backfill Above Structure



Remove Decking and
Restore Street

Westwood/UCLA

Schedule – Key Dates*

**Dates are approximate and subject to change.*

Activity	Forecast Start	Forecast Finish
Advance Utility Relocation (AUR)	April 2018	March 2020
End-wall piling at UCLA Station	June 2020	September 2020
City sewer/storm drain relocation	October 2020	April 2021
Station piling and decking	April 2021	February 2022
Revenue/service operations	March 2026	

Tunnel Subsurface Easement Fact Sheet

The standard tunnel subsurface easement is a rectangular box surrounding both tunnels

- 10 ft. above the tunnel crown and 10 ft. below the tunnel invert
- 5 ft. offset from the outer most tunnel wall



Existing Ground

The tunnel boring machine will be under individual parcels for approximately 2-3 days for each tunnel

Tunnel Boring Machine drives for each tunnel will be staggered by approximately 1-2 months

Operation of the subway tunnels are designed to avoid adverse noise/vibration to the occupants

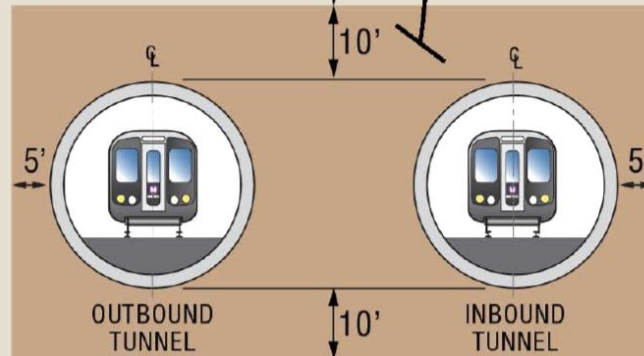
50' – 100'
Typical Depth

The tunnels have been designed to accommodate the existing building(s)

Future construction above the tunnels which requires excavation will be subject to Metro's review and approval which shall not be unreasonably withheld

Tunnel
Subsurface
Easement

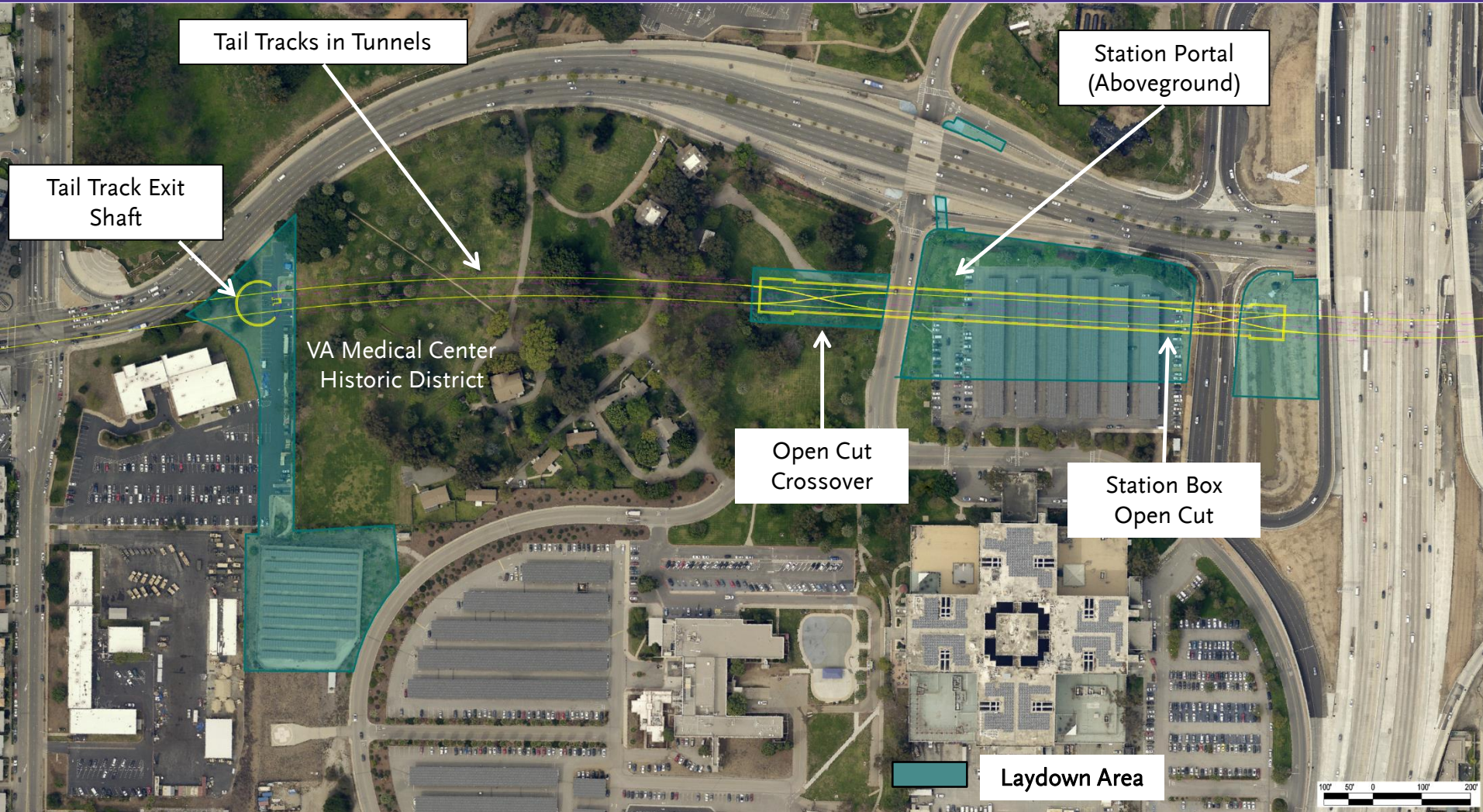
The tunnels will be excavated by an Earth Pressure Balance Tunnel Boring Machine; this type of machine balances soil and groundwater pressure at the tunnel face, controlling the ground movement. As the tunnel is excavated, precast concrete segments are immediately installed within the machine to serve as the permanent tunnel lining.



Not to Scale,
Diagram is for
illustrative
purposes only

Westwood/VA Hospital

Station Area



Next PLE Section 3 Community Meeting

Construction Community Meeting

Thursday, March 22, 2018

6pm – 7:30pm

Westwood United Methodist Church

10497 Wilshire Bl

Los Angeles, CA 90024

310-474-4511



Metro

Stay Informed



213.922.6934



purplelineext@metro.net



metro.net/purplelineext



@purplelineext



facebook.com/purplelineext



Metro



Purple Line Extension

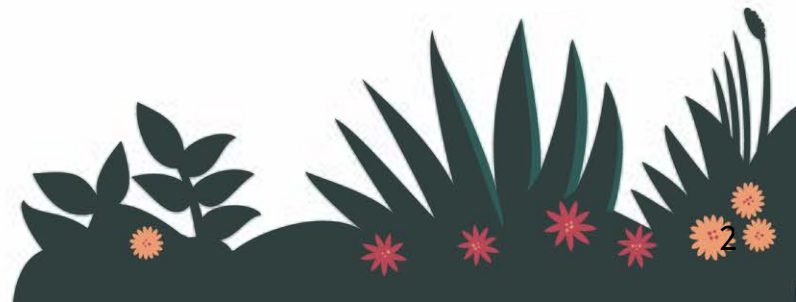
Section 3 Pre-Construction Community Meeting

March 22, 2018



Agenda

- **Westwood/UCLA**
 - Map and Schedule
 - Advance Utility Relocation
 - Bus Stop Relocations
- **Westwood/VA Hospital**
 - Map
 - Advance Utility Relocation



Purple Line Extension

Project Alignment



Sections 1, 2 & 3 Status

**Subject to change. The PLE project team is working to deliver the project consistent with Measure M*

	Forecasted Schedule		
Section	Section 1	Section 2	Section 3
Length	3.92 Miles	2.59 Miles	2.59 Miles
New Stations	Wilshire/La Brea Wilshire/Fairfax Wilshire/La Cienega	Wilshire/Rodeo Century City/ Constellation	Westwood/UCLA Westwood/VA Hospital
Pre-Construction Activities	2014-2015	2016 - 2018	2018 - 2020
Construction	2015 - 2023	2018 – 2025	2019 – 2026
Operations	2023	2025	2026

Purple Line Extension

Section 3 Alignment



Westwood/UCLA

Station Box



Westwood/UCLA

Station Rendering



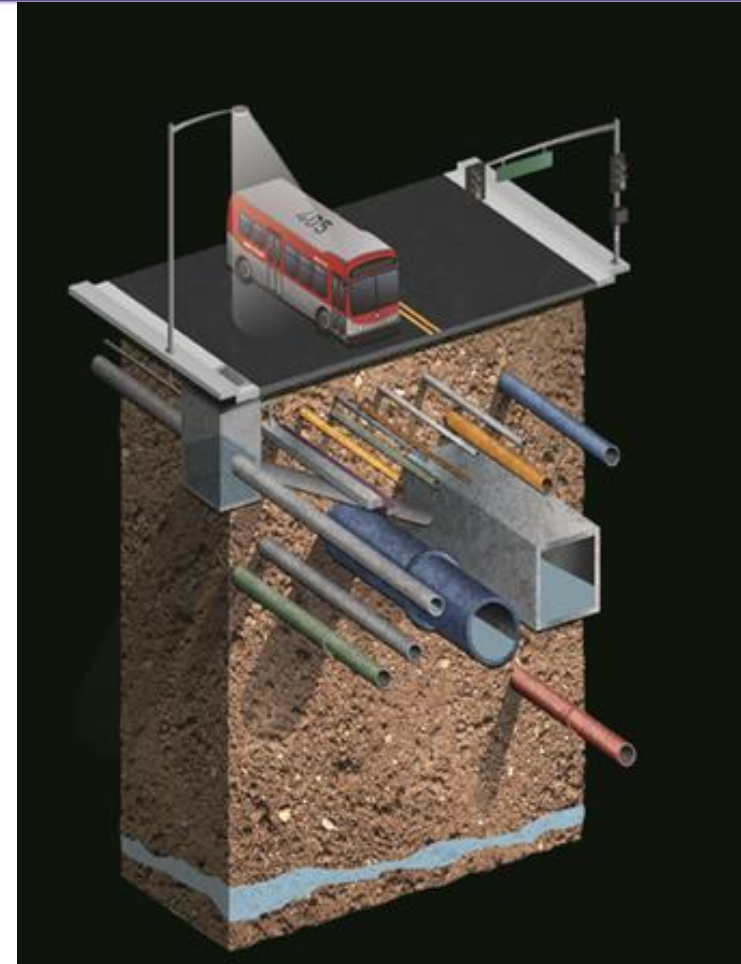
Pre-Construction

Advanced Utility Relocation (AUR)

- **Utility relocations:**
 - Clear the way for station construction
 - Telecom, gas, water, electricity, sewer
 - Ensure continued utility service
 - **April 9, 2018 – April 2020**
 - Proposed Hours:
 - Monday-Friday: 9pm - 6am
 - Weekend Work: Friday 9pm - Monday 6am
- **Typical process:**
 - Hours and traffic plans approved by City of Los Angeles
 - Maintain at least one lane of traffic in each direction on Wilshire
 - Truck/crew leave and lanes reopen at the end of each work period
 - Noisiest activities include saw-cutting and jack-hammering



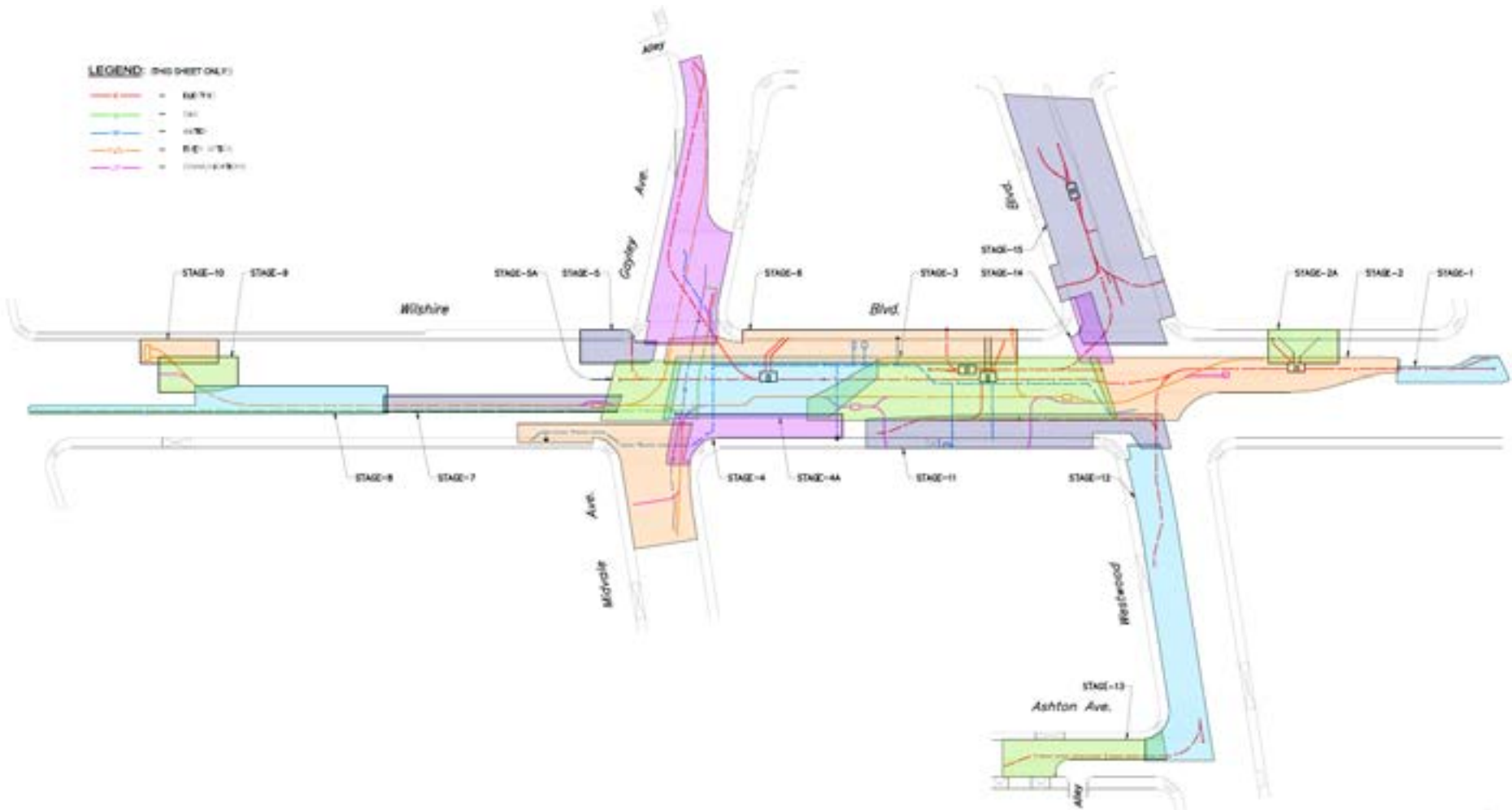
Metro



Rendering of AUR work

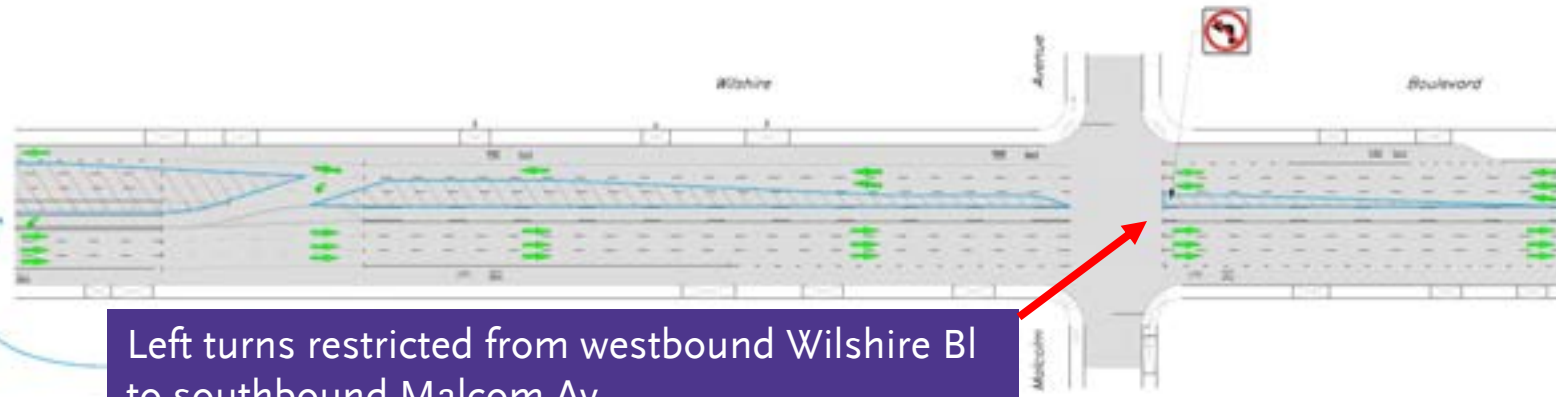
Advanced Utility Relocation (AUR)

Westwood/UCLA Station



Stage 1: 9 days









Weekday nights 9pm - 6am



Left turns restricted from westbound Wilshire Bl to southbound Malcom Av



LEGEND:

-  CLOSED LANES OF TRAVEL
-  PROPOSED WORK AREA
-  ELECTRIC
-  GAS
-  WATER
-  FIBER OPTICS
-  COMMUNICATIONS
-  SIGNALIZED INTERSECTION

TRAFFIC CONTROL FOR STAGE 1 CONSTRUCTION



DRAFT

DURATION: 9 DAYS

DURATION OF WORK MAY VARY DUE TO FIELD CONDITIONS.

WORK HOURS: 8:00 P.M. TO 6:00 A.M. WEEKNIGHTS

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
WESTWOOD BOULEVARD TO MALCOLM AVENUE
STAGE 1 - SHEET 1

Stage 2: 54 days

Weekday nights 9pm - 6am



Stage 3: 131 days

Weekday nights 9pm - 6am

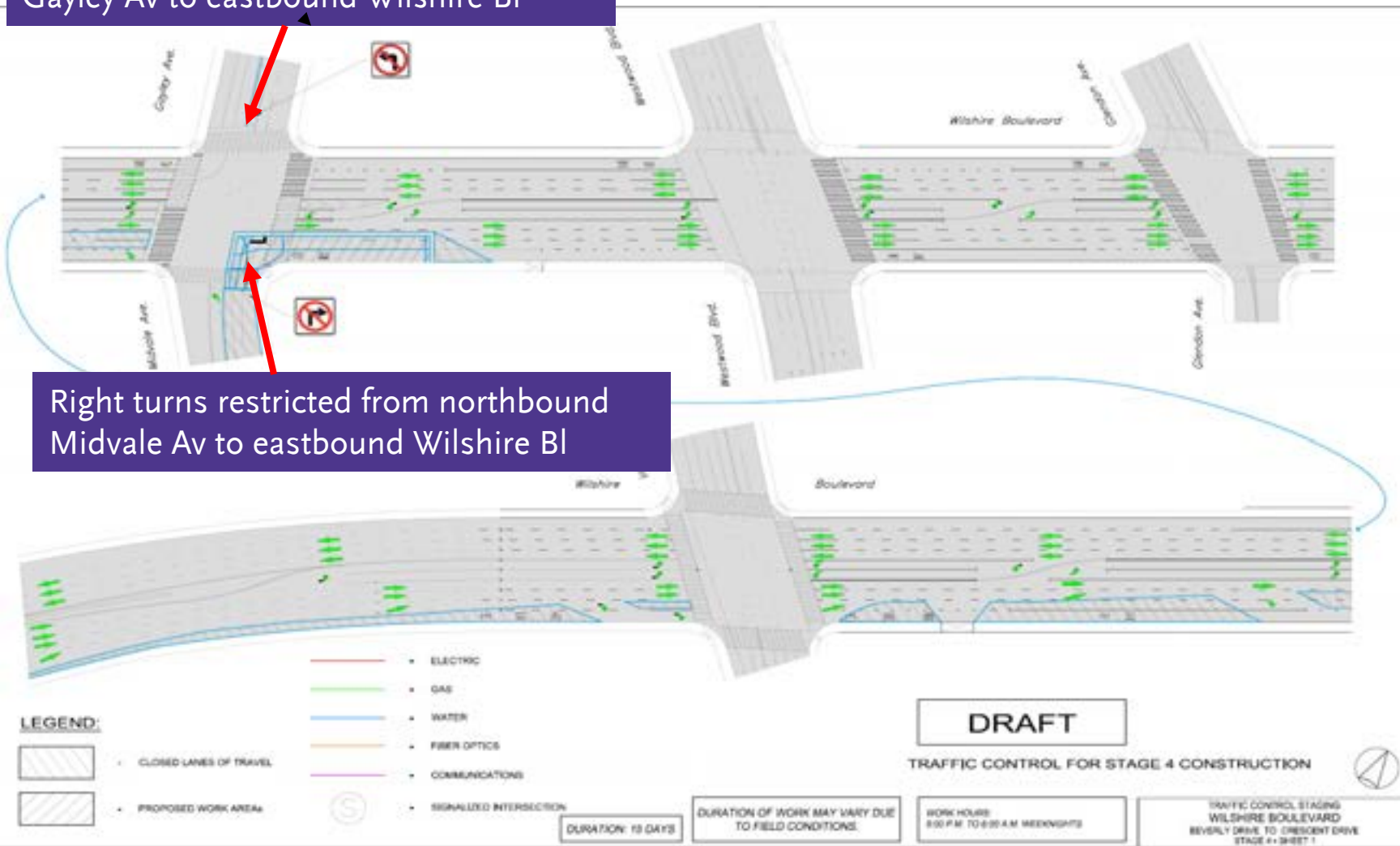


Stage 4: 15 days

Weekday nights 9pm - 6am

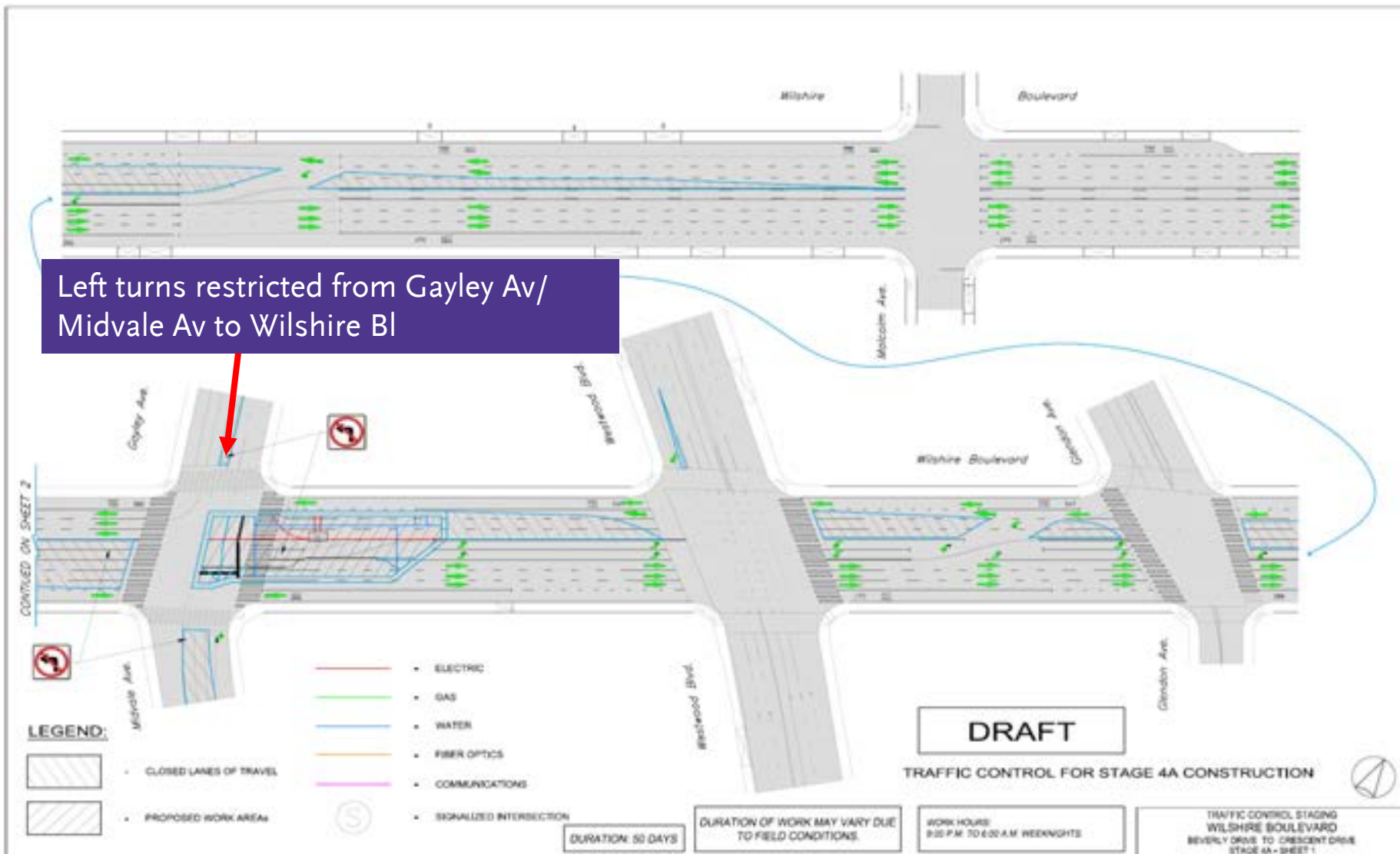
Left turns restricted from southbound Gayley Av to eastbound Wilshire Bl

Right turns restricted from northbound Midvale Av to eastbound Wilshire Bl



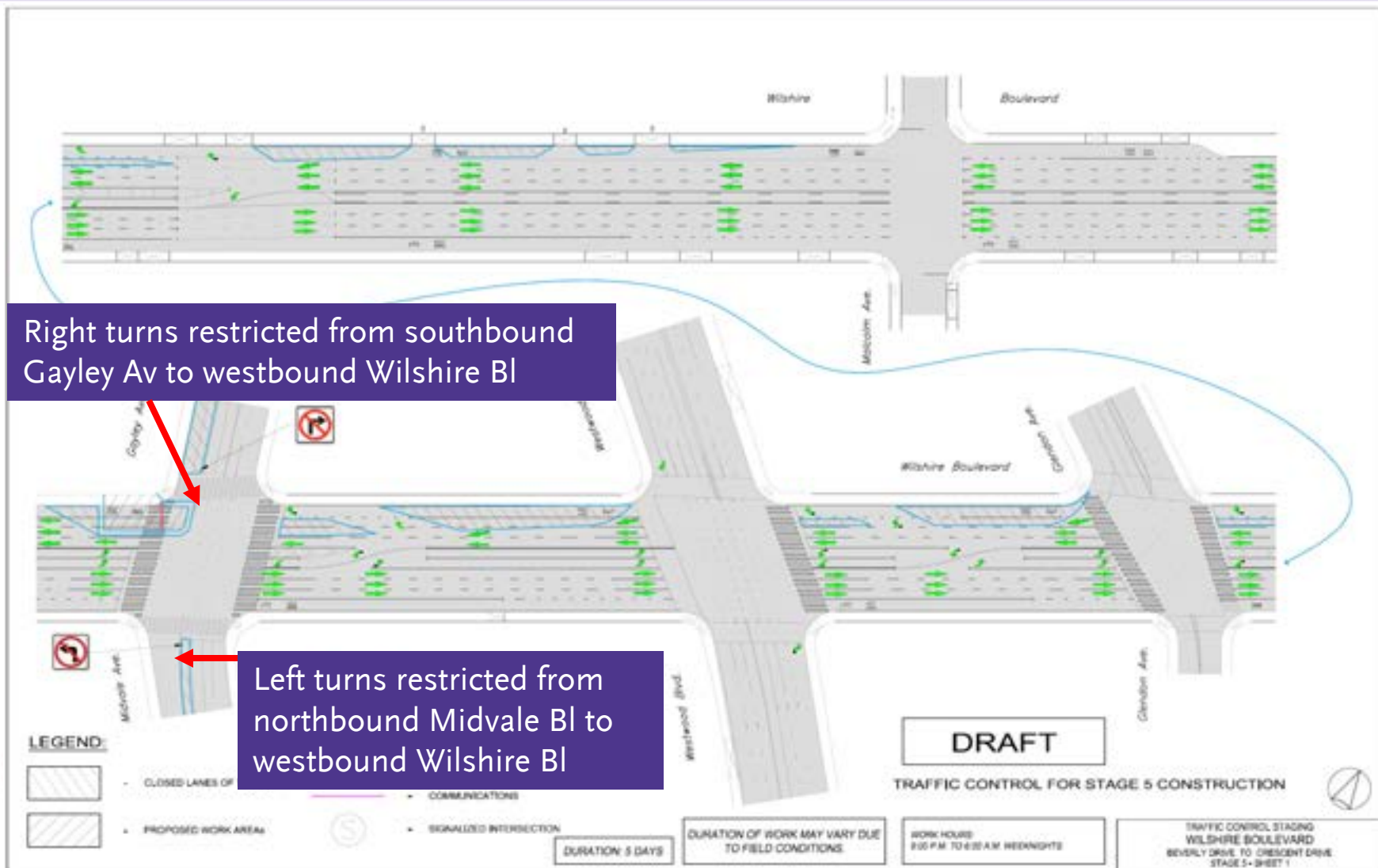
Stage 4A: 50 days

Weekday nights 9pm - 6am



Stage 5: 5 days

Weekday nights 9pm - 6am

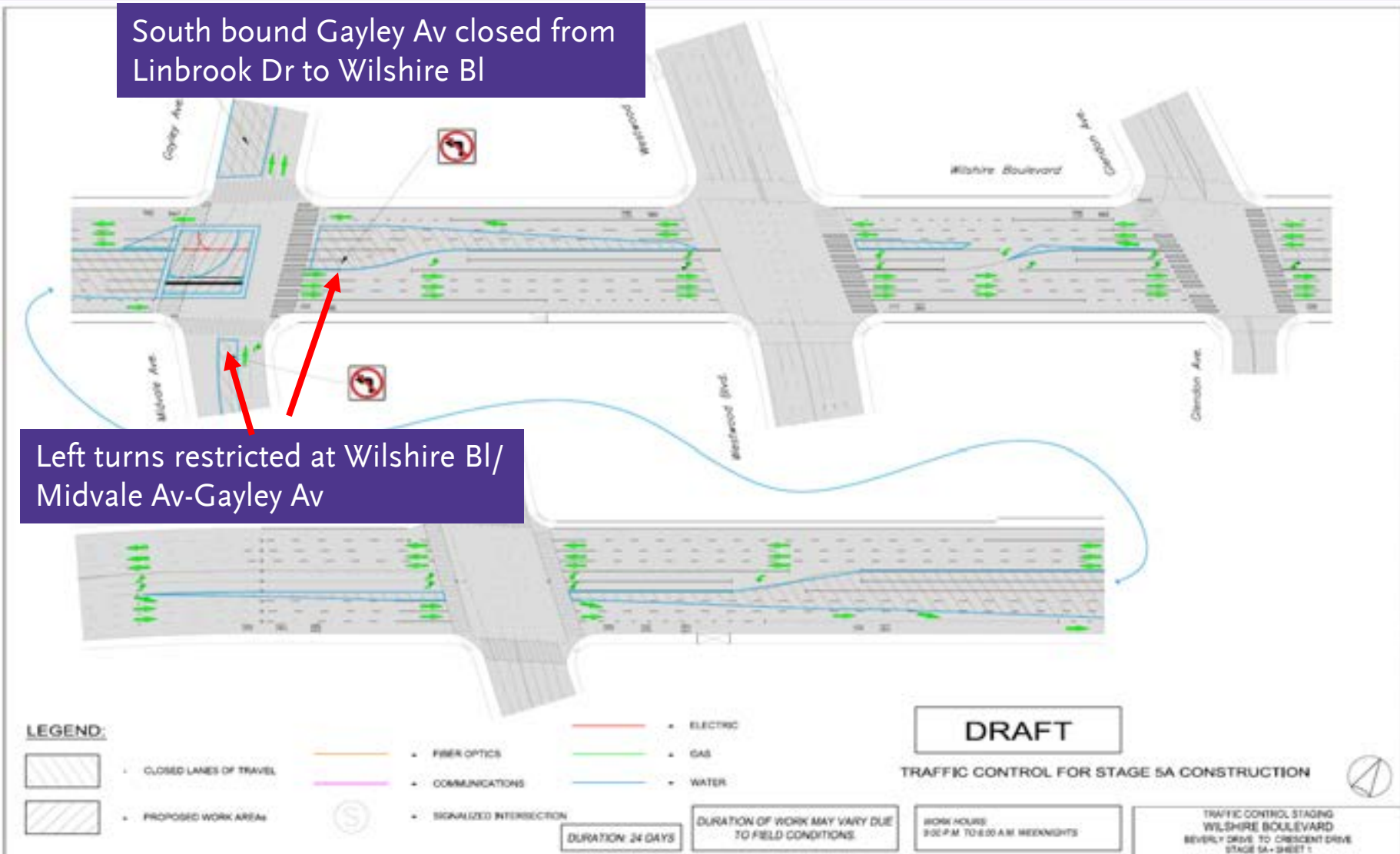


Stage 5A: 24 days

Weekday nights 9pm - 6am

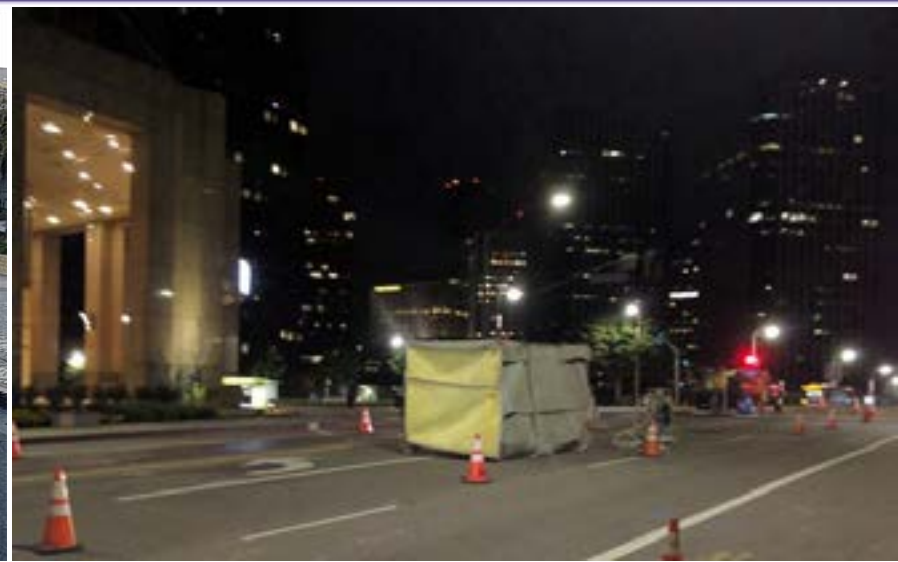
South bound Gayley Av closed from
Linbrook Dr to Wilshire Bl

Left turns restricted at Wilshire Bl/
Midvale Av-Gayley Av



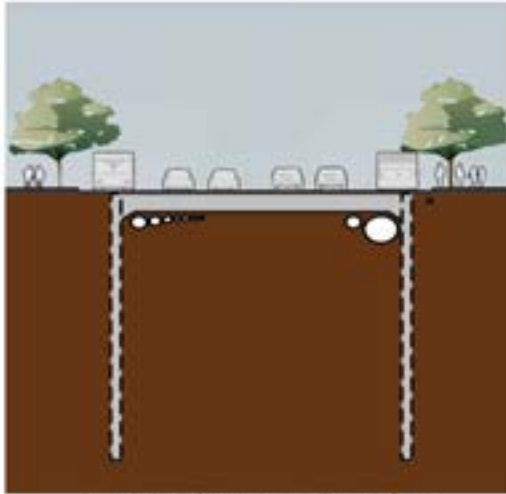
Pre-Construction

Advanced Utility Relocation (AUR)

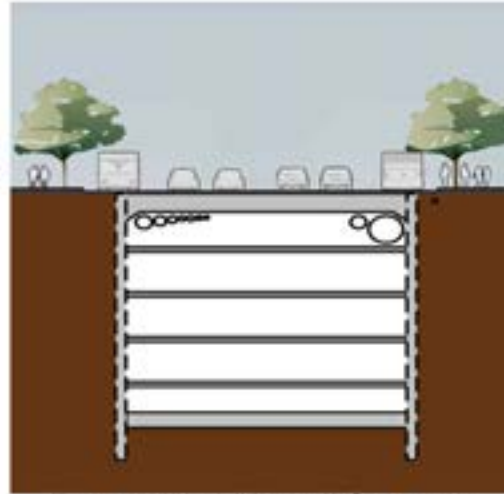


Examples of AUR work

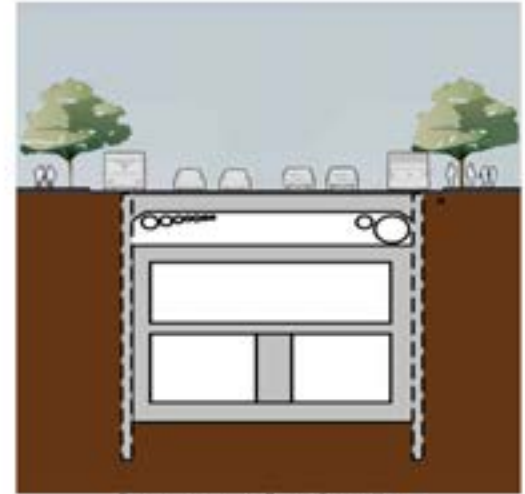
Station Construction Overview



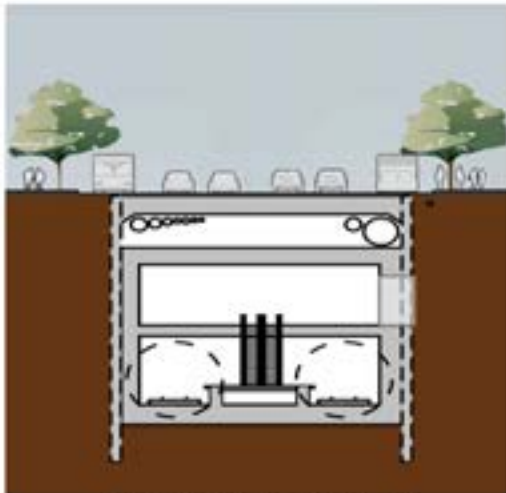
Install Piles and Decking



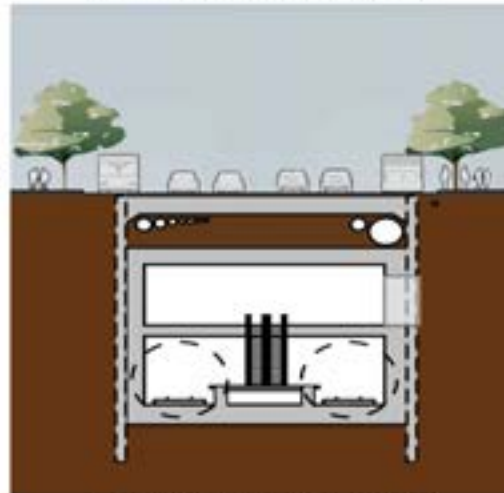
Excavate and Install Supports
(from beneath decking)



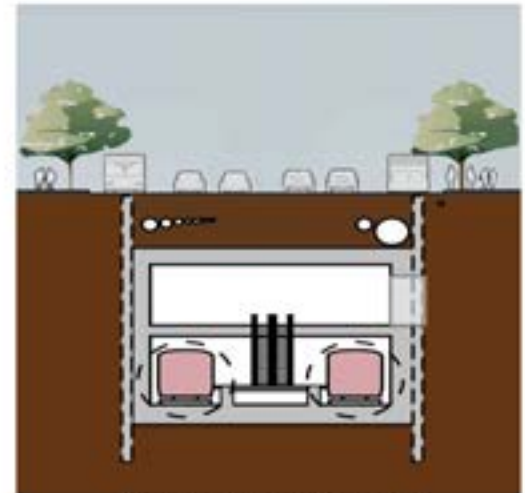
Construct Station Box



Complete Station Box



Backfill Above Structure



Remove Decking and
Restore Street

Westwood/UCLA

Schedule – Key Dates*

**Dates are approximate and subject to change.*

Activity	Forecast Start	Forecast Finish
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End-wall piling at UCLA Station	June 2020	September 2020
City sewer/storm drain relocation	October 2020	April 2021
Station piling and decking	April 2021	February 2022
Revenue/service operations	March 2026	

Tunnel Subsurface Easement Fact Sheet

The standard tunnel subsurface easement is a rectangular box surrounding both tunnels

- 10 ft. above the tunnel crown and 10 ft. below the tunnel invert
- 5 ft. offset from the outer most tunnel wall



Existing Ground

The tunnel boring machine will be under individual parcels for approximately 2-3 days for each tunnel

Tunnel Boring Machine drives for each tunnel will be staggered by approximately 1-2 months

Operation of the subway tunnels are designed to avoid adverse noise/vibration to the occupants

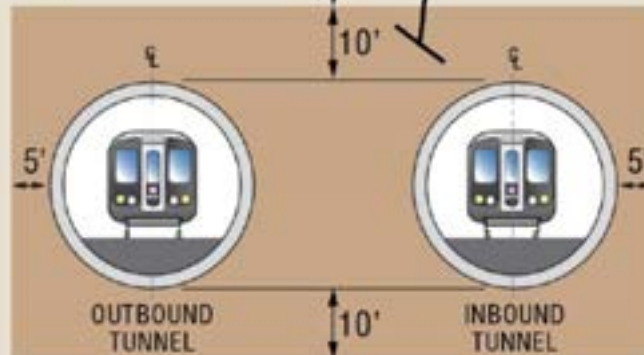
The tunnels have been designed to accommodate the existing building(s)

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50' - 100'
Typical Depth

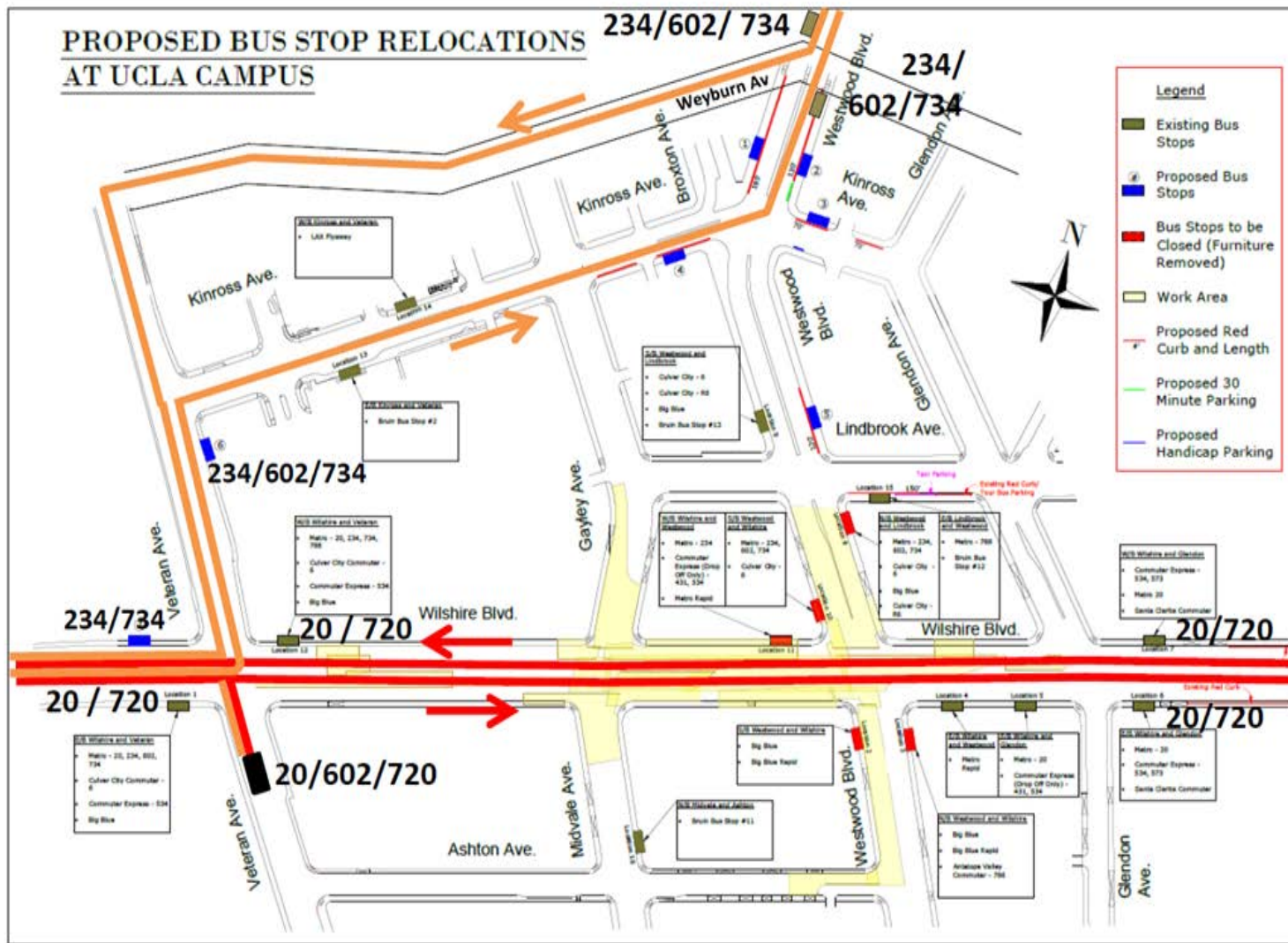
Tunnel
Subsurface
Easement



Not to Scale,
Diagram is for
illustrative
purposes only

Tentative Bus Relocations

Metro Coordination with 7 Transit Agencies



- Culver City Commuter
- LADOT Transit
- Santa Monica Big Blue Bus
- Antelope Valley Commuter
- Santa Clarita Commuter
- UCLA Bruins
- LAX Flyaway
- When northbound Westwood is closed to thru traffic at Wilshire, buses will detour to eastbound Wilshire and then northbound Glendon

Tentative Bus Relocations

Metro Coordination with 7 Transit Agencies

- Culver City Commuter
- LADOT Transit
- Santa Monica Big Blue Bus
- Antelope Valley Commuter
- Santa Clarita Commuter
- UCLA Bruins
- LAX Flyaway

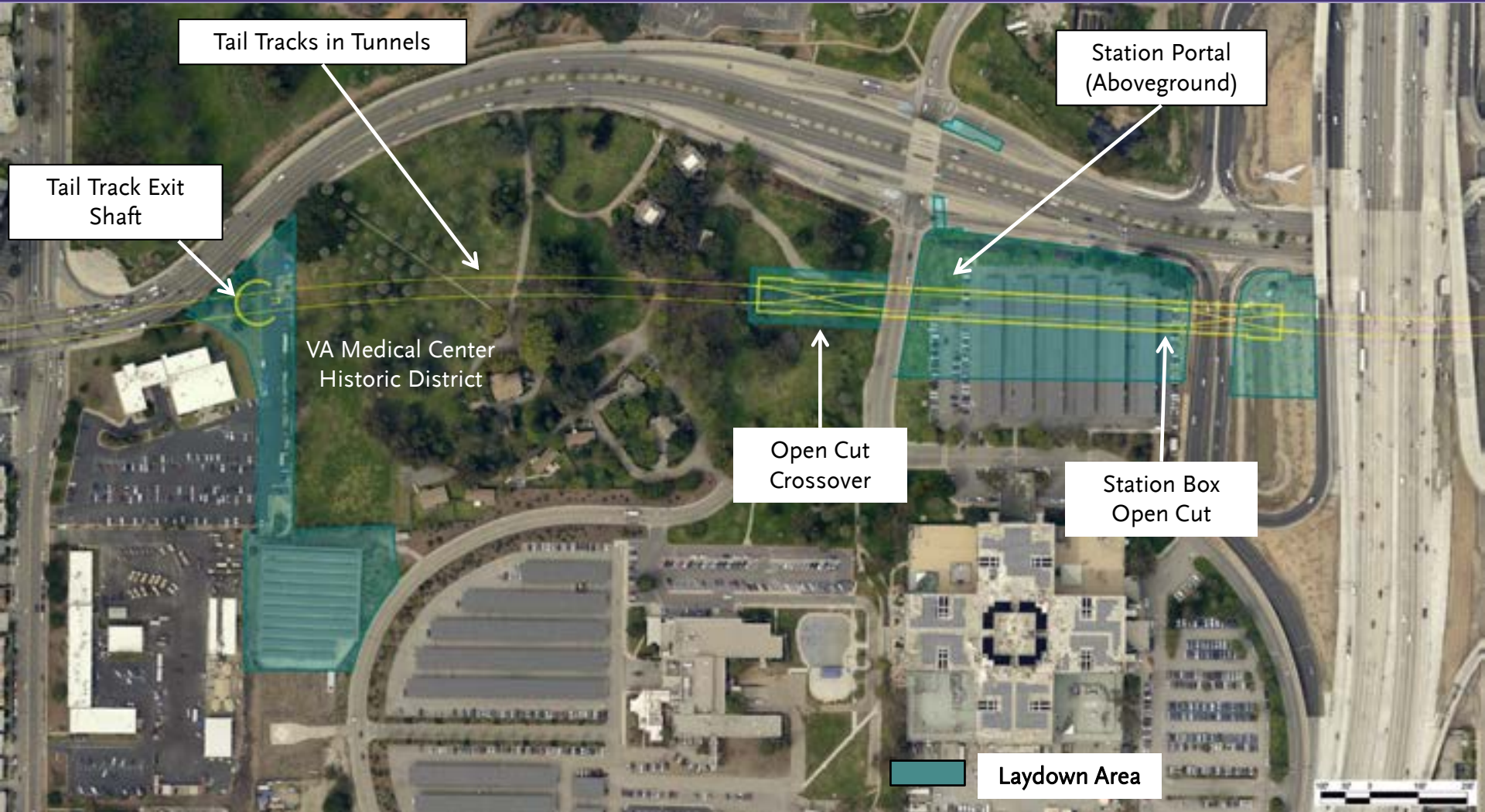
Details:

- Weeknights, 9pm–6am
- Weekends, Friday 9pm–Monday 6am
- Coming soon: Permanent bus stop relocations during construction
- Continuous Community Relations outreach including web updates, construction notices and door to door delivery



Westwood/VA Hospital

Station Area



Westwood/VA Hospital

Station Rendering

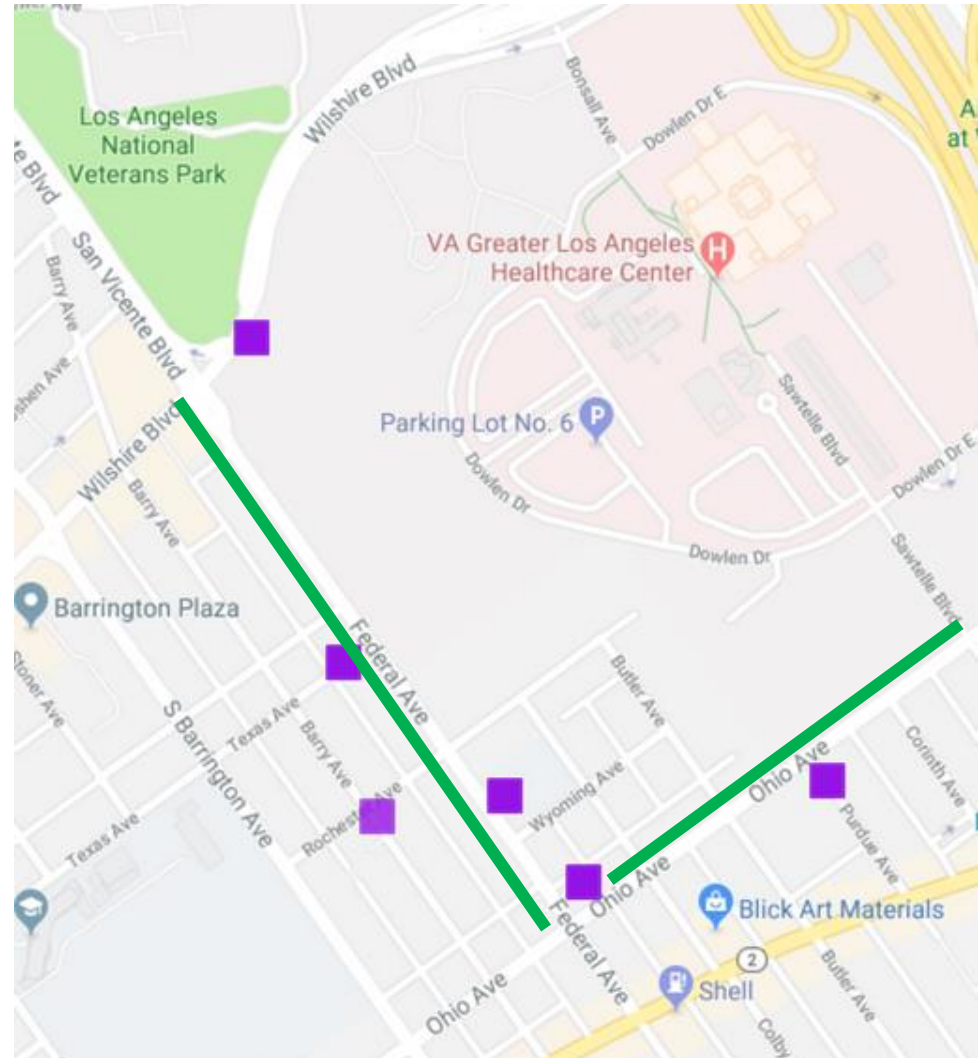


Westwood/VA Hospital

Upcoming SCE Work

Southern California Edison
Power connection Ohio Ave and
Federal Ave

- Work anticipated October 2018 – December 2018
- Daytime work only
- Coordinating with Department of Transportation (DOT)
- One lane of traffic maintained in each direction.



Next Community Meeting

Section 3

Section 3 Pre-Construction Community Meeting

Thursday, June 21, 2018

6:30pm – 8pm

Westwood United Methodist Church

10497 Wilshire Bl

Los Angeles, CA 90024

310.474.4511



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Metro



Purple Line Extension

Section 3 Pre-Construction Community Meeting

June 21, 2018



Agenda

- Environmental Updates
- UCLA Station
 - Advance Utility Relocation
- VA Station
 - Advance Utility Relocation
- Underground Easements



Purple Line Extension

Project Alignment



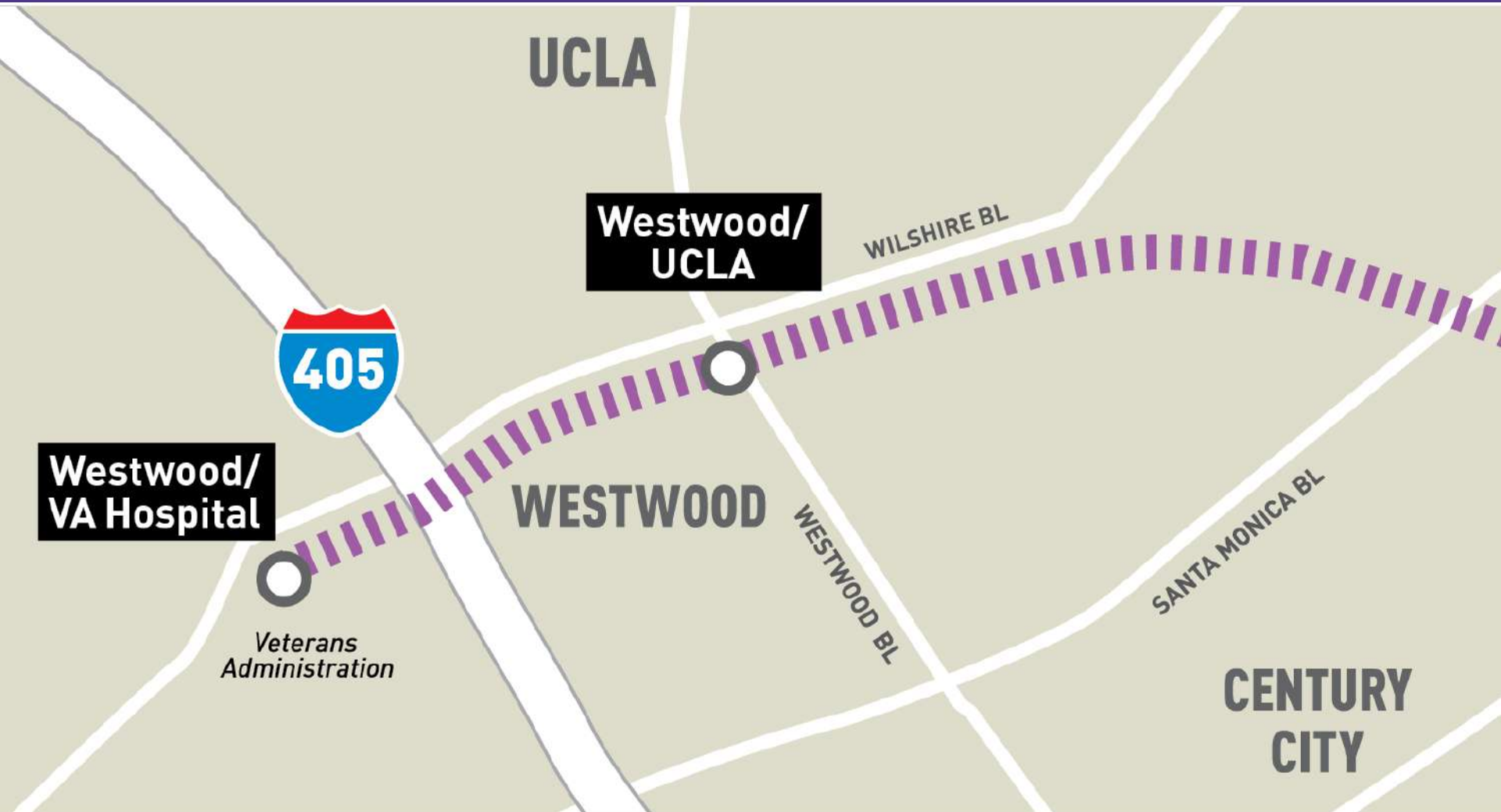
Sections 1, 2 & 3 Status

**Subject to change. The PLE project team is working to deliver the project consistent with Measure M*

	Forecasted Schedule		
Section	Section 1	Section 2	Section 3
Length	3.92 Miles	2.59 Miles	2.59 Miles
New Stations	Wilshire/La Brea Wilshire/Fairfax Wilshire/La Cienega	Wilshire/Rodeo Century City/ Constellation	Westwood/UCLA Westwood/VA Hospital
Pre-Construction Activities	2014 – 2015	2016 – 2018	2018 – 2020
Construction	2015 – 2023	2018 – 2025	2019 – 2026
Operations	2023	2025	2026

Purple Line Extension

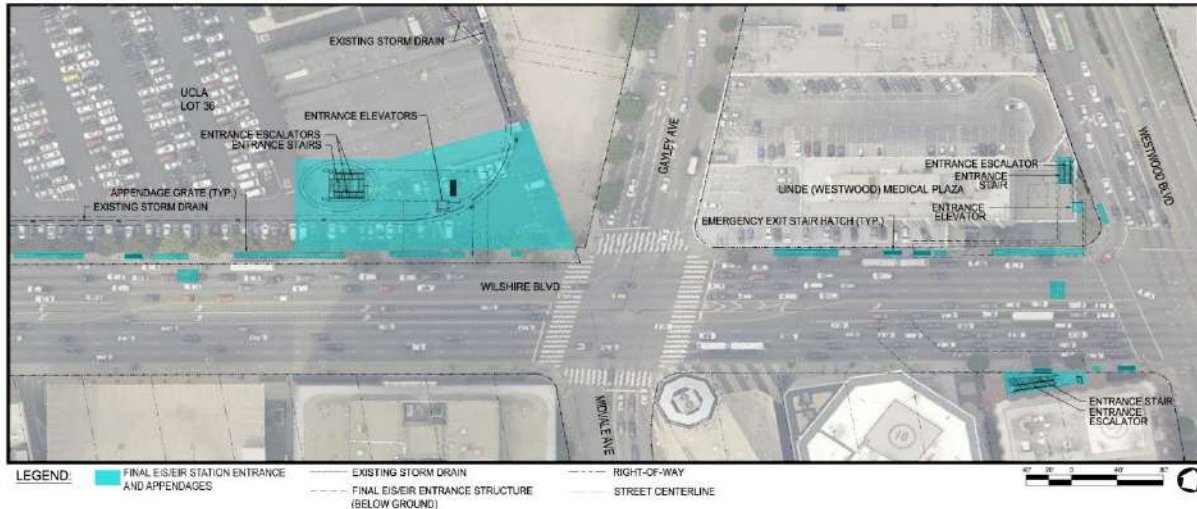
Section 3 Alignment



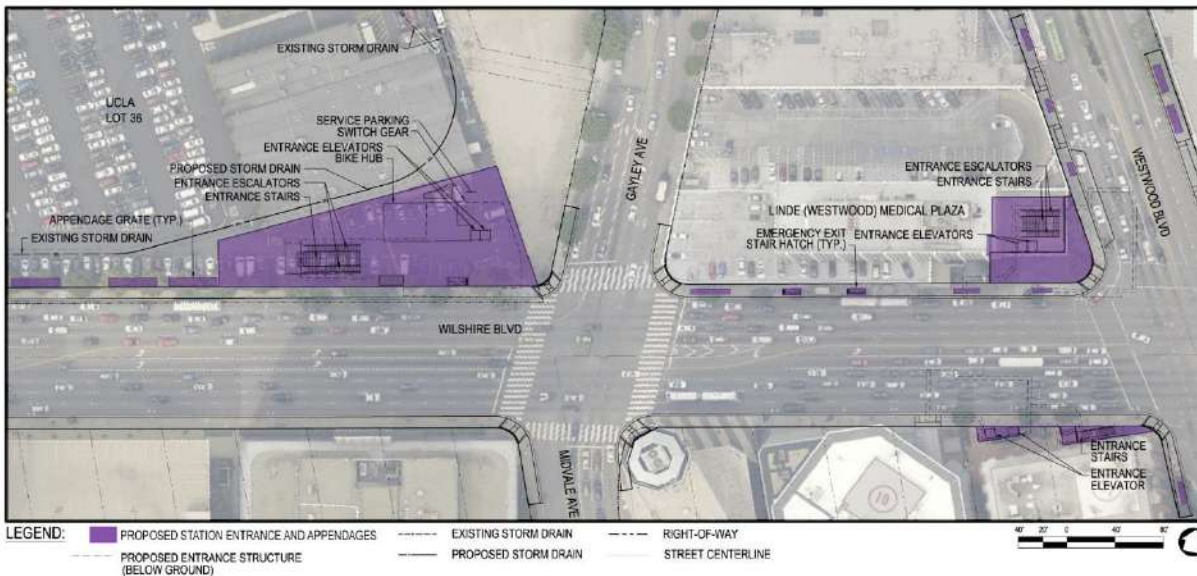
Environmental Updates



Westwood/UCLA Station Entrances

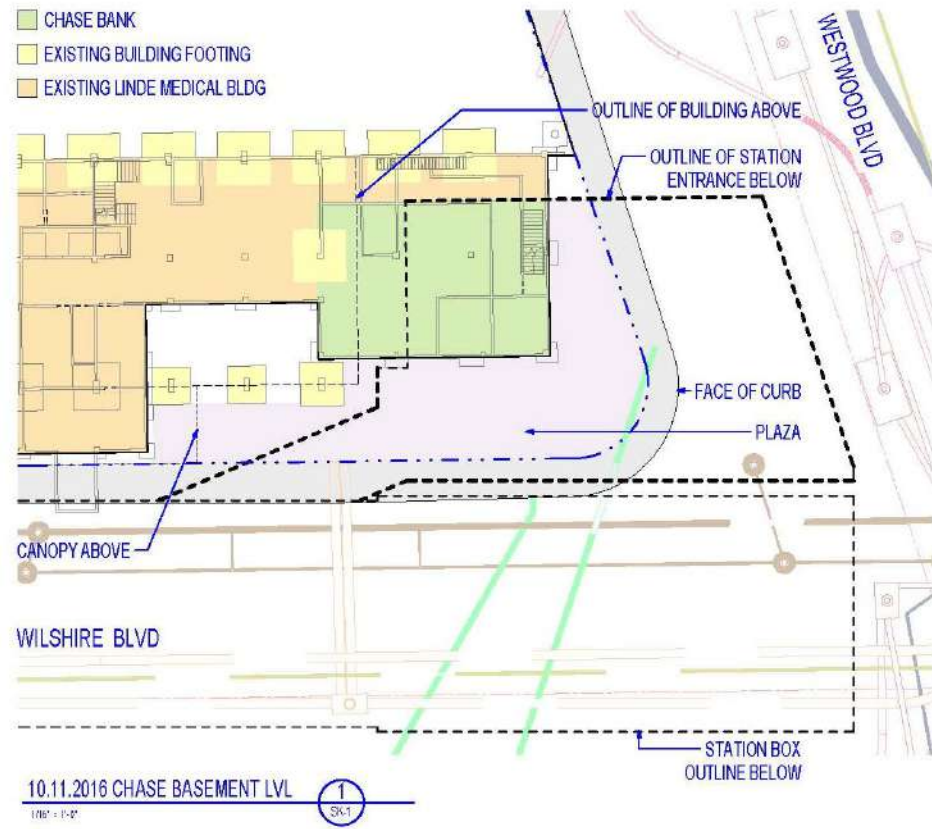


Final EIS/EIR

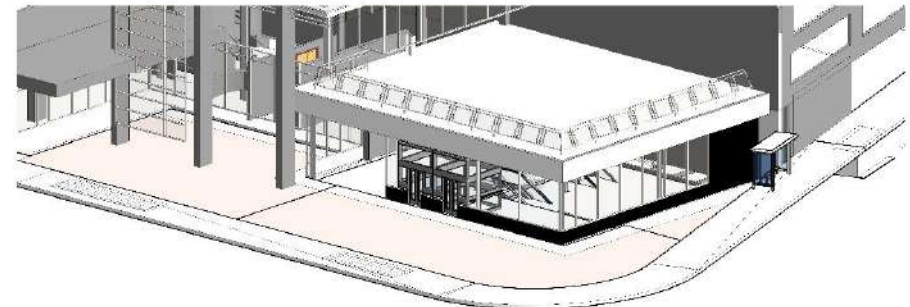


Current Design

Northeast Entrance Proposed Full Station Portal

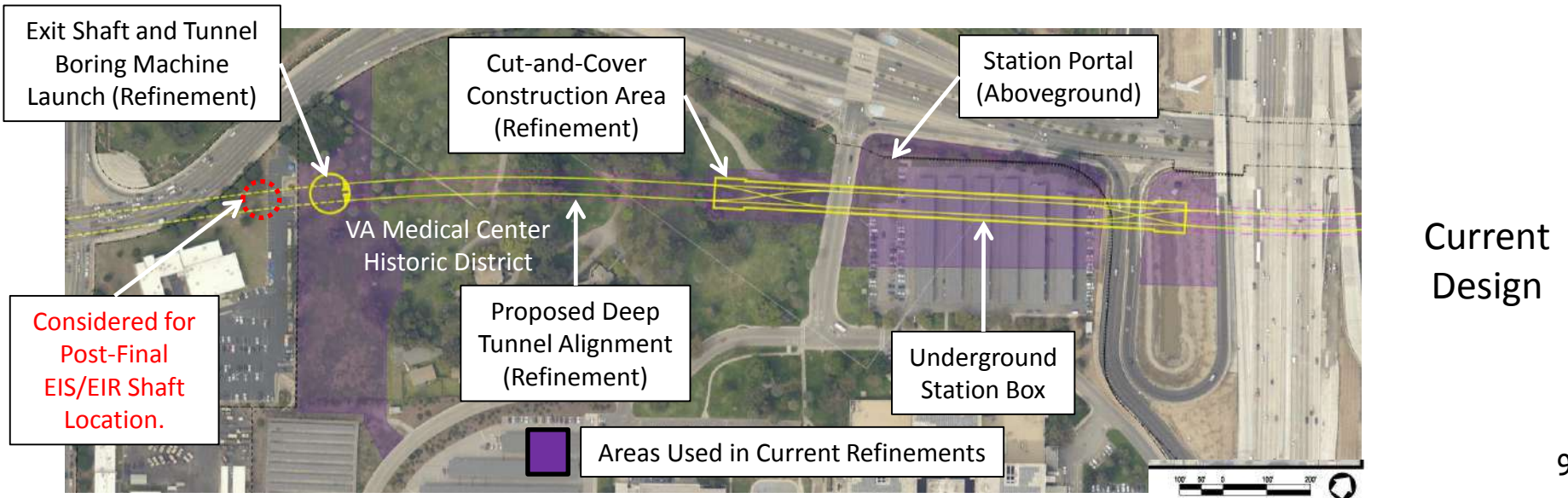
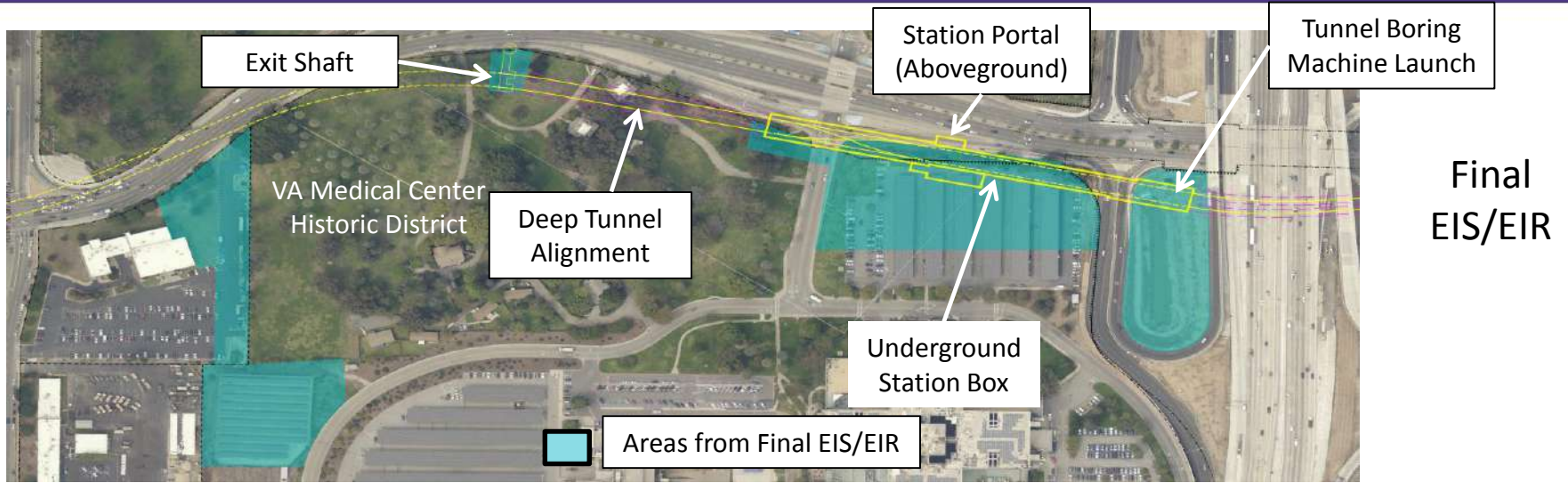


Proposed Full Entrance
Inside Chase Bank

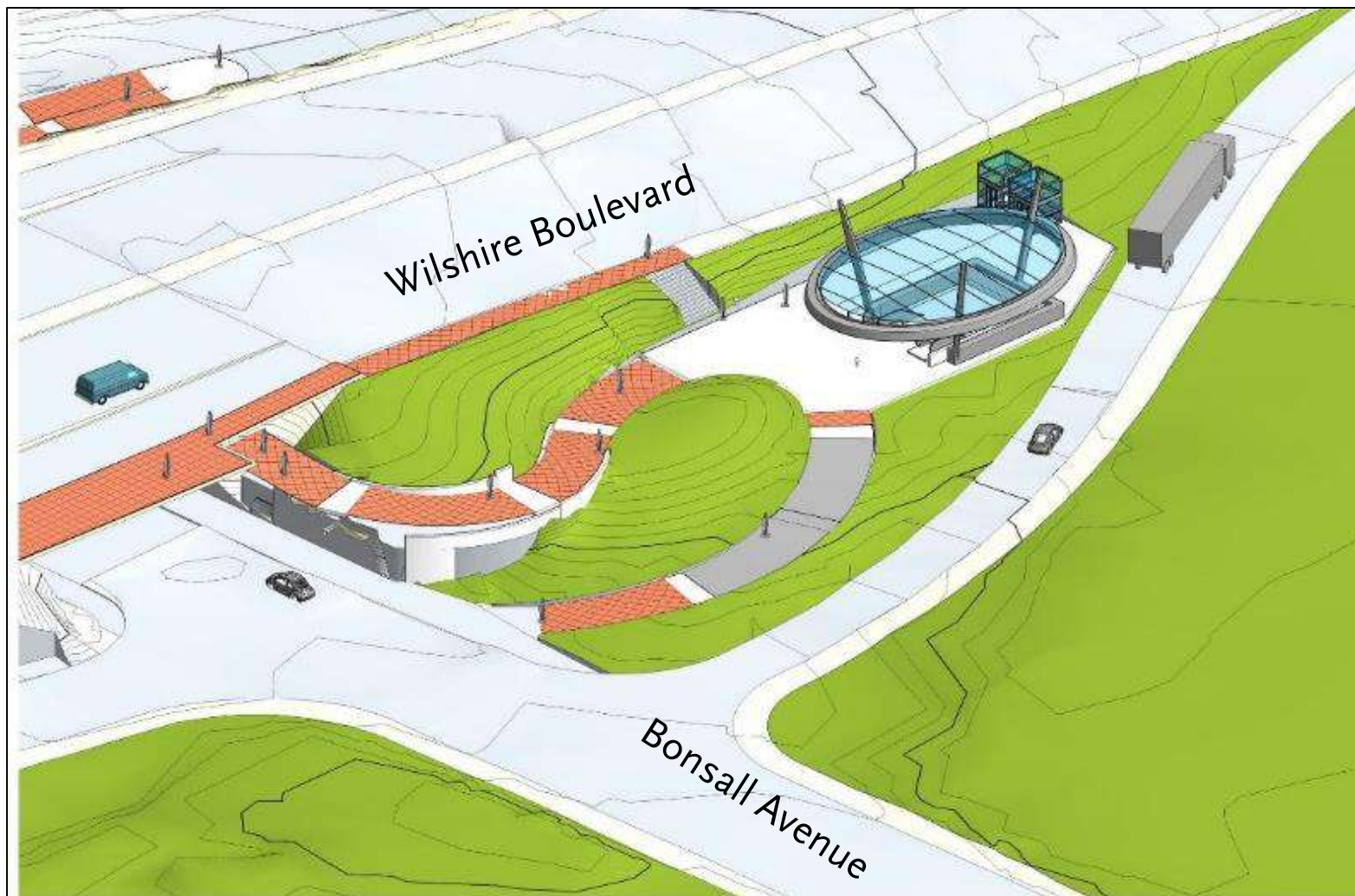


WPLE Section 3

VA Station – Laydown Areas and Alignment



Main Entrance at VA Hospital Final EIS/EIR



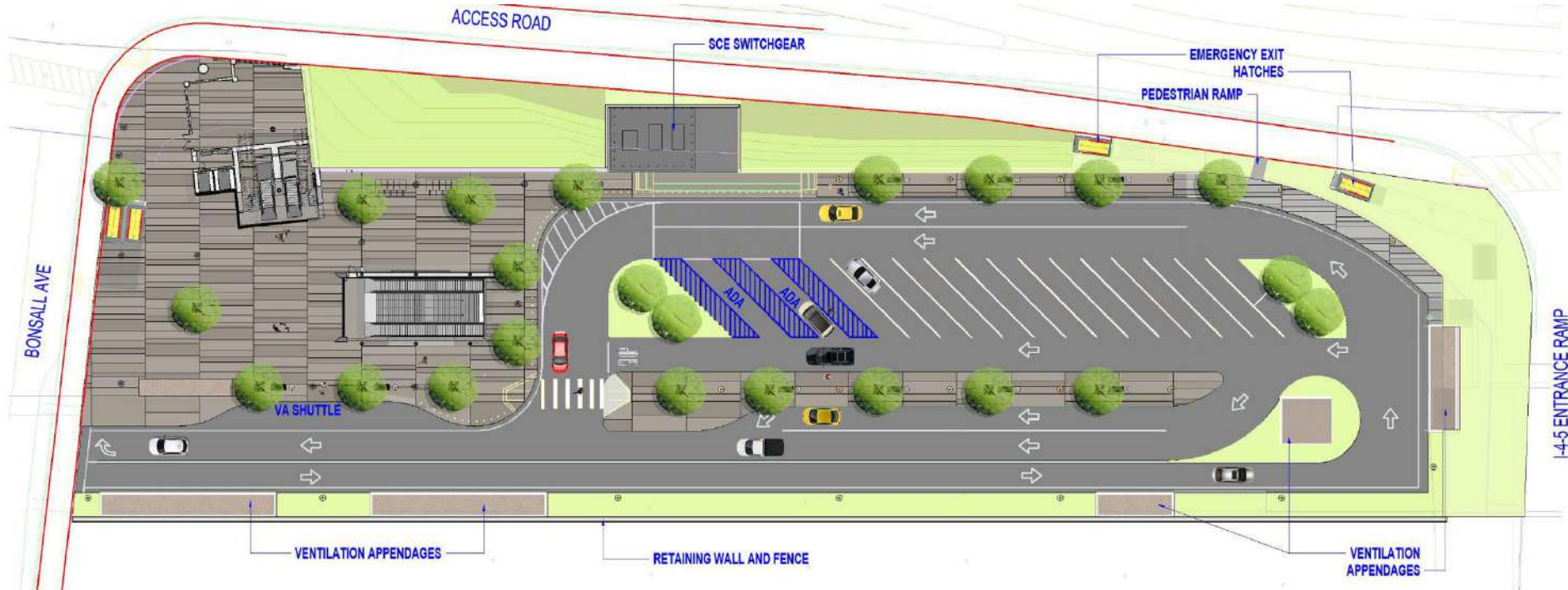
Westwood/VA Hospital

Current Station Rendering



Passenger Pick-up/Drop-off

Current Design



- Short term passenger drop-off and pick up (15-30 minutes max)
- Will prevent Metro passengers entering the VA Campus to drop off passengers

Impacts to Surrounding Vegetation



Canary Island date palm #27



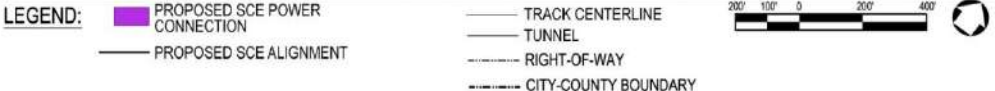
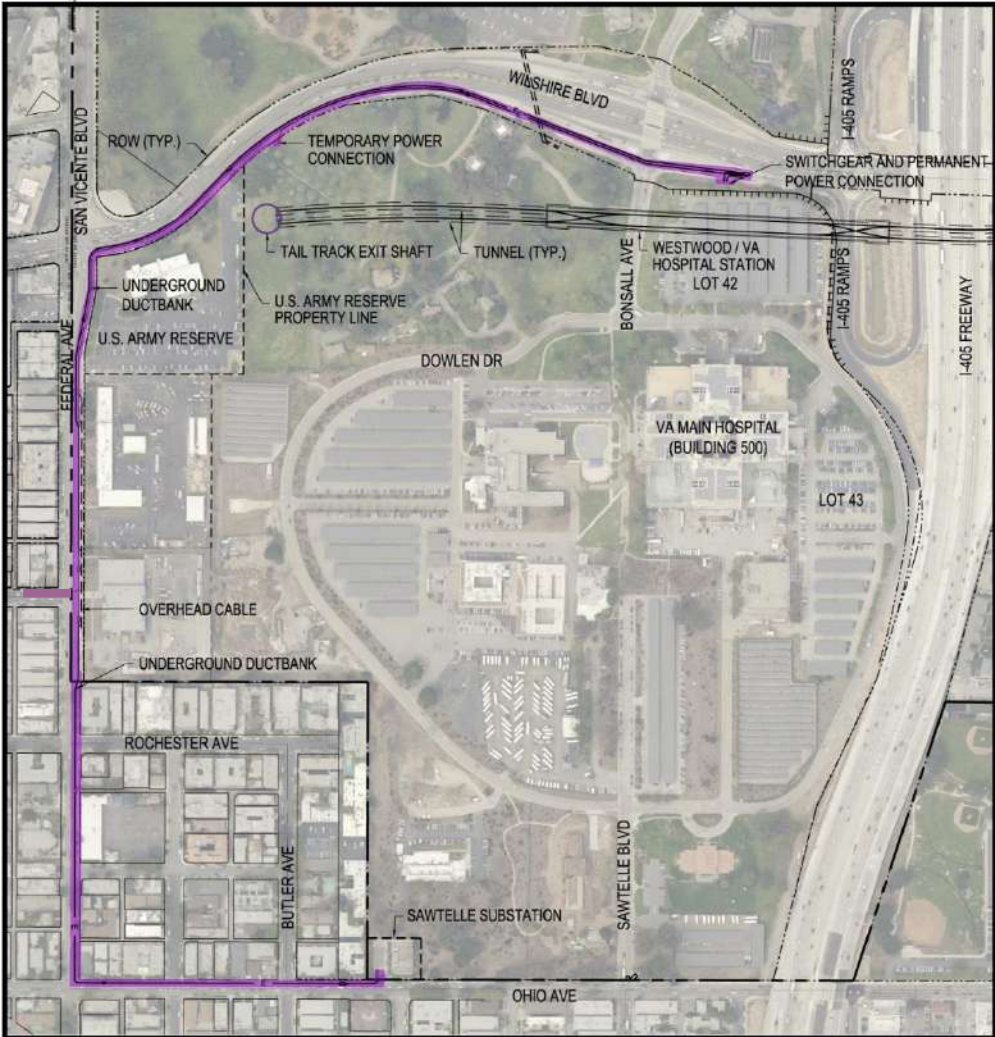
Canary Island date palm #27, note crack in the trunk



Original Planters to be Removed and Replaced with Open Plaza for Pedestrian Circulation



Underground Conduits



Construction Update



Westwood/UCLA

Station Rendering



Westwood/UCLA

Station Box



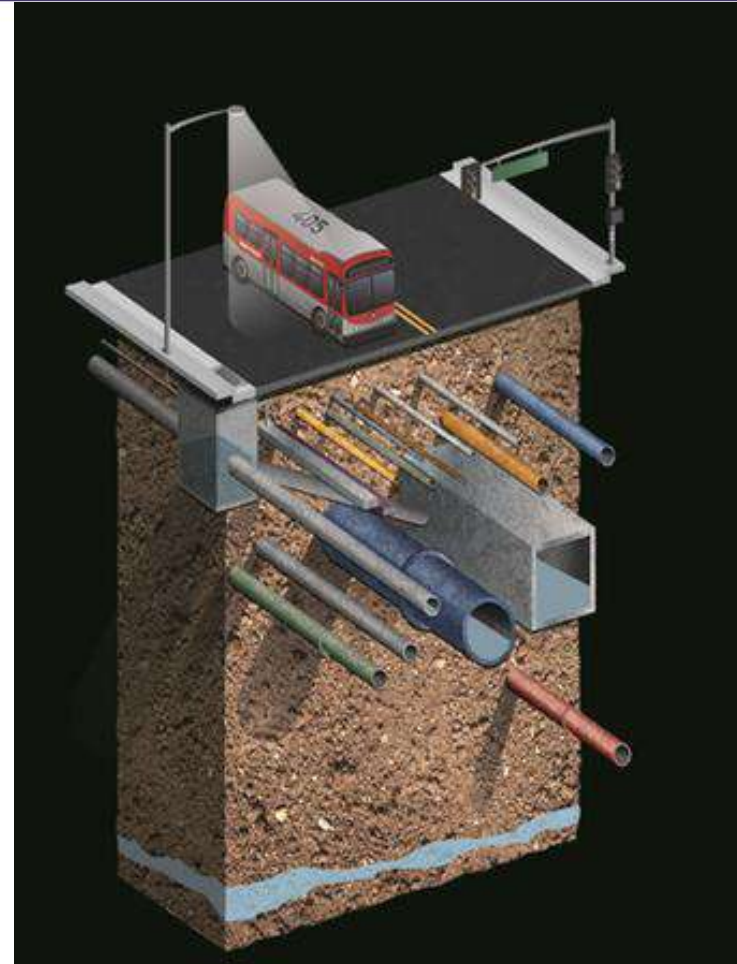
Pre-Construction

Advanced Utility Relocation (AUR)

- **Utility relocations:**
 - Clear the way for station construction
 - Telecom, gas, water, electricity, sewer
 - Ensure continued utility service
 - May 2018 – April 2020
 - Proposed Hours:
 - Monday-Friday: 9pm – 6am
 - Weekend Work: Friday, 9pm – Monday, 6am
- **Typical process:**
 - Hours and traffic plans approved by City of Los Angeles
 - Maintain at least one lane of traffic in each direction on Wilshire
 - Truck/crew leave and lanes reopen at the end of each work period
 - Noisiest activities include saw-cutting and jack-hammering



Metro



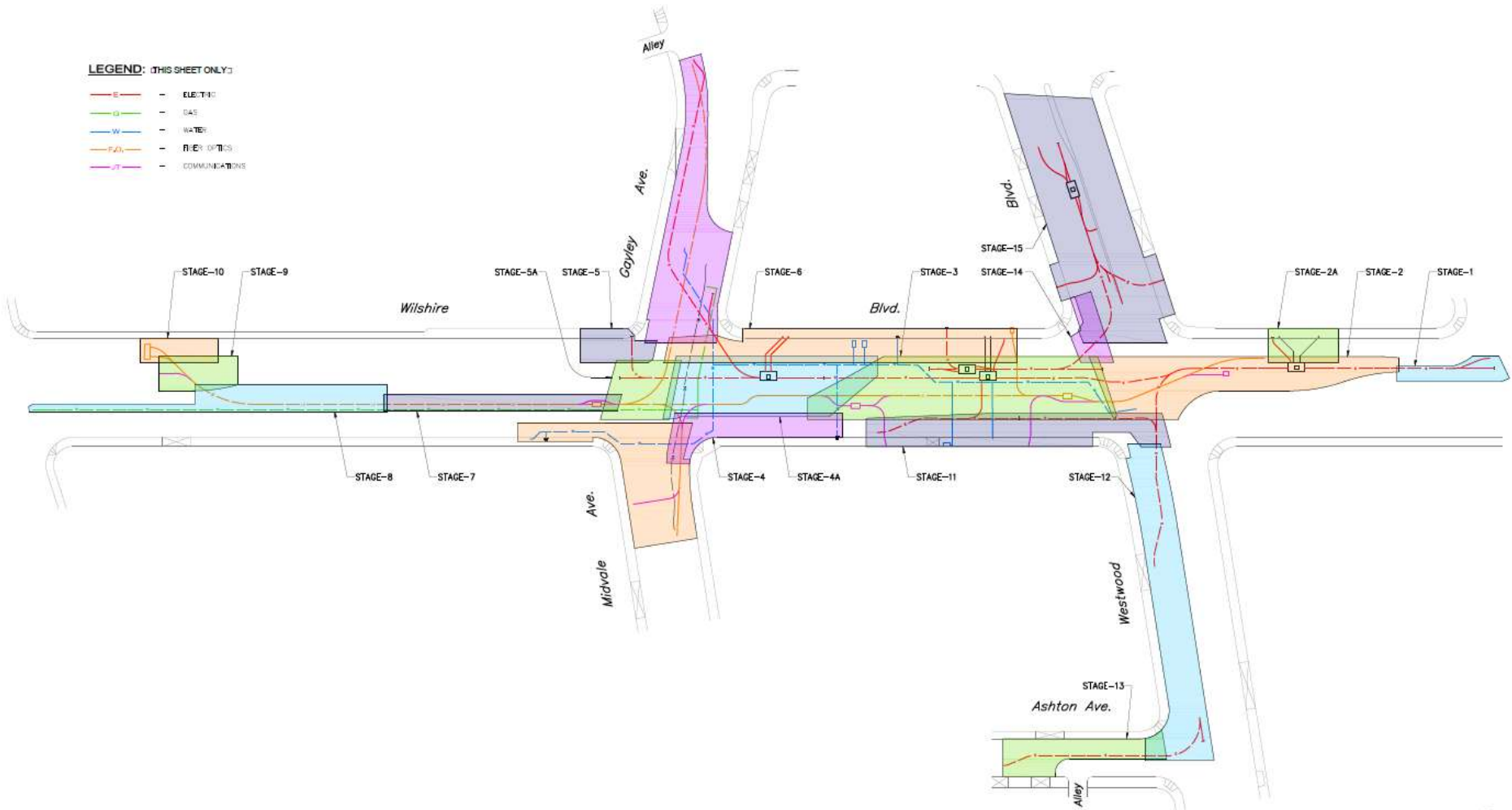
Rendering of AUR work

Advanced Utility Relocation (AUR)

Westwood/UCLA Station

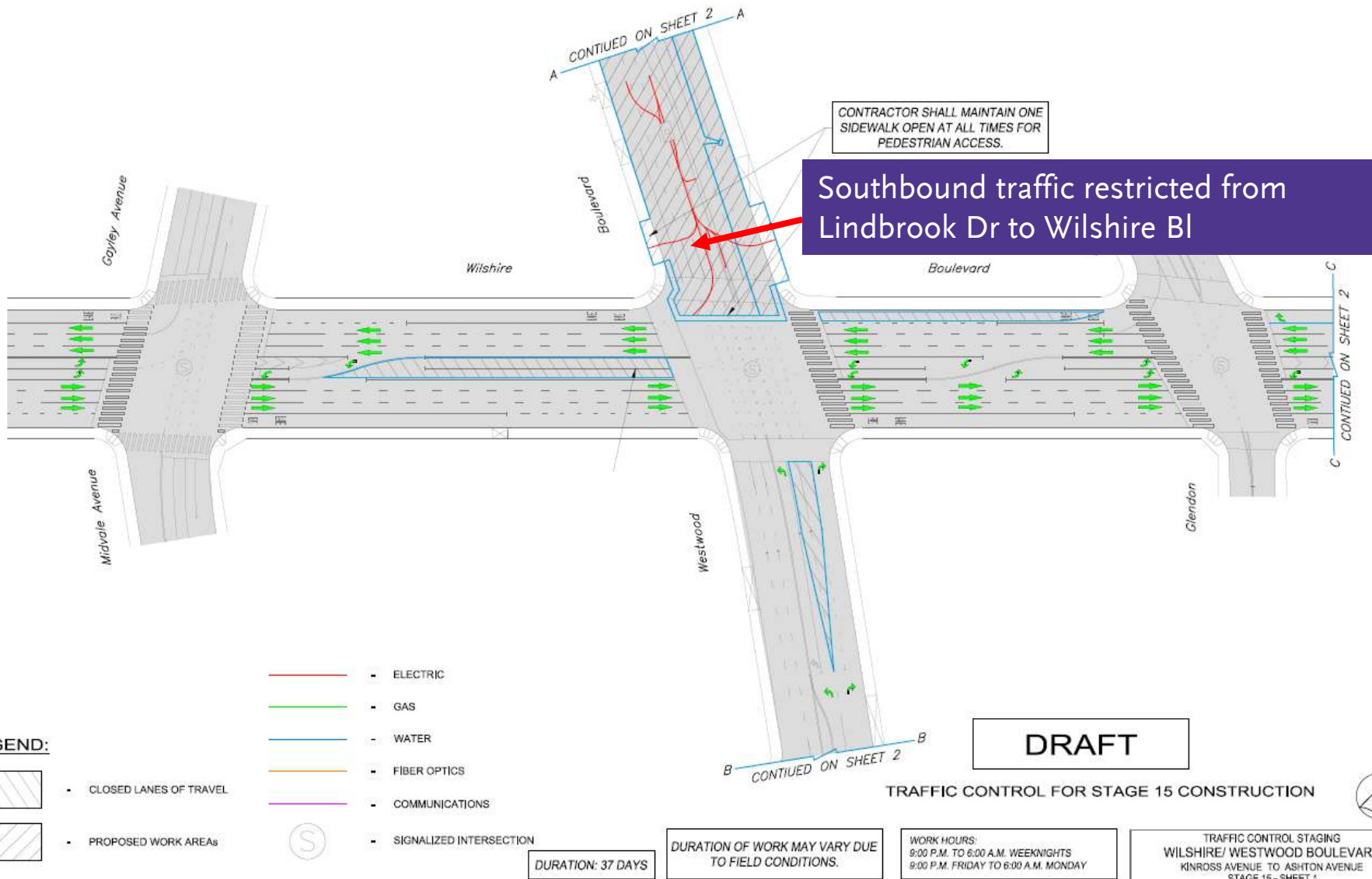
LEGEND: (THIS SHEET ONLY)

- ELECTRIC
- GAS
- WATER
- FLY ASH
- COMMUNICATIONS



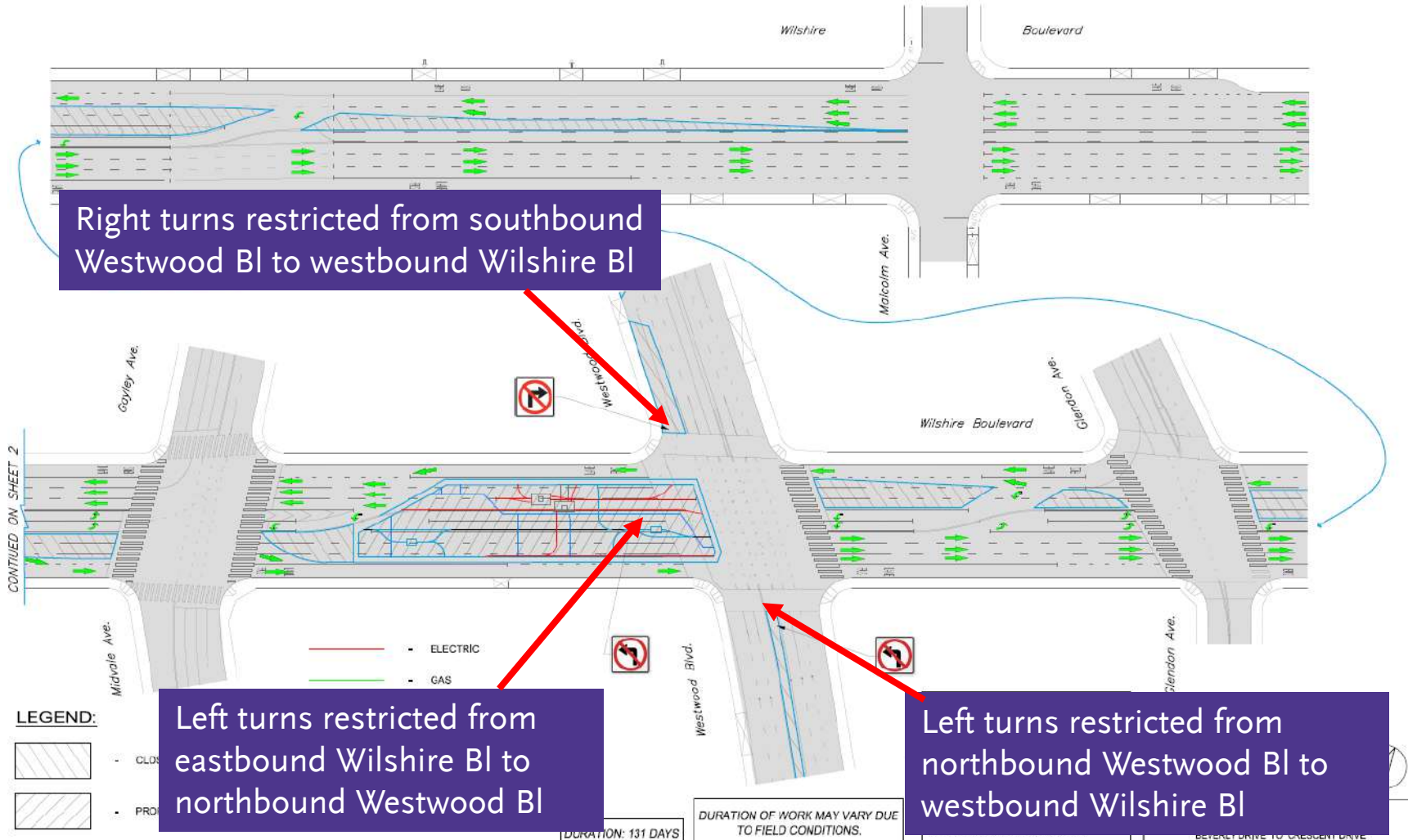
Stage 15: 37 days

Weeknights 9pm-6am / 9pm Friday to 6am Monday



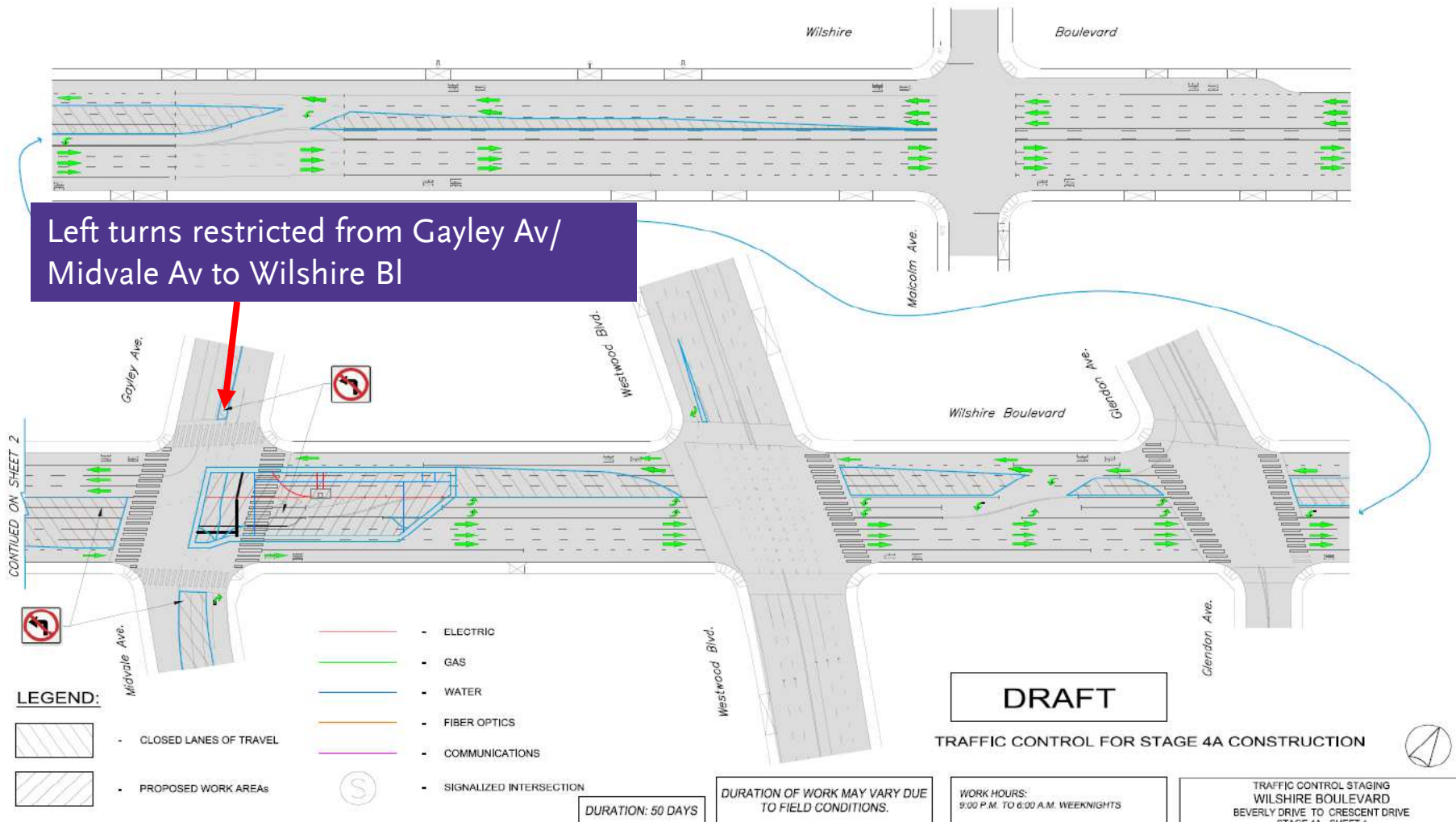
Stage 3: 131 days

Weekday nights 9pm - 6am



Stage 4A: 50 days

Weekday nights 9pm - 6am



Stage 5A: 24 days

Weekday nights 9pm - 6am

South bound Gayley Av closed from
Linbrook Dr to Wilshire Bl



Left turns restricted at Wilshire Bl/
Midvale Av to Gayley Av

LEGEND:

- CLOSED LANES OF TRAVEL
- PROPOSED WORK AREAS

- FIBER OPTICS
- COMMUNICATIONS
- SIGNALIZED INTERSECTION

- ELECTRIC
- GAS
- WATER

DURATION: 24 DAYS

DURATION OF WORK MAY VARY DUE
TO FIELD CONDITIONS.

DRAFT

TRAFFIC CONTROL FOR STAGE 5A CONSTRUCTION

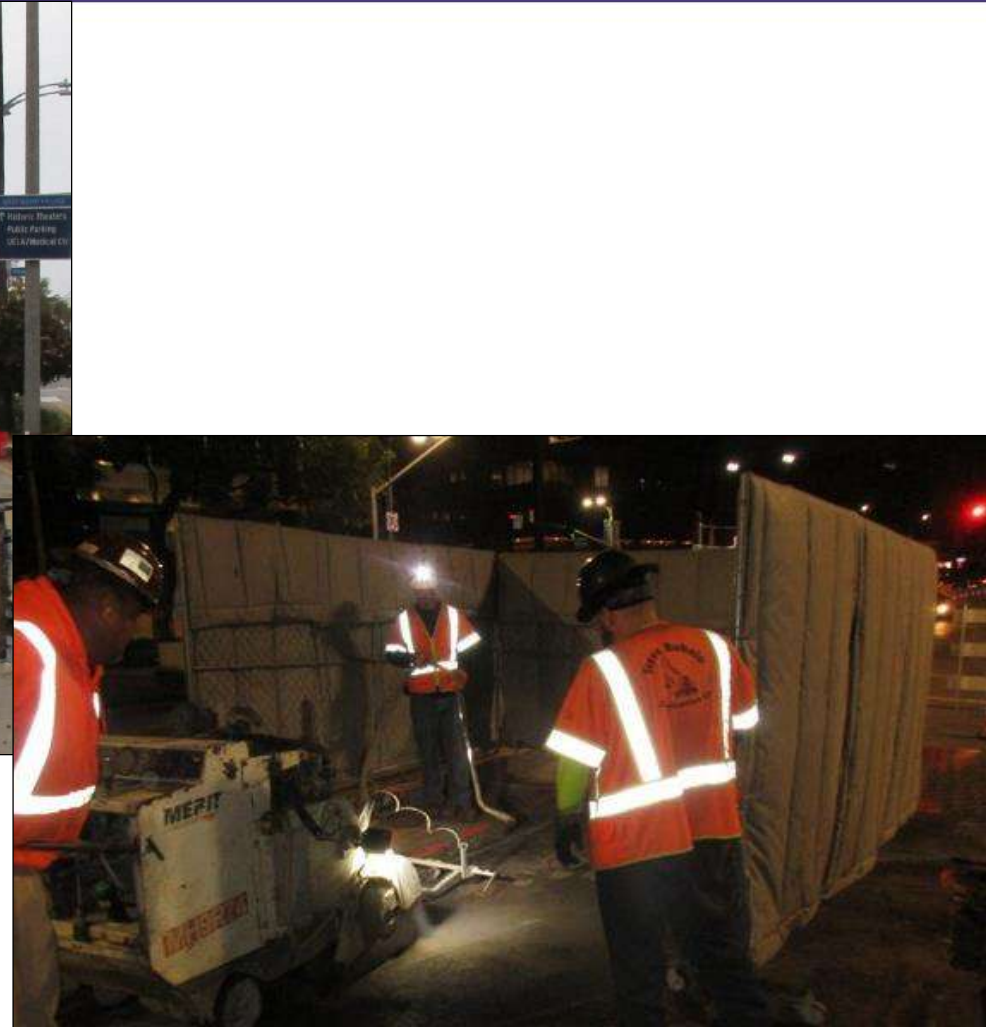
WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
BEVERLY DRIVE TO CRESCENT DRIVE



Pre-Construction

Advanced Utility Relocation (AUR)

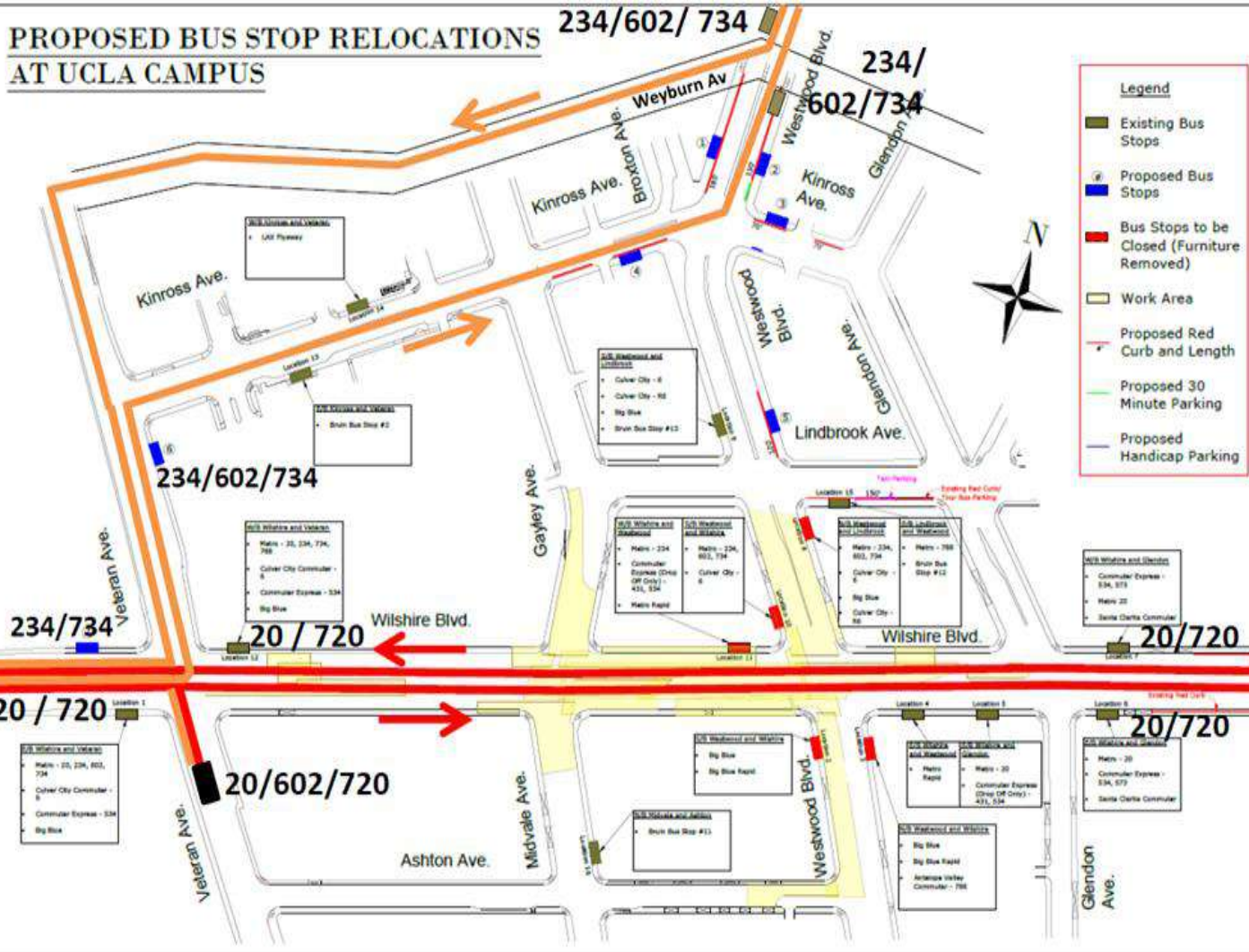


Examples of AUR work

Bus Relocations

Metro Coordination with 7 Transit Agencies

PROPOSED BUS STOP RELOCATIONS AT UCLA CAMPUS



- Culver City Commuter
- LADOT Transit
- Santa Monica Big Blue Bus
- Antelope Valley Commuter
- Santa Clarita Commuter
- UCLA Bruins
- LAX Flyaway
- When northbound Westwood is closed to thru traffic at Wilshire, buses will detour to eastbound Wilshire and then northbound Glendon

Bus Relocations

Metro Coordination with 7 Transit Agencies

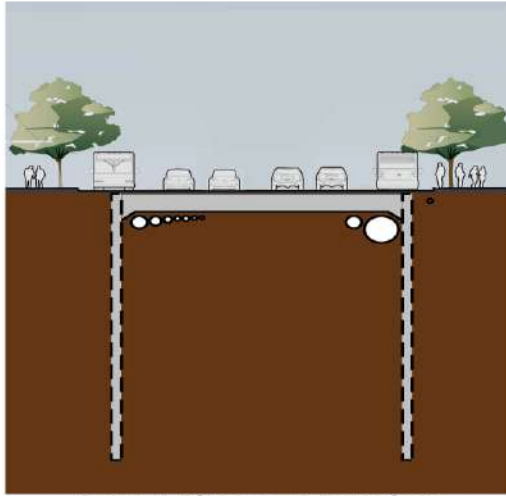
- Culver City Commuter
- LADOT Transit
- Santa Monica Big Blue Bus
- Antelope Valley Commuter
- Santa Clarita Commuter
- UCLA Bruins
- LAX Flyaway

Details:

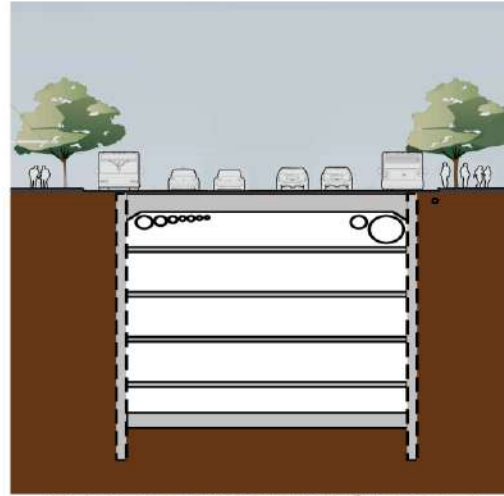
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- Coming soon: Permanent bus stop relocations during construction
- Continuous Community Relations outreach including web updates, construction notices and door to door delivery



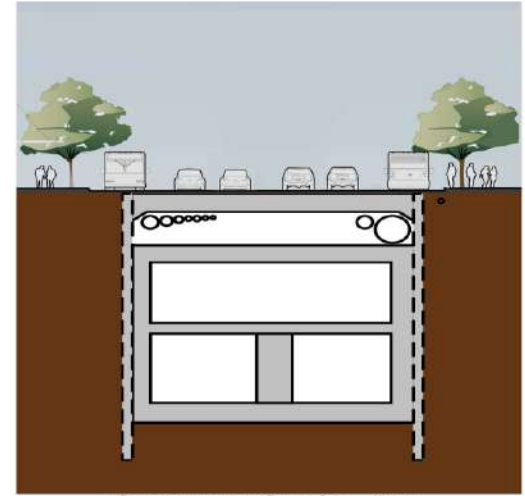
Station Construction Overview



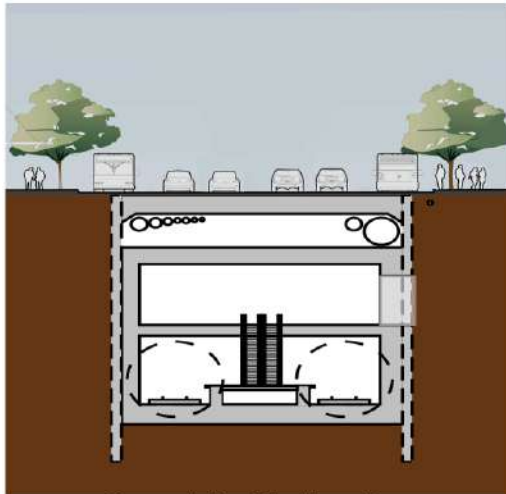
Install Piles and Decking



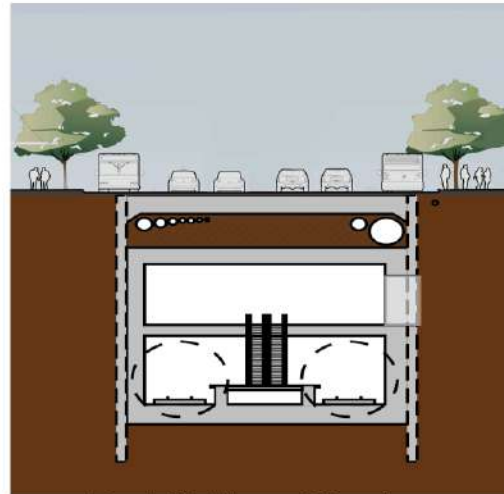
Excavate and Install Supports
(from beneath decking)



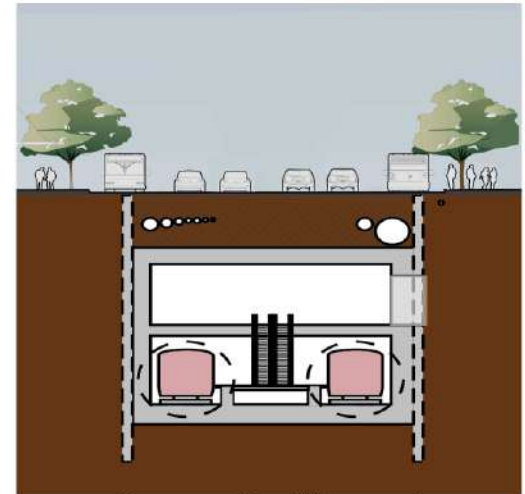
Construct Station Box



Complete Station Box



Backfill Above Structure



Remove Decking and
Restore Street

Westwood/UCLA

Schedule – Key Dates*

**Dates are approximate and subject to change.*

Activity	Forecast Start	Forecast Finish
Advance Utility Relocation (AUR)	May 2018	April 2020
End-wall piling at UCLA Station	April 2020	September 2020
City sewer/storm drain relocation	October 2020	May 2021
Station piling and decking	April 2021	May 2022
Revenue/service operations	March 2026	

Westwood/VA Hospital

Station Rendering

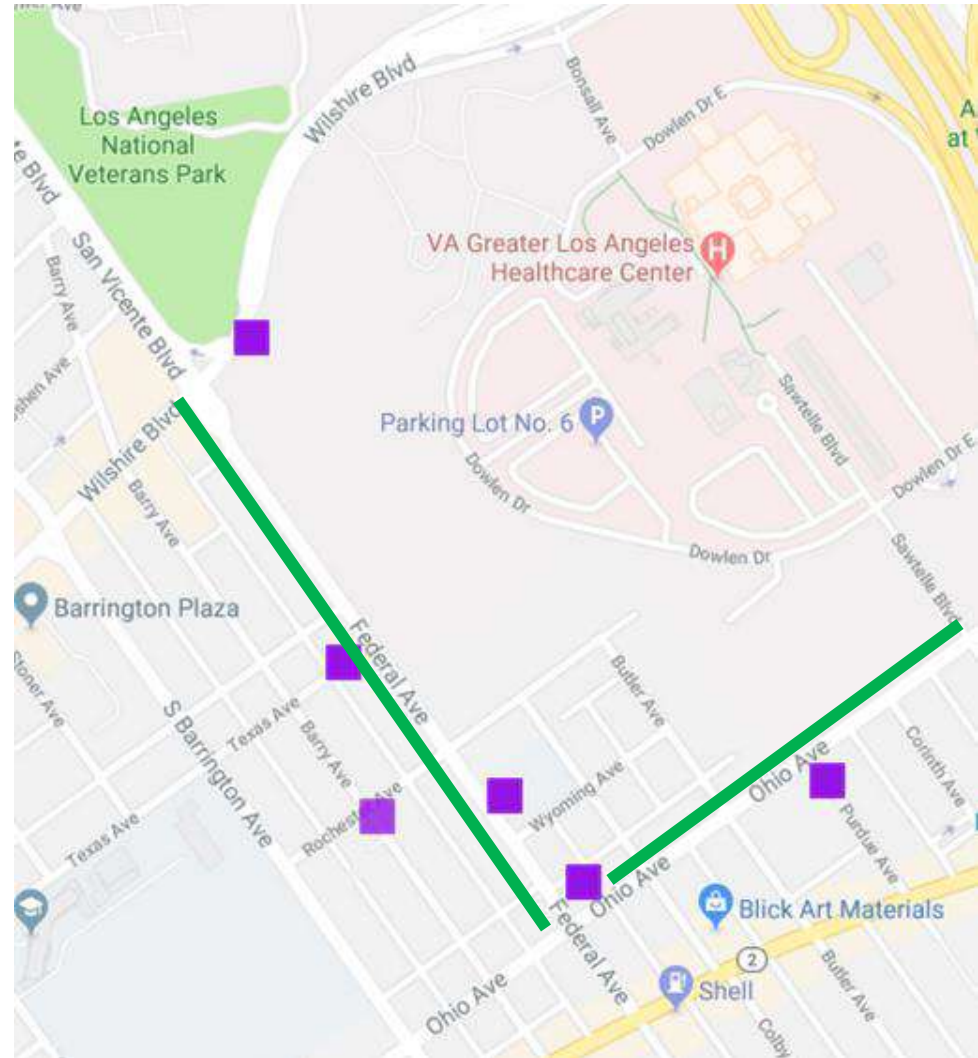


Westwood/VA Hospital

Upcoming SCE Work

Power connection

- Anticipated December 2018
- One year of work
- Work hours: Ohio and Federal, 9am-3:30pm
- Work hours: Wilshire, 9pm-6am
- Traffic maintained in each direction, temporary parking restrictions



Tentative Schedule

**Dates are preliminary and subject to change*

Westside Purple Line Extension, Section 3 Tentative Schedule

Summary Activity	Construction Year																					
	2019			2020			2021			2022			2023			2024			2025			
TBM Launch Box Piling / Excavation at Western VA Staging Area																						
Tunneling																						
Cross Passages																						
Tunnel Invert and Walkway																						
Station Construction																						
Systems Installation and Facilities																						
Station Backfill and Street Restoration																						

Tunnel Subsurface Easements

The standard tunnel subsurface easement is a rectangular box surrounding both tunnels

- 10 ft. above the tunnel crown and 10 ft. below the tunnel invert
- 5 ft. offset from the outer most tunnel wall



Existing Ground

The tunnel boring machine will be under individual parcels for approximately 2-3 days for each tunnel

Tunnel Boring Machine drives for each tunnel will be staggered by approximately 1-2 months

Operation of the subway tunnels are designed to avoid adverse noise/vibration to the occupants

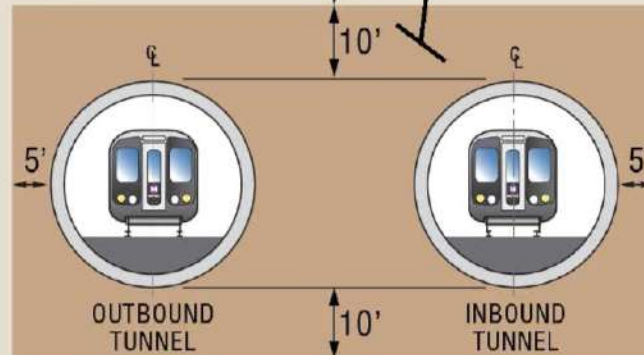
50' – 100'
Typical Depth

The tunnels have been designed to accommodate the existing building(s)

Future construction above the tunnels which requires excavation will be subject to Metro's review and approval which shall not be unreasonably withheld

Tunnel
Subsurface
Easement

The tunnels will be excavated by an Earth Pressure Balance Tunnel Boring Machine; this type of machine balances soil and groundwater pressure at the tunnel face, controlling the ground movement. As the tunnel is excavated, precast concrete segments are immediately installed within the machine to serve as the permanent tunnel lining.



Not to Scale,
Diagram is for
illustrative
purposes only

Next Community Meeting

Section 3

Section 3 Pre-Construction Community Meeting

Thursday, September 13, 2018

6:30pm – 8pm

Westwood United Methodist Church

10497 Wilshire Bl

Los Angeles, CA 90024

310.474.4511



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Metro



Purple Line Extension

Department of Veterans Affairs Town Hall

July 26, 2108



Introduction and Agenda

- VA Introduction
- VA Master Plan Overview
- Metro Environmental Update
- Metro Pre-Construction Update
- Question and Answer



Purple Line Extension

Project Alignment



PLE Construction Schedule

Dates are preliminary and subject to change

	Forecasted Schedule		
Section	Section 1	Section 2	Section 3
Length	3.92 Miles	2.59 Miles	2.59 Miles
New Stations	Wilshire/La Brea Wilshire/Fairfax Wilshire/La Cienega	Wilshire/Rodeo Century City/ Constellation	Westwood/UCLA Westwood/VA Hospital
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VA Hospital Station

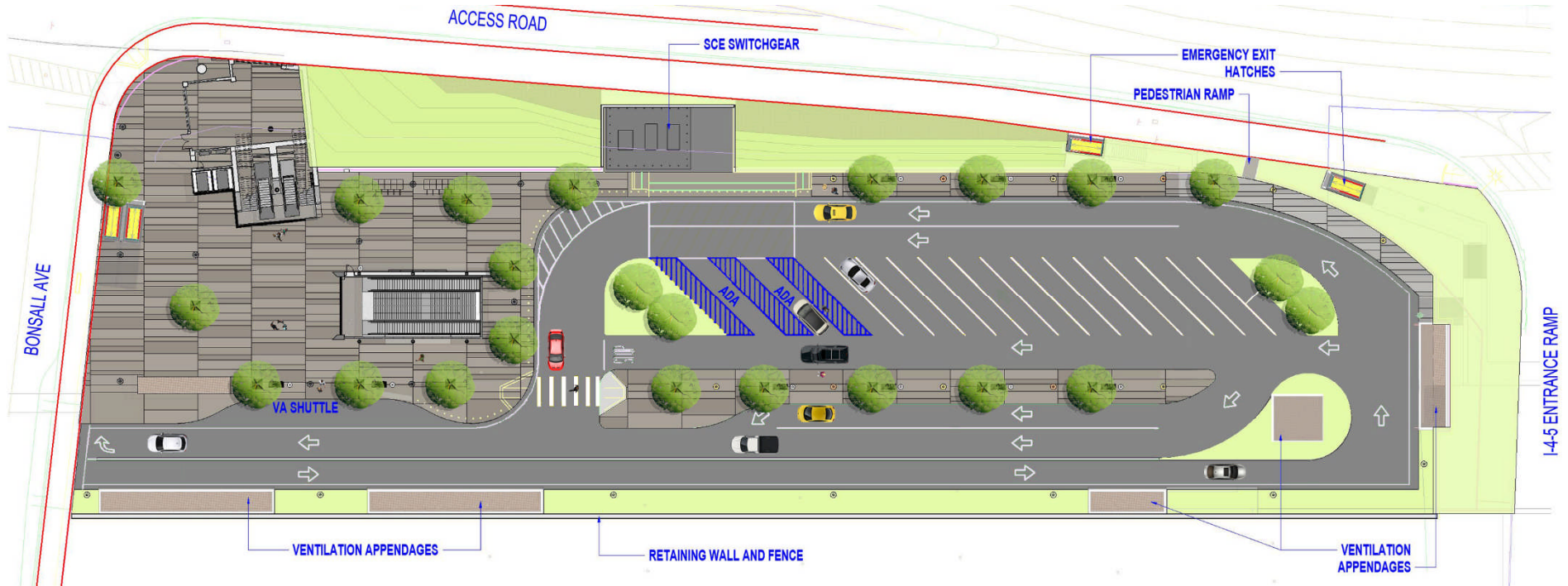
Rendering of Proposed Station



Passenger Pick-up/Drop-off

Proposed Design

DRAFT

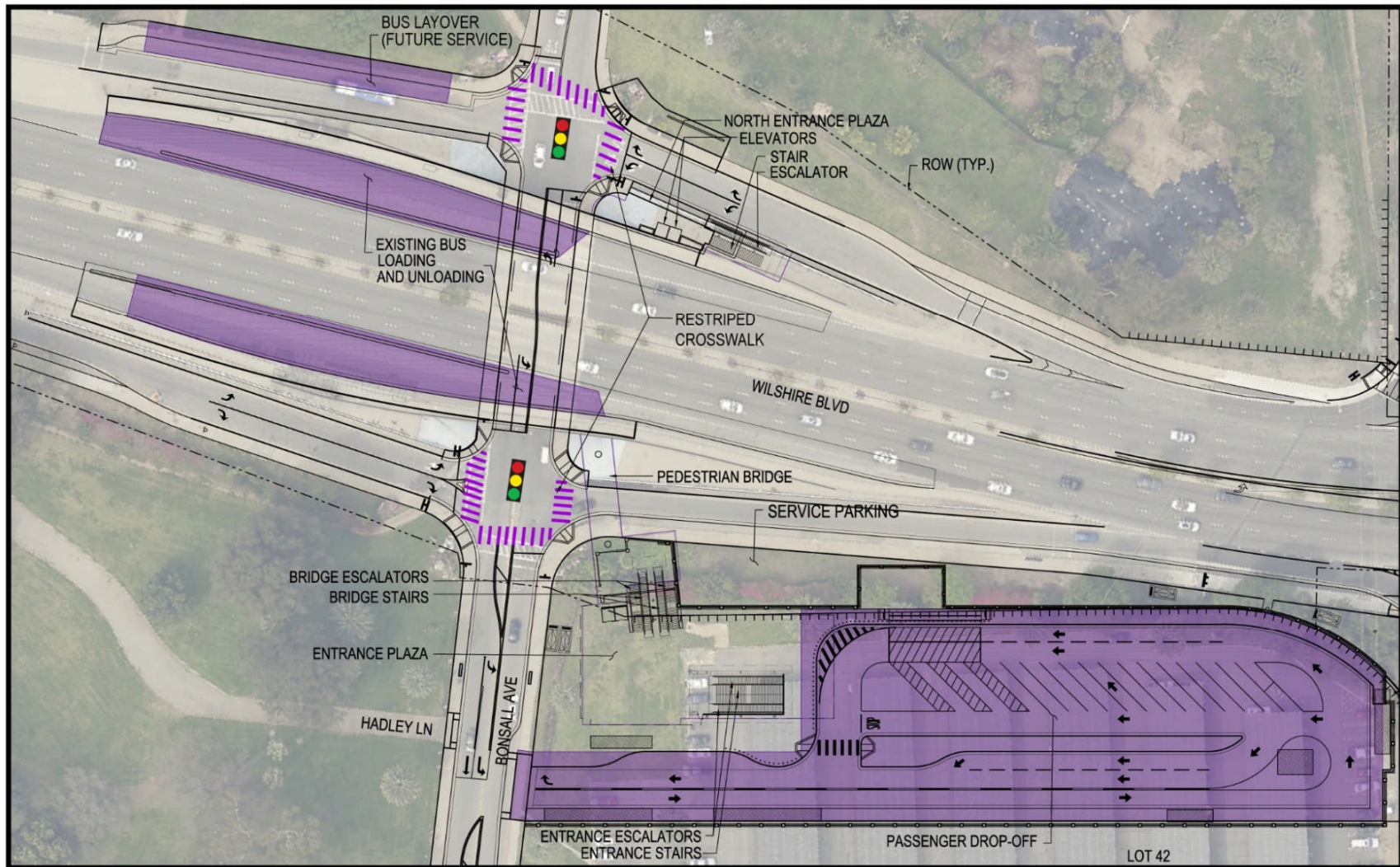


- Short term passenger drop-off and pick up (15-30 minutes max)
- Will prevent Metro passengers entering the VA Campus to drop off passengers
- Design is based on access from Wilshire Blvd. via Bonsall Ave.
- Signage will indicate *No Idling Area*

VA Hospital Station

Proposed Station Access

DRAFT



LEGEND: PROPOSED STATION BUS AND PASSENGER DROP OFF AREAS

RIGHT-OF-WAY
 STREET CENTERLINE

PROPOSED NEW TRAFFIC SIGNAL

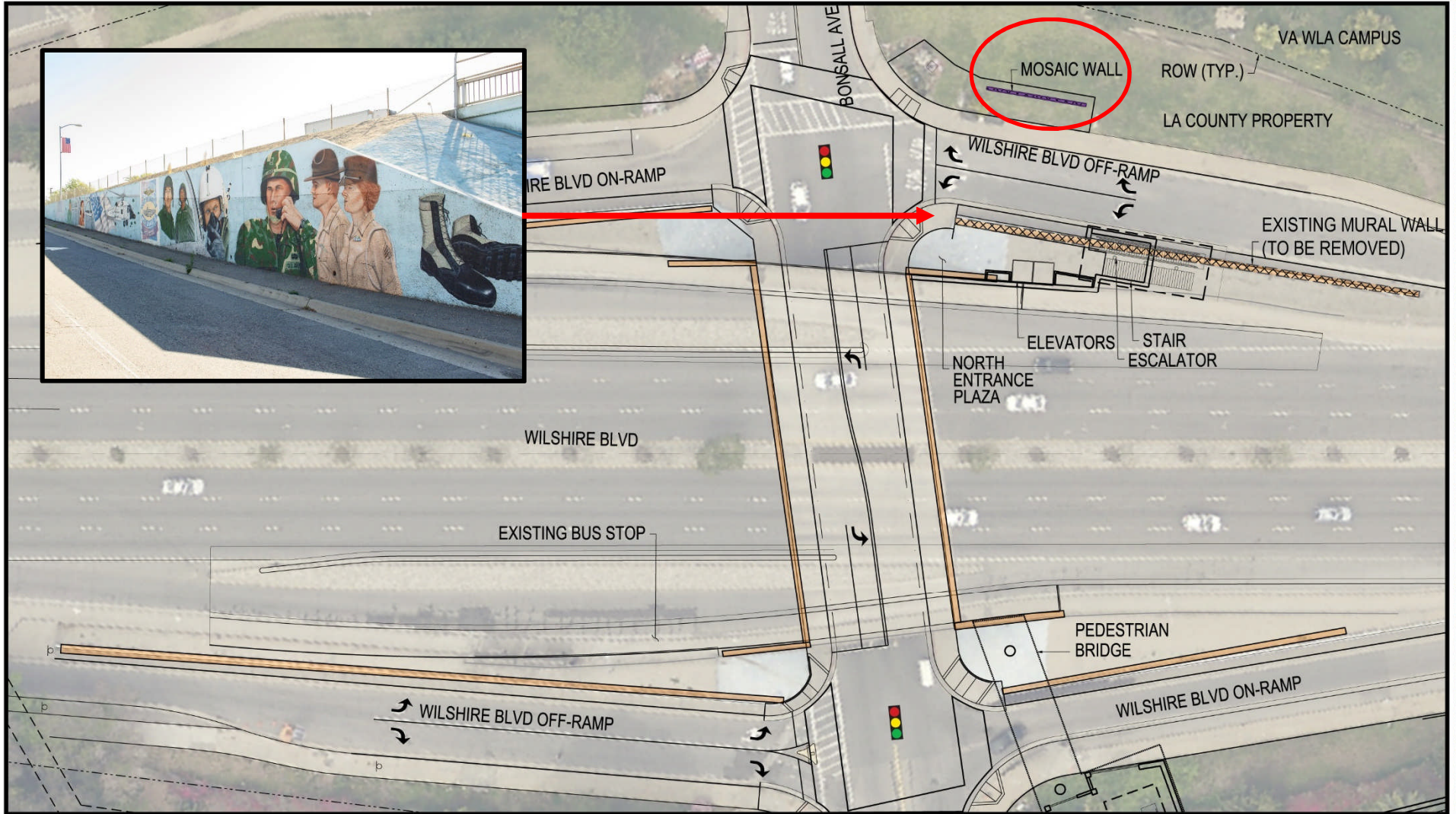
40' 20' 0 40' 80'



VA Hospital Station

Mural

DRAFT



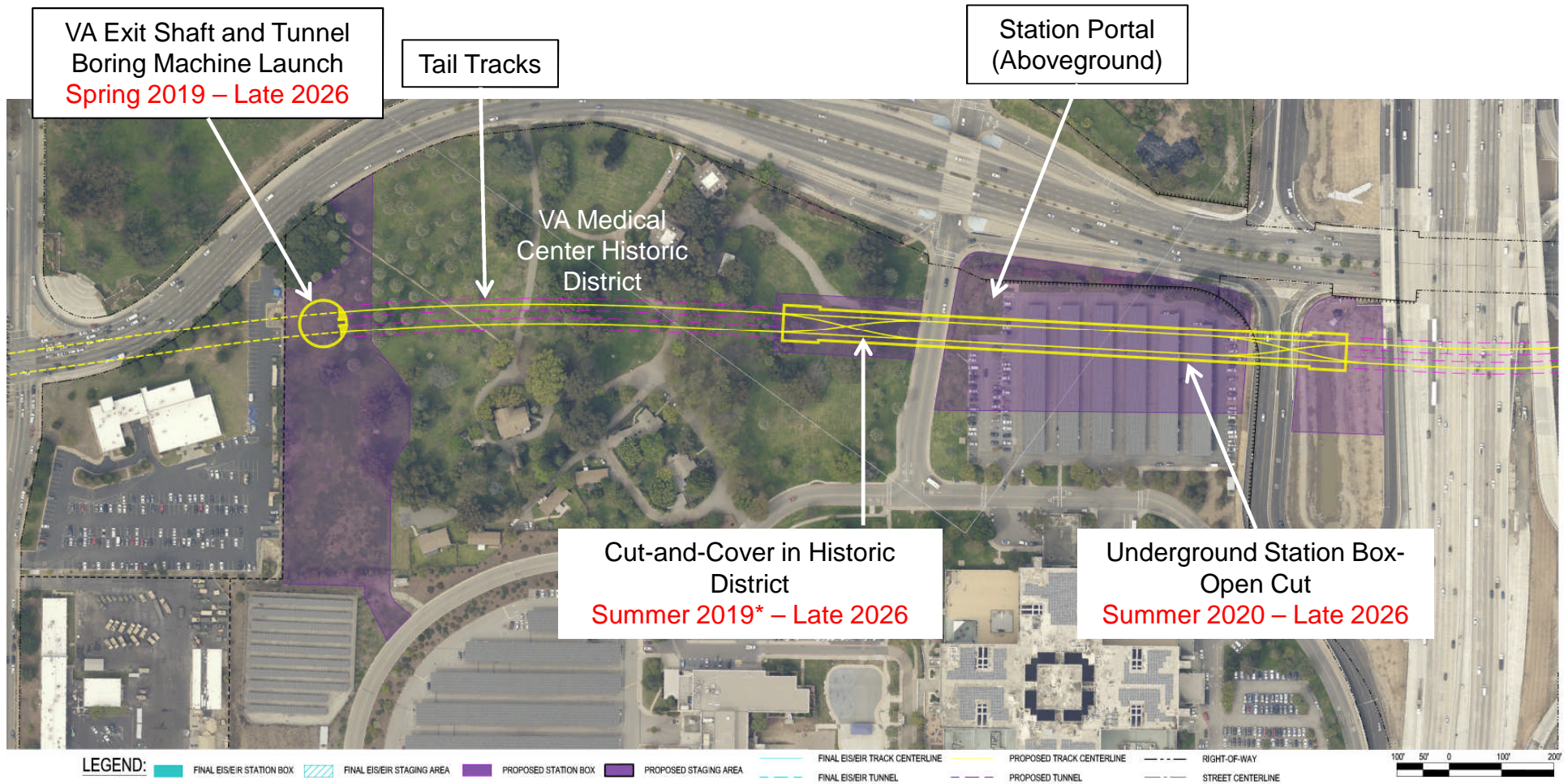
LEGEND: MURAL TO BE RETAINED PROPOSED MOSAIC WALL RIGHT-OF-WAY PROPOSED NEW TRAFFIC SIGNAL
 MURAL TO BE REMOVED STREET CENTERLINE



VA Hospital Station

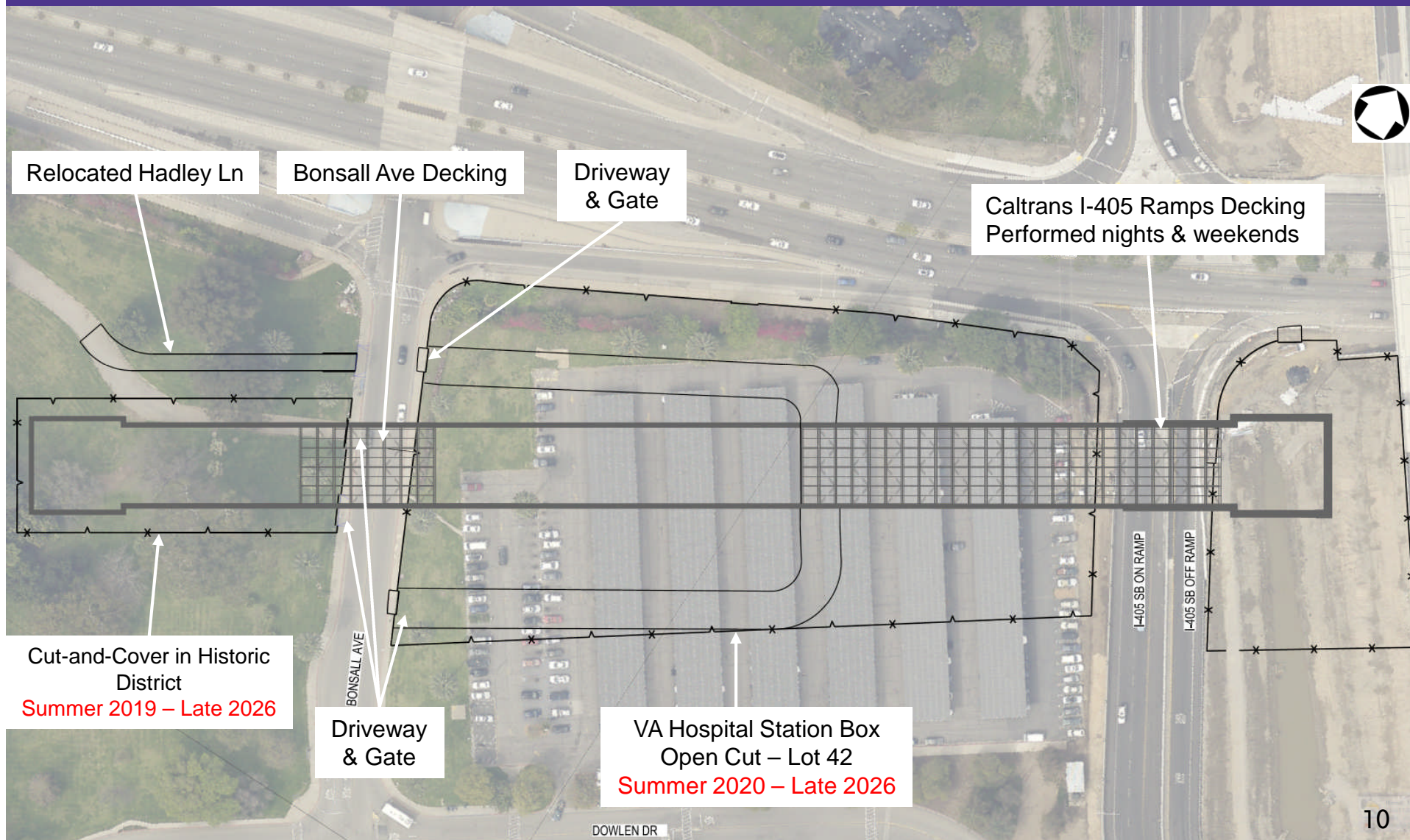
Construction Staging and Alignment

DRAFT

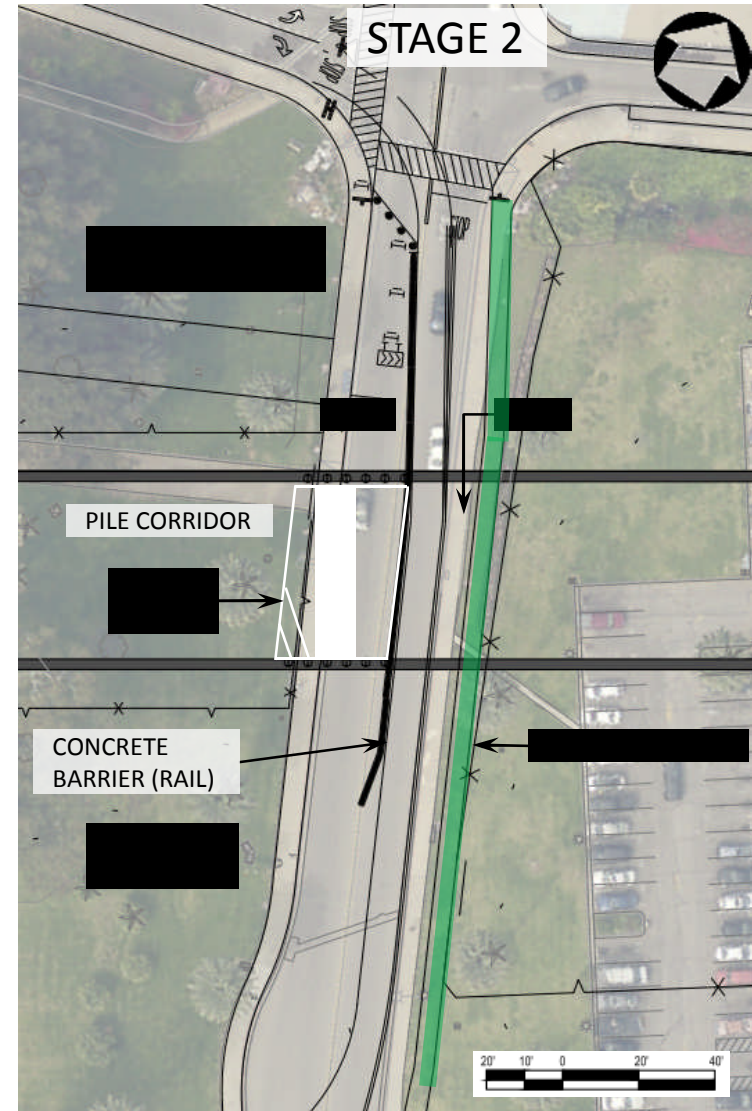
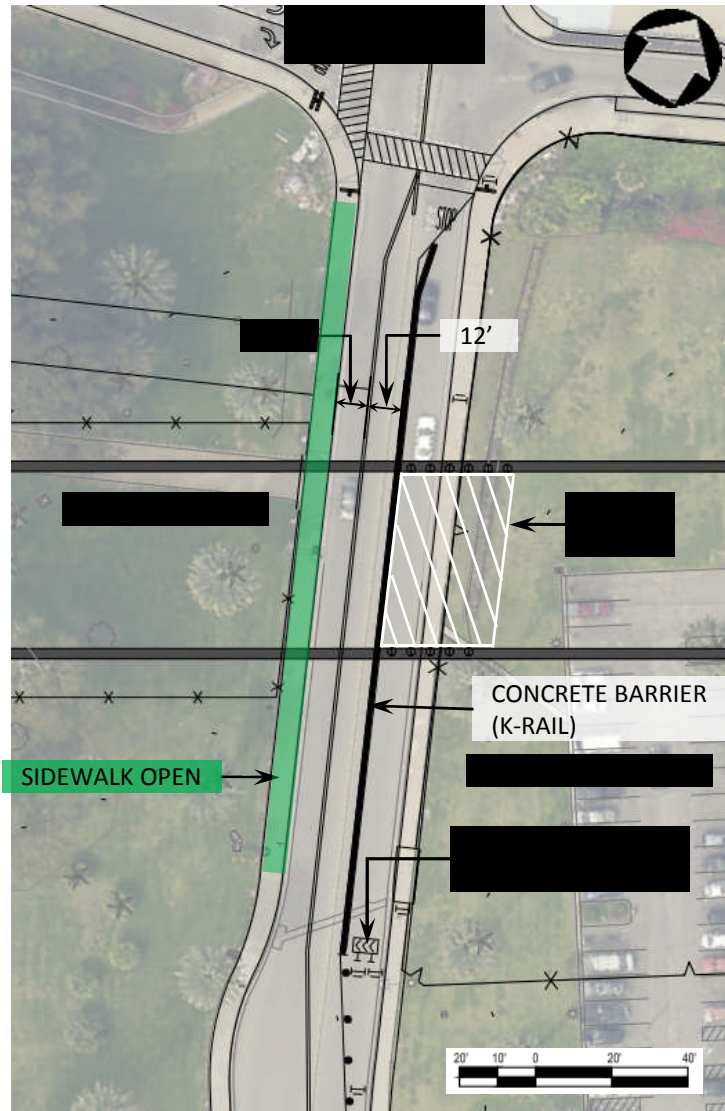


Station Staging Area

DRAFT

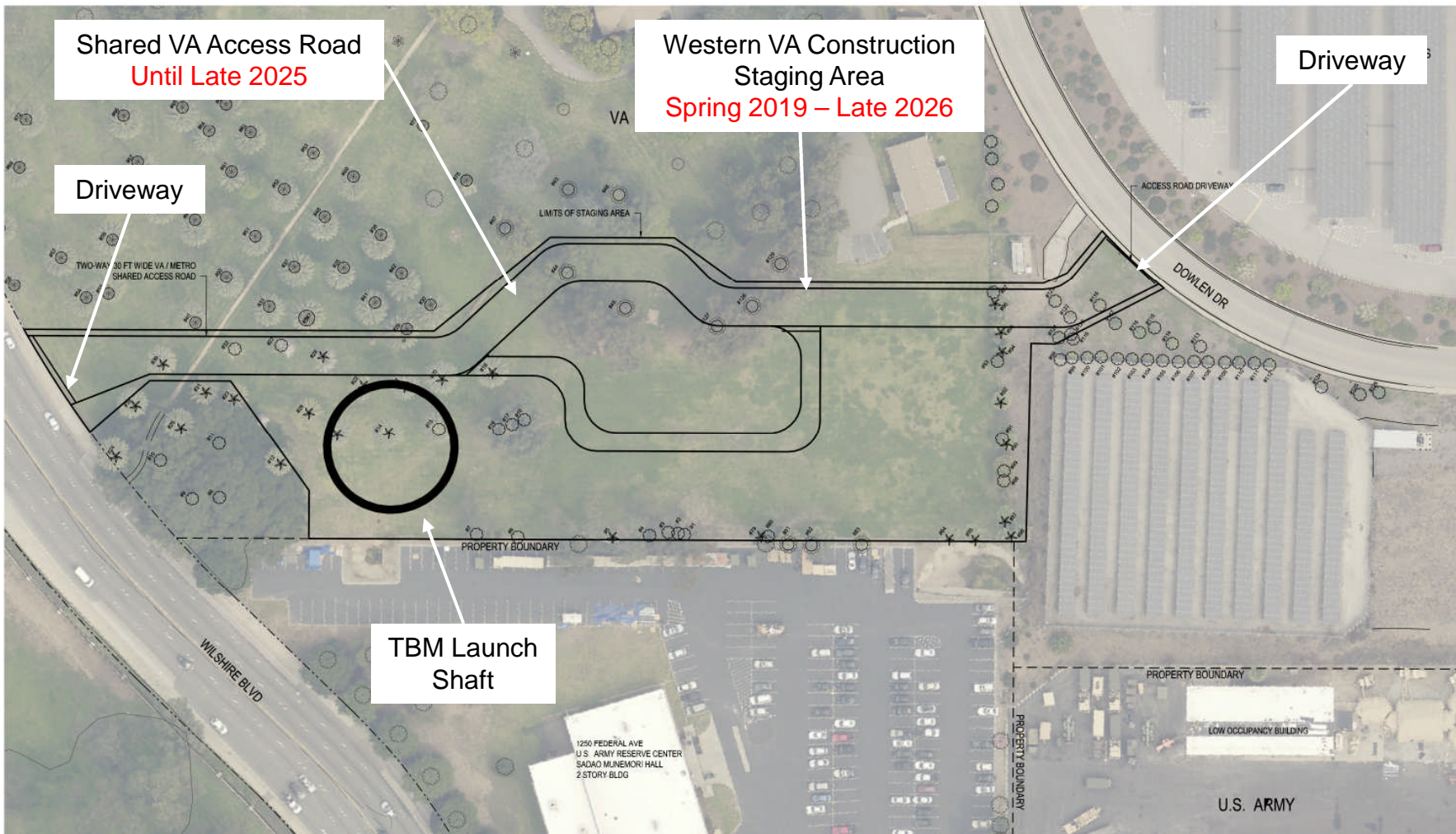


Pedestrian and Vehicular Access to Bonsall Avenue Maintained



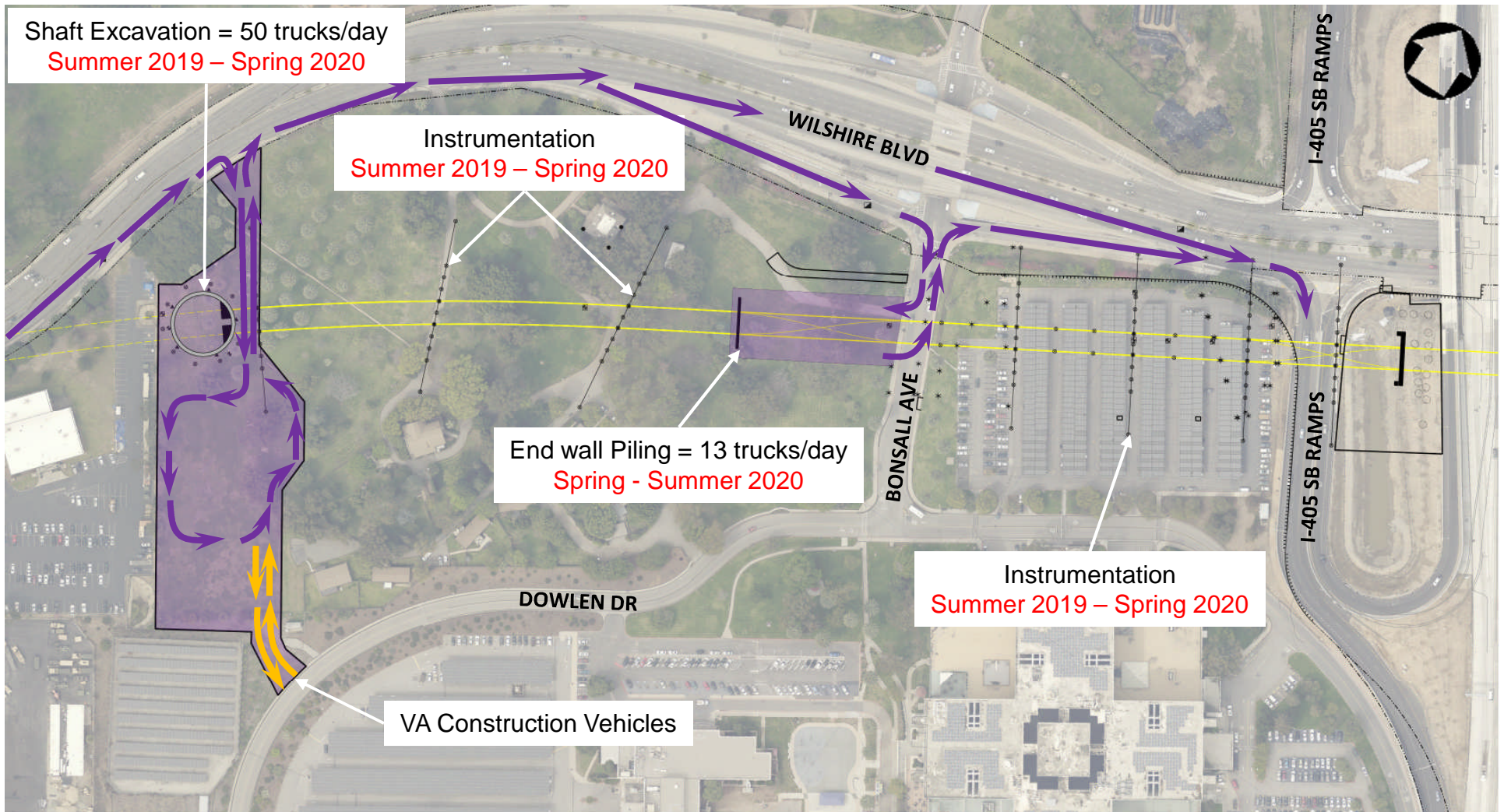
Tunnel Staging Area

DRAFT



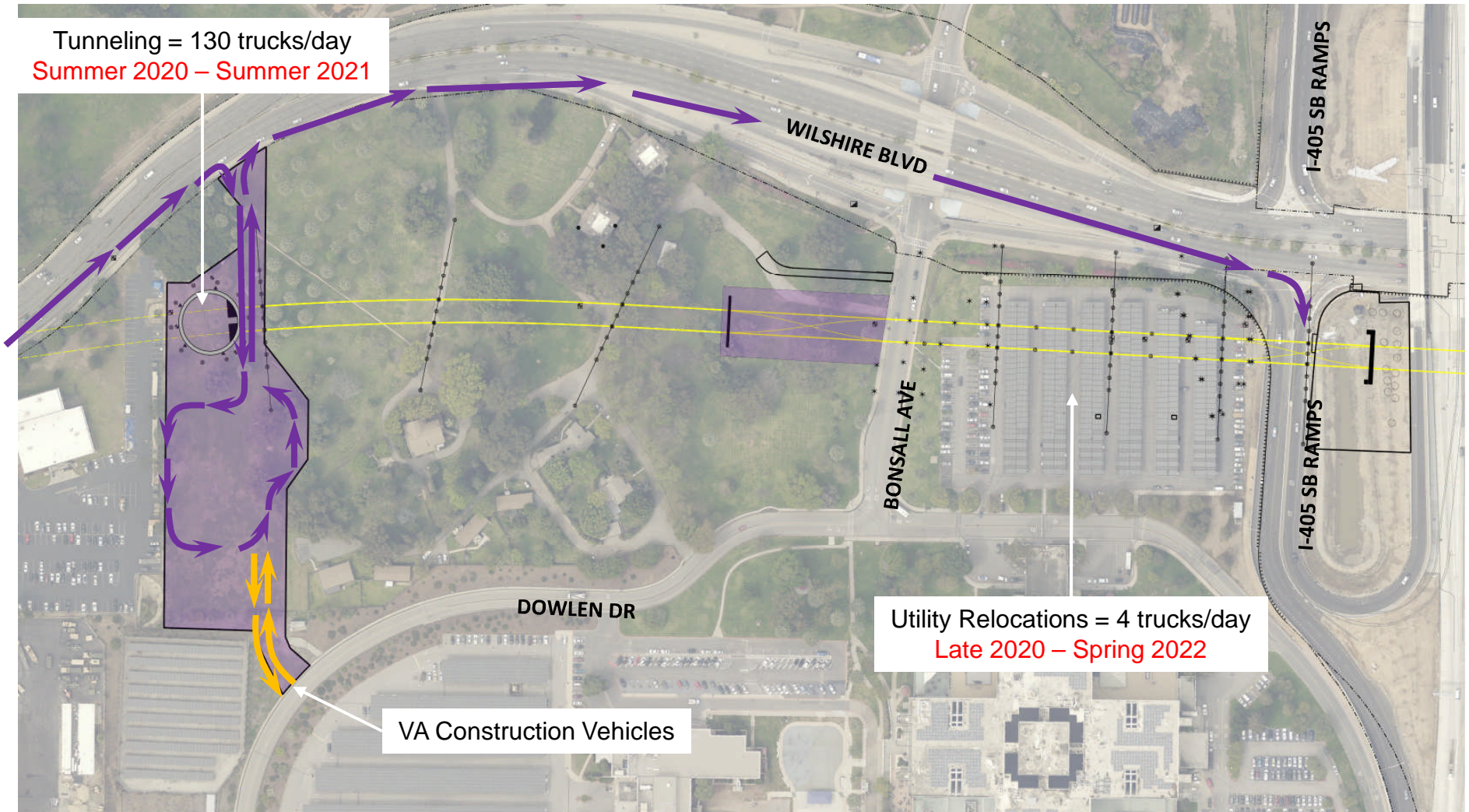
Stage 1 – Major Truck Trips

DRAFT



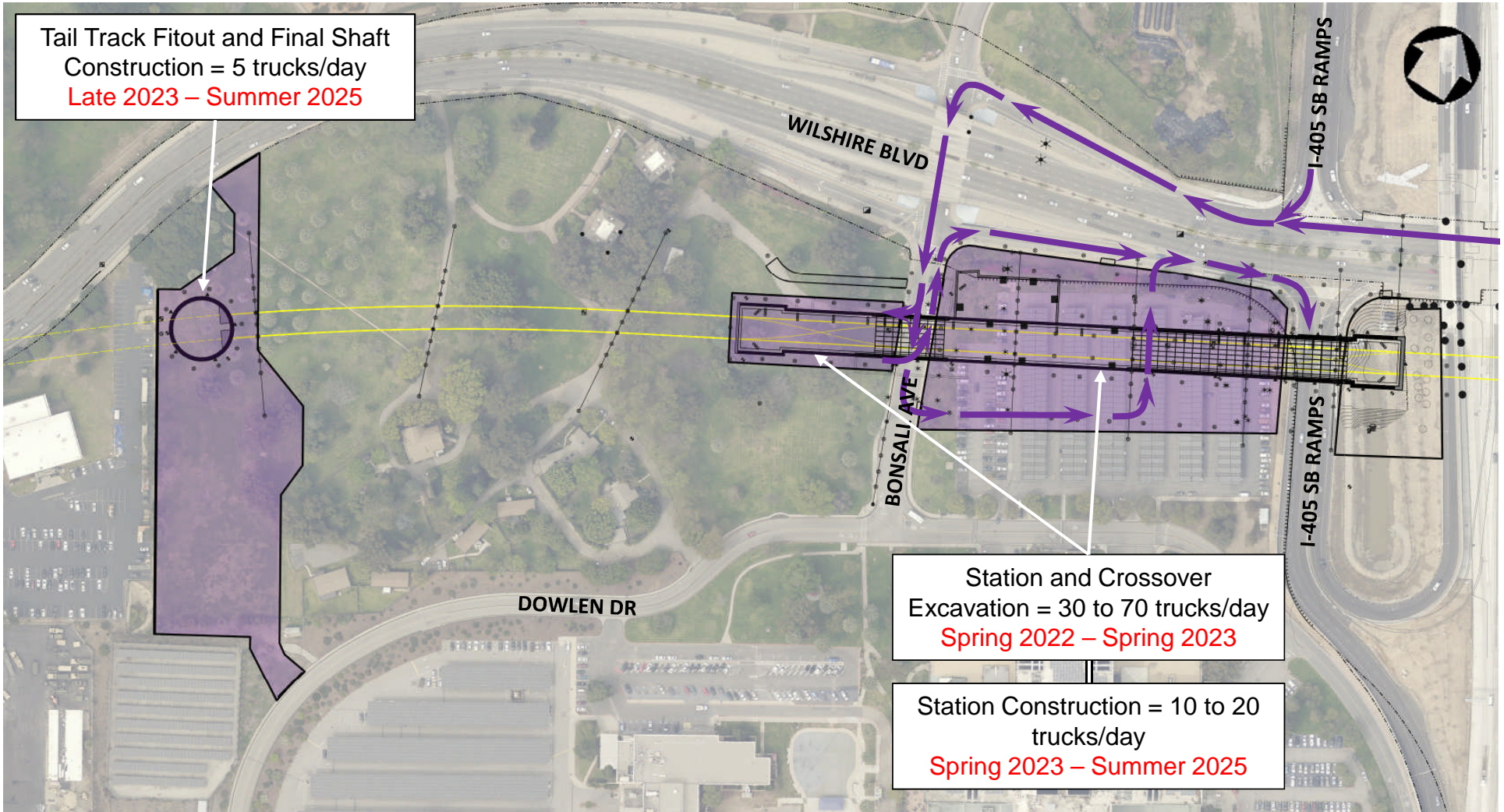
Stage 2 – Major Truck Trips

DRAFT



Stage 3 – Major Truck Trips

DRAFT



Forecasted Schedule

Dates are preliminary and subject to change

Westside Purple Line Extension, Section 3

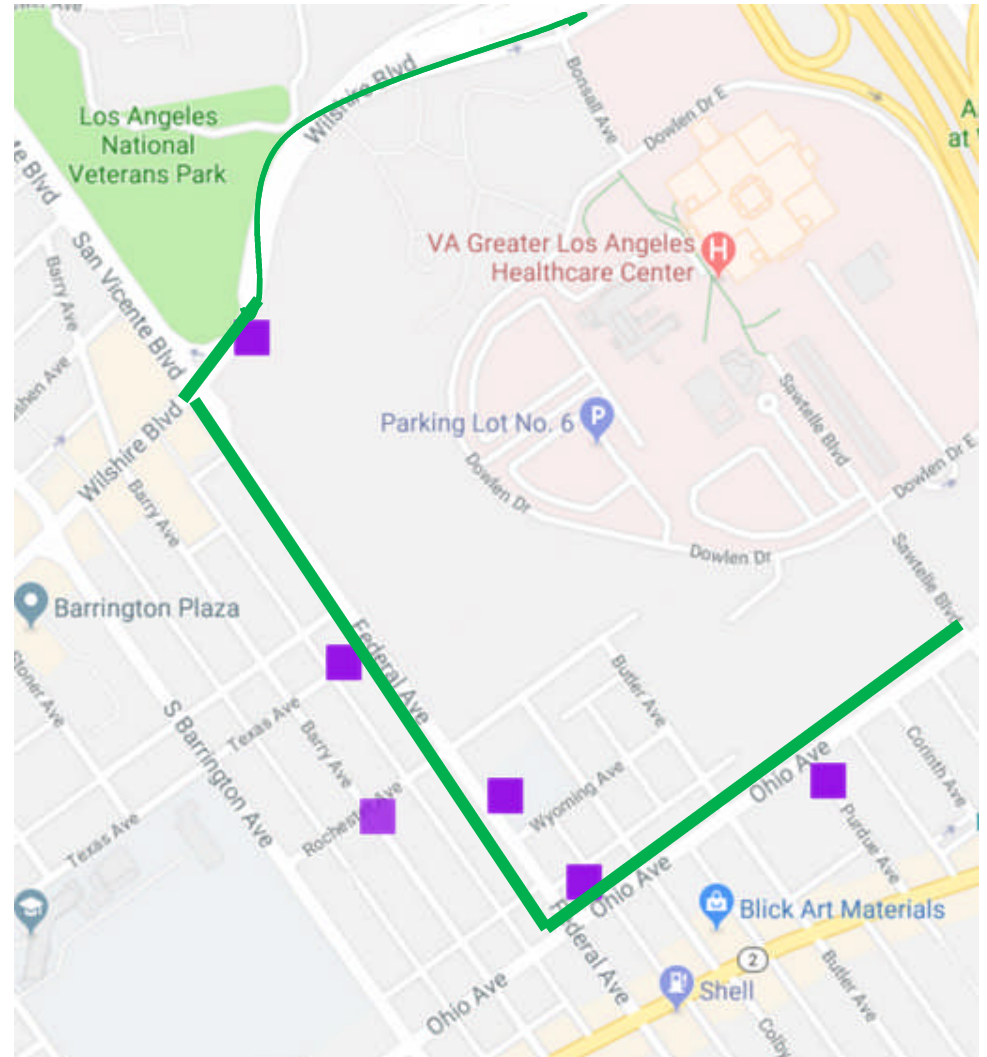
Summary Activity	Construction Year																
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Advance Utility Relocation	■	■	■	■	■	■											
TBM Launch Box Piling / Excavation at Western VA Staging Area		■	■														
Tunneling			■	■	■	■	■										
Cross Passages				■	■												
Tunnel Invert and Walkway						■	■	■									
Station Construction				■	■	■	■	■	■	■	■	■					
Systems Installation and Facilities													■	■	■	■	
Station Backfill and Street Restoration													■	■	■		

VA Hospital Station

Future SCE Work

Power connection

- Anticipated January 2019
- One year of work
- Work hours: Ohio and Federal, 9am-3:30pm
- Work hours: Wilshire, 9pm-6am
- Traffic maintained in each direction
- Temporary parking restrictions, 2 blocks at a time



Construction Staging Yards

Wilshire/La Brea

- Equipment, vehicle and material storage
- 20 foot sound wall noise mitigation



Construction Staging Yards

Wilshire/Western



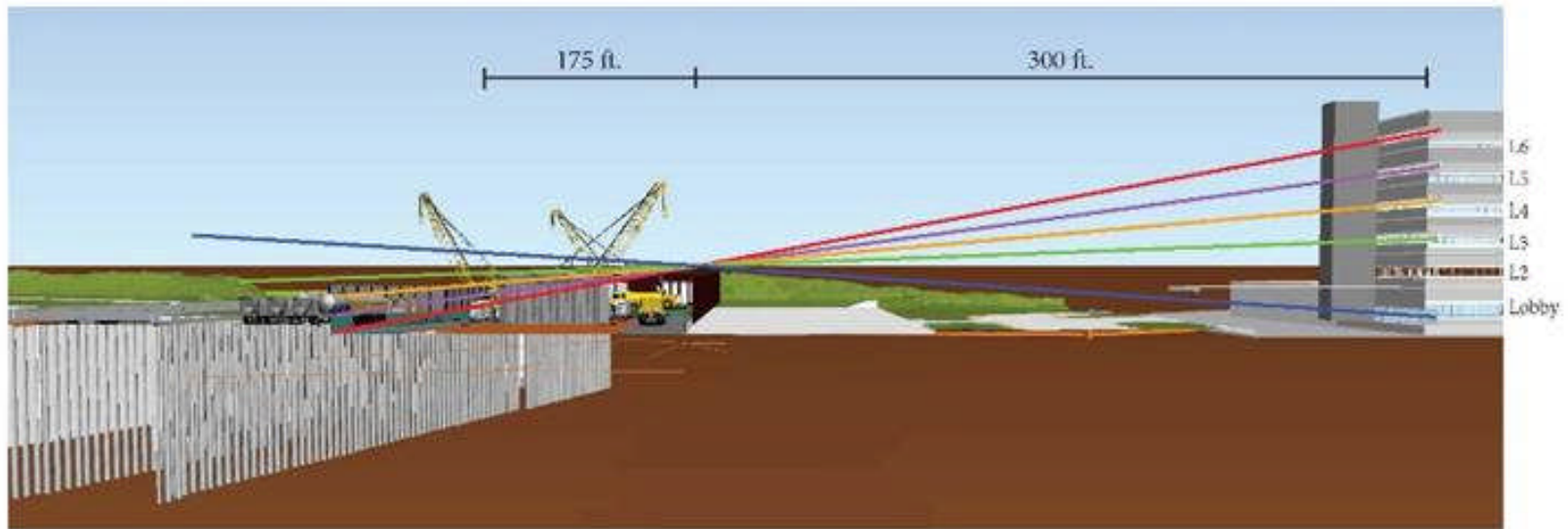
Construction Staging Yards

Wilshire/La Cienega

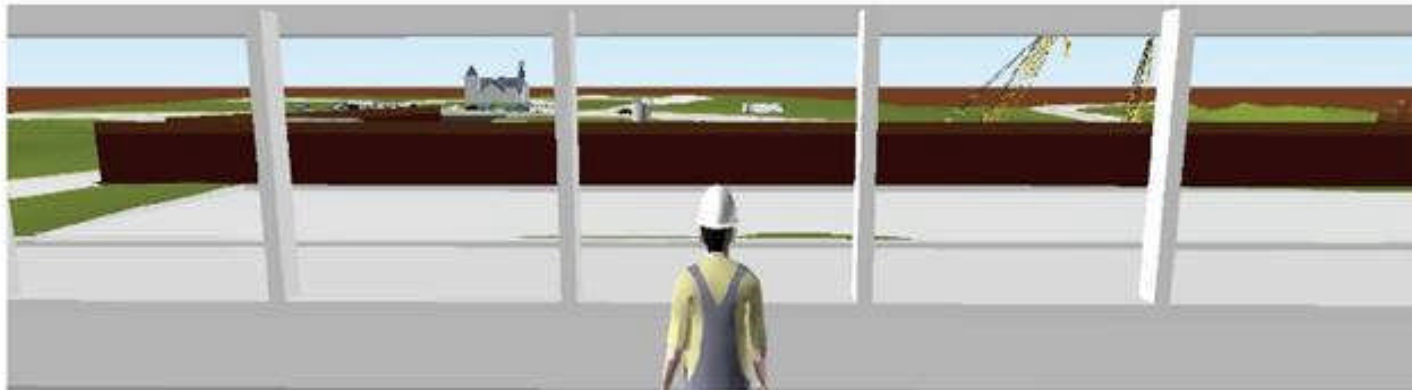
- Equipment, vehicle and material storage
- 20 foot sound wall noise mitigation



Sight Lines

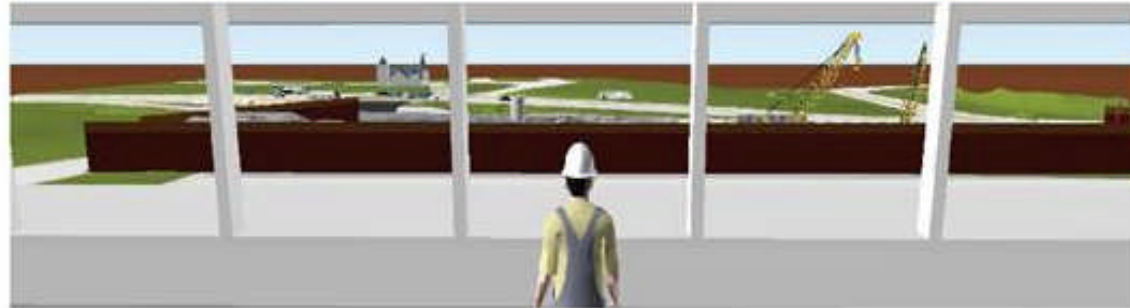


Level 3



Sight Lines

Level 4



Level 5



Level 6



Noise Mitigation Measures

Noise Control

- All construction personnel will attend Noise Awareness Training provided by Metro
- Moveable noise barriers
- Noise control curtains
- Noise muffling enclosures on stationary equipment
- No idling of heavy equipment when not in use
- No slamming tailgates
- Configure operations to eliminate backing movements
- Maintain equipment to avoid rattling and banging of parts
- Keep noise levels relatively uniform, avoid excessive and impulse noises
 - Truck Manager will be onsite to ensure that trucks idle in and out of site to reduce noise levels at the site



Air Quality Mitigation Measures

Construction Air Quality Compliance

- Activities must comply with South Coast Air Quality Management District (SCAQMD) Rule 403, the reduction and control of fugitive dust
- Construction equipment is required to be registered with the California Air Resource Board (CARB)
- Use of Tier 4 equipment is required, which reduces emissions by over 95%
- Inspectors and Monitors actively observe daily activities and track compliance
- Report dust concerns to SCAQMD via 800-288-7664



Vibration & Dust Mitigation Measures

Vibration

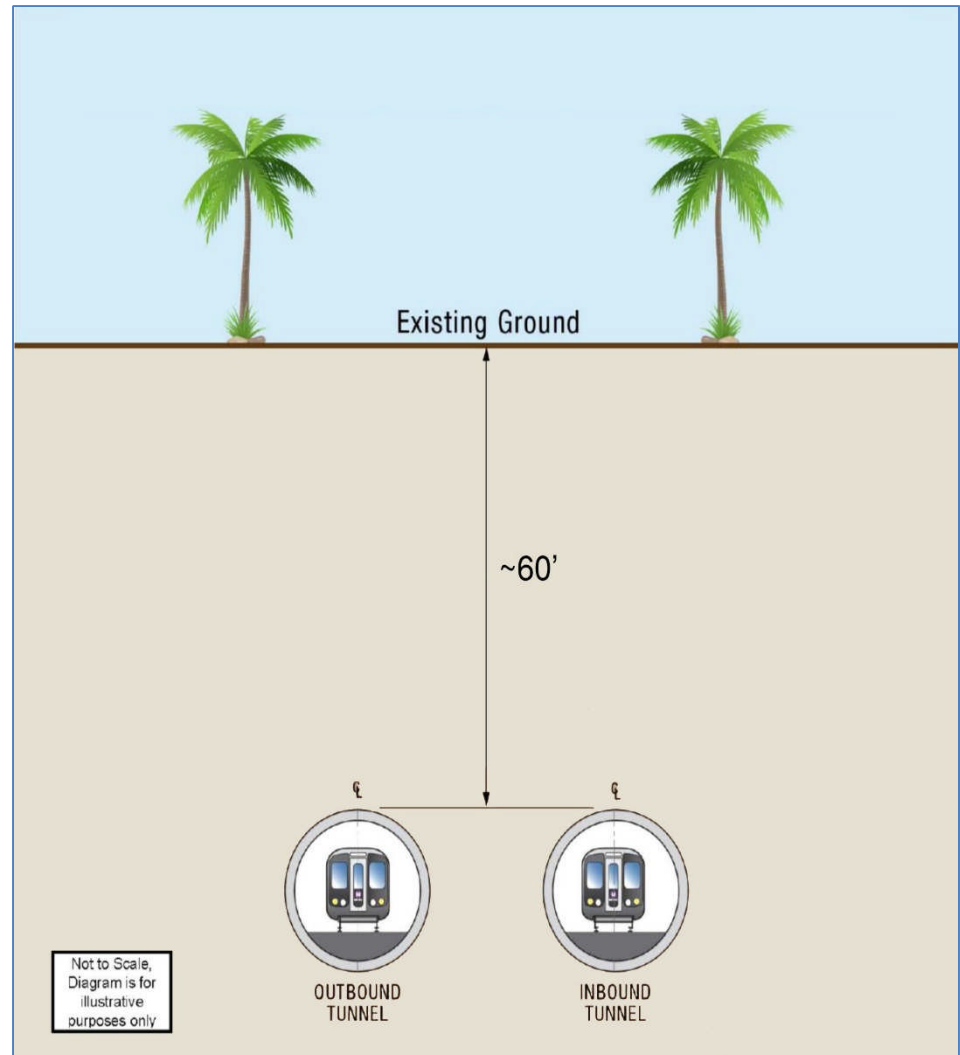
- Vibration Monitoring will be implemented
- If vibration approaches FEIS/R threshold, then operations causing higher levels of vibration will be minimized
- Vibration exceedance will cause all work activities to stop until corrective active measures can be implemented

Dust

- During demo, water will be used to control fugitive dust
- Use tarped trucks / covered loads
- Hand sweep work area prior to opening traffic
- Implementation of the Mitigation Monitoring Reporting Program (MMRP)
 - Dust control during transport, no idling of heavy equipment, maintenance of construction equipment
- Metro's Green Construction Policy sets rigorous standards for equipment emissions
- Implementation of Best Management Practices (BMPs)
 - Street watering, street sweeping, truck wheel track outs, wheel wash

Tunnel Alignment

- Standard tunnel alignment will be approximately 90-110 feet underground.
- Top of tunnels will be approx. 60 feet underground.
- You will not be able to see, hear or feel the subway underground.



Metro Services for Veterans

Dennis Tucker, US Army, Retired

- Veterans Hiring Initiative Program
- Transportation for Veterans



Next Community Meeting

Section 3

Section 3 Pre-Construction Community Meeting

Thursday, September 13, 2018

6:30pm – 8pm

Westwood United Methodist Church

10497 Wilshire Bl

Los Angeles, CA 90024

310.474.4511

- Regular Joint VA and Metro meetings will be scheduled on campus.
- Meetings will begin as we get closer to construction starting in January 2019.



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Purple Line Extension

Section 3 Pre-Construction Community Meeting

September 13, 2018

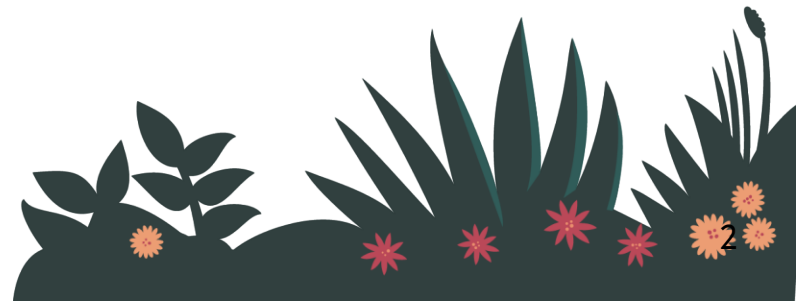


Agenda

- Project Overview and Schedule
- Pre-Construction: Advance Utility Relocation
- UCLA Station Design and Construction
- VA Station Design and Construction
- Metro's Green Construction Policy
- Questions



Metro



Purple Line Extension

Project Alignment



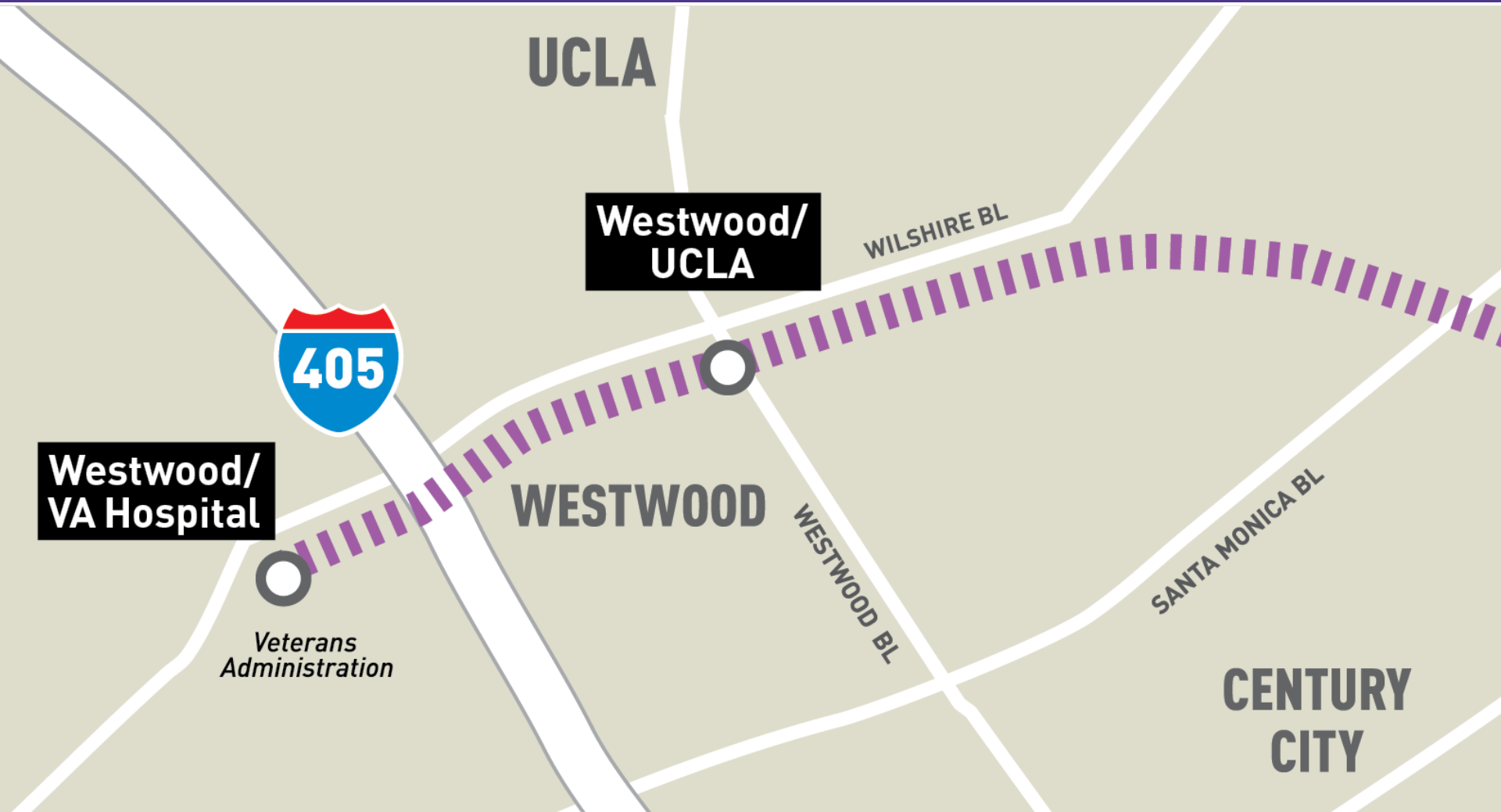
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New Stations	Wilshire/La Brea Wilshire/Fairfax Wilshire/La Cienega	Wilshire/Rodeo Century City/ Constellation	Westwood/UCLA Westwood/VA Hospital
Pre-Construction Activities	2014 – 2015	2016 – 2018	2018 – 2020
Construction	2015 – 2023	2018 – 2025	2019 – 2026
Operations	2023	2025	2026

Purple Line Extension

Section 3 Alignment



Section 3 Tentative Schedule

**Dates are preliminary and subject to change*

Westside Purple Line Extension, Section 3 Tentative Schedule

Summary Activity	Construction Year													
	2019		2020			2021		2022		2023		2024		2025
TBM Launch Box Piling / Excavation at Western VA Staging Area	█	█												
Tunneling			█	█	█	█	█							
Cross Passages						█	█	█						
Tunnel Invert and Walkway									█	█	█			
Station Construction				█	█	█	█	█	█	█	█	█		
Systems Installation and Facilities													█	█
Station Backfill and Street Restoration												█	█	█

Pre-Construction

Advanced Utility Relocation (AUR)

- **Utility relocations**
 - Clear the way for station construction
 - Telecom, gas, water, electricity, sewer
 - Ensure continued utility service
 - May 2018 – April 2020
 - **Permitted Work Hours:**
 - Monday-Friday: 9pm – 6am
 - Weekend Work: Friday, 9pm – Monday, 6am
- **Typical process:**
 - Hours and traffic plans approved by City of Los Angeles
 - Maintain at least one lane of traffic in each direction on Wilshire
 - Truck/crew leave and lanes reopen at the end of each work period
 - Noisiest activities include saw-cutting and jack-hammering



Metro

Pre-Construction

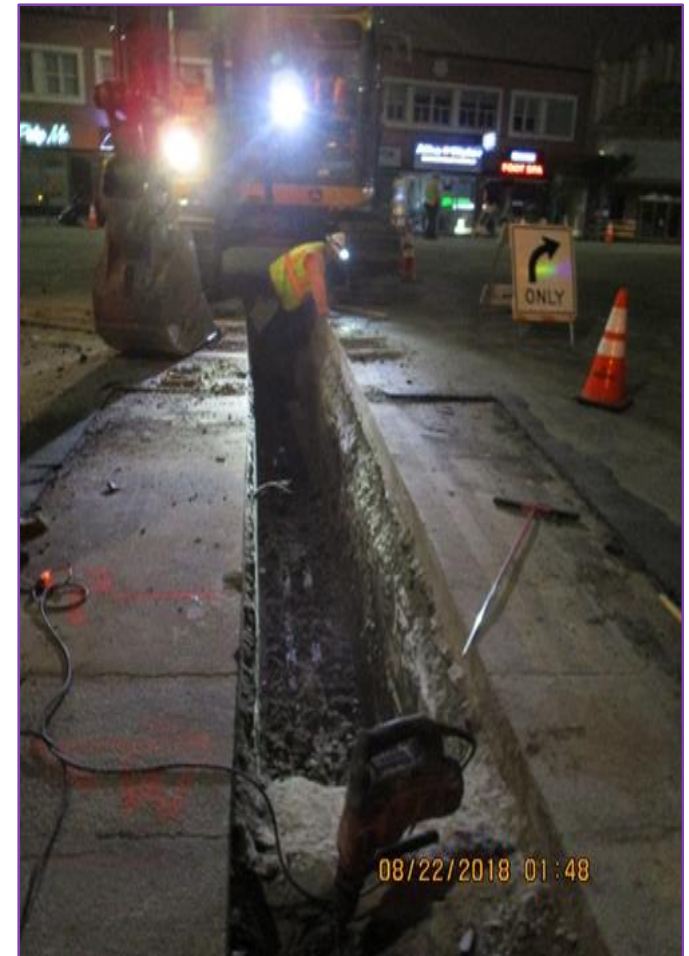
Advanced Utility Relocation (AUR)



Advance Utility Relocation

Wilshire Bl

Metro contractors pouring a concrete encasement for a duct bank.



Advance Utility Relocation

Westwood Bl

Relocating an 8 inch waterline, 4 feet below the street surface.



Advance Utility Relocation

Westwood Bl



Holiday Moratorium 2018

- Metro is seeking to obtain a waiver for the 2018 Holiday Season Moratorium
- Allows work from **Monday, Nov. 19** through **Tuesday, Jan. 1, 2018**.
- Work will continue at night, 9pm to 6am, and on weekends.
 - *Example:* No work is planned for Wednesday through Sunday of Thanksgiving week

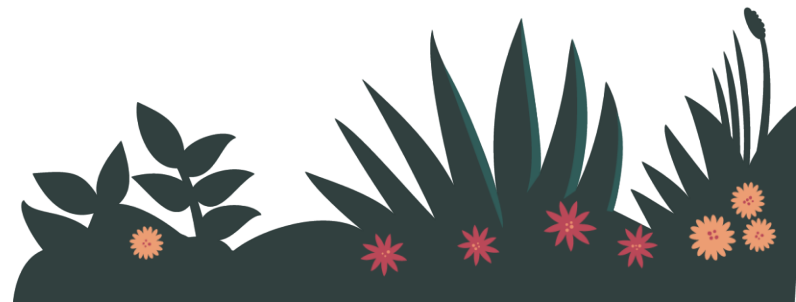


Holiday Moratorium 2018

- All construction closures will follow DOT-approved Worksite Traffic Control Plans.
- The City of LA reserves the option to make changes after the moratorium takes effect, depending on conditions
- Metro contractor must maintain all work permits, Traffic Control Plans and a copy of the waiver on-site.

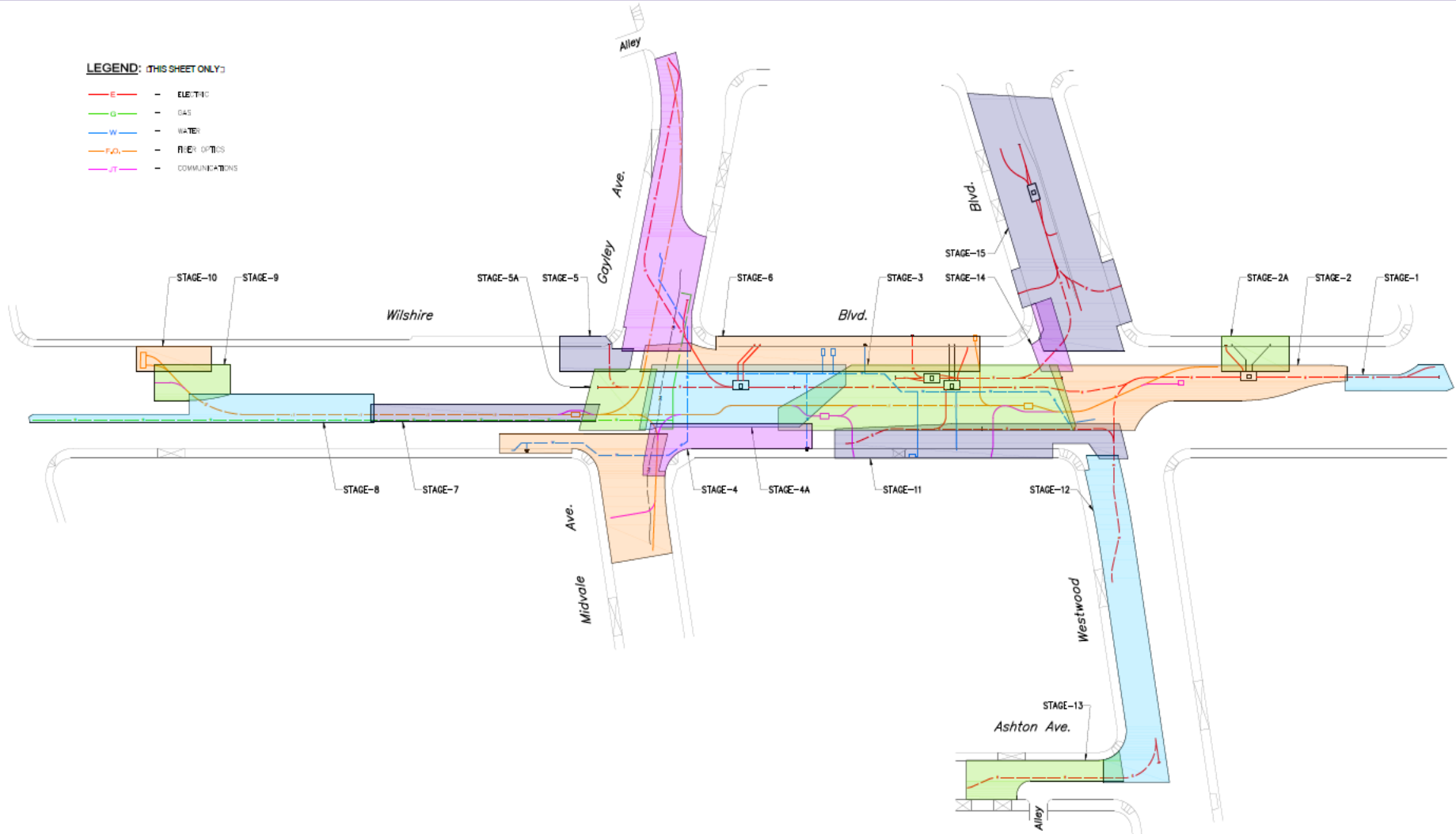


Metro



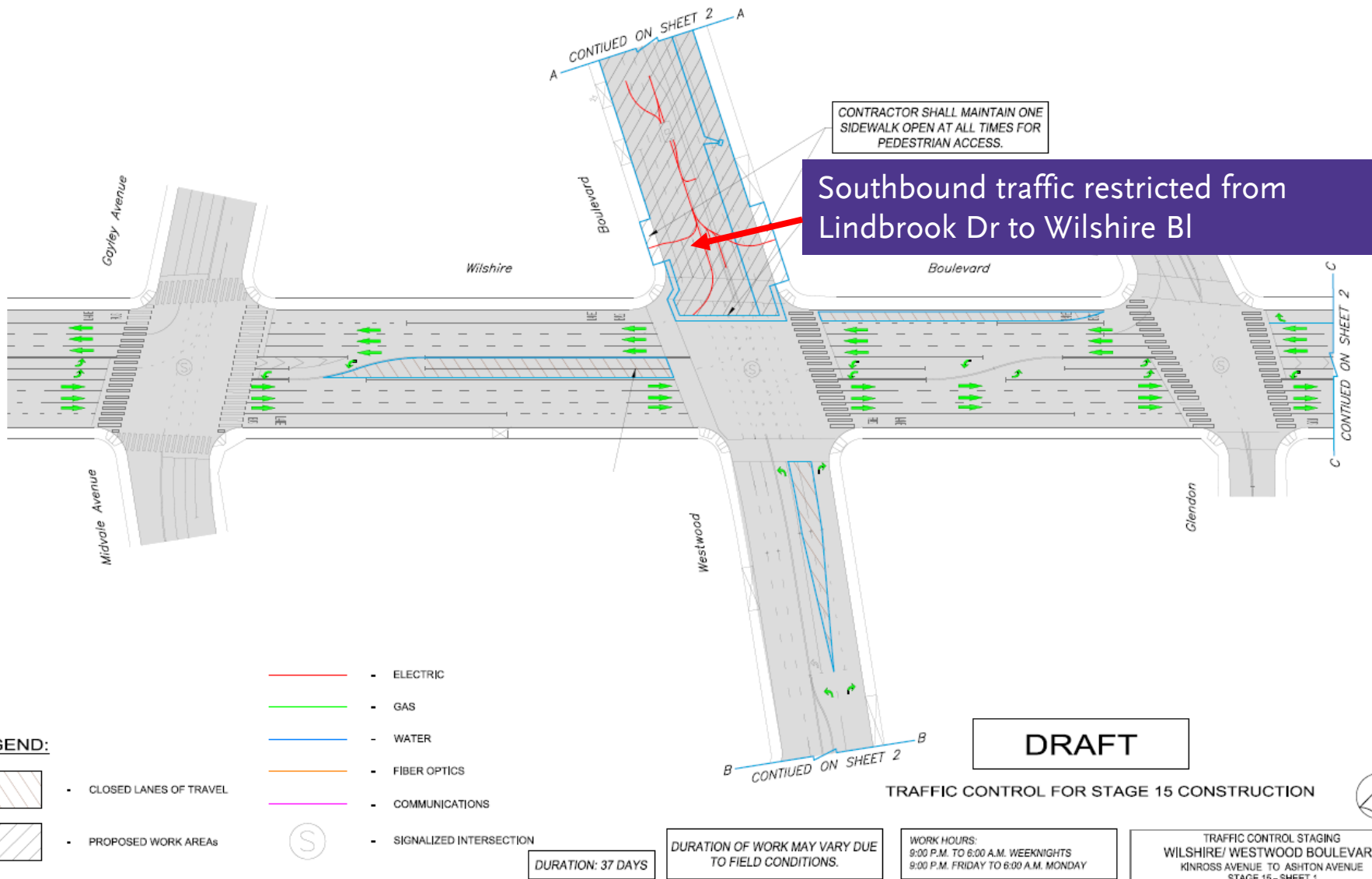
Advanced Utility Relocation (AUR)

Westwood/UCLA Station



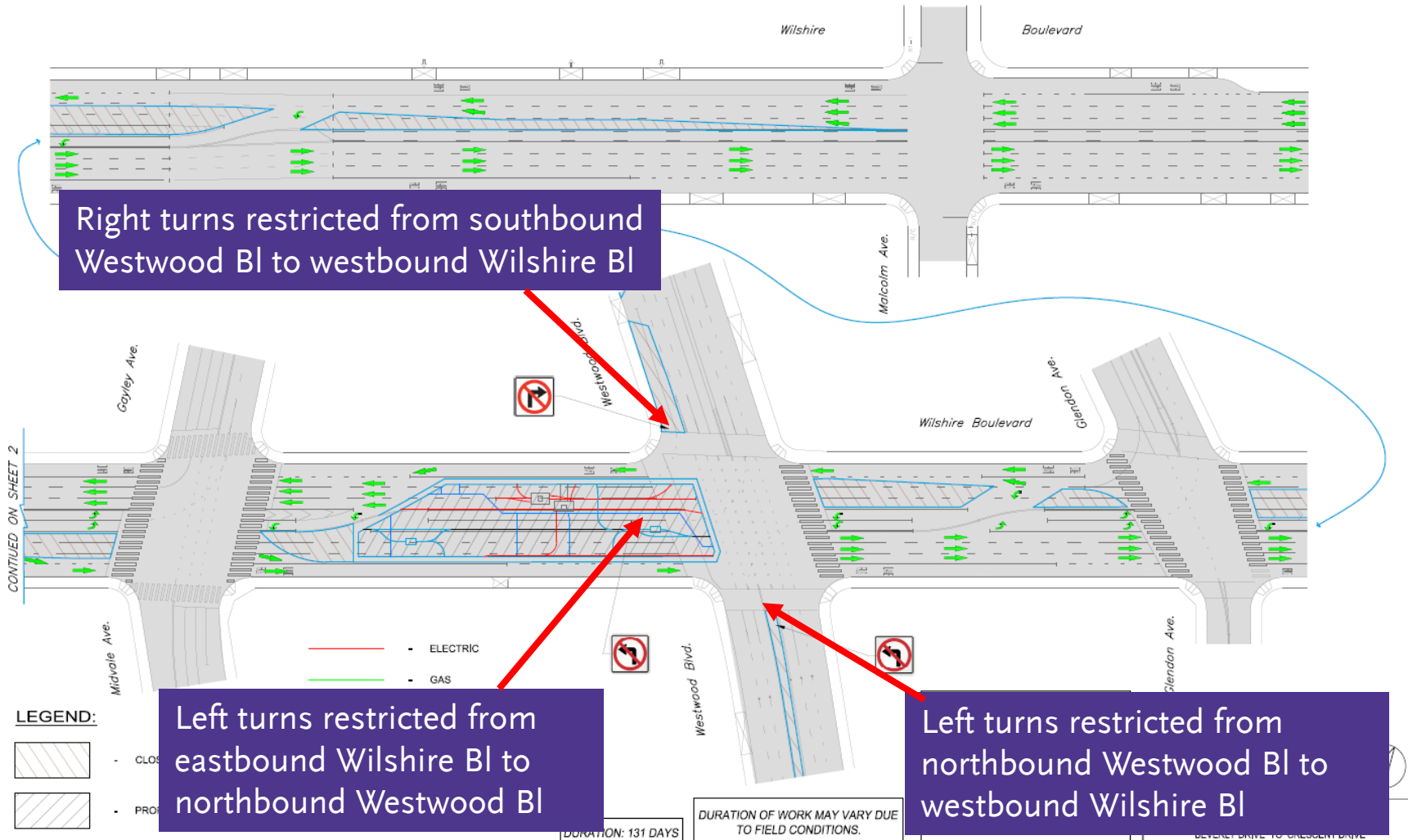
Stage 15: 37 days

Weeknights 9pm-6am / 9pm Friday to 6am Monday



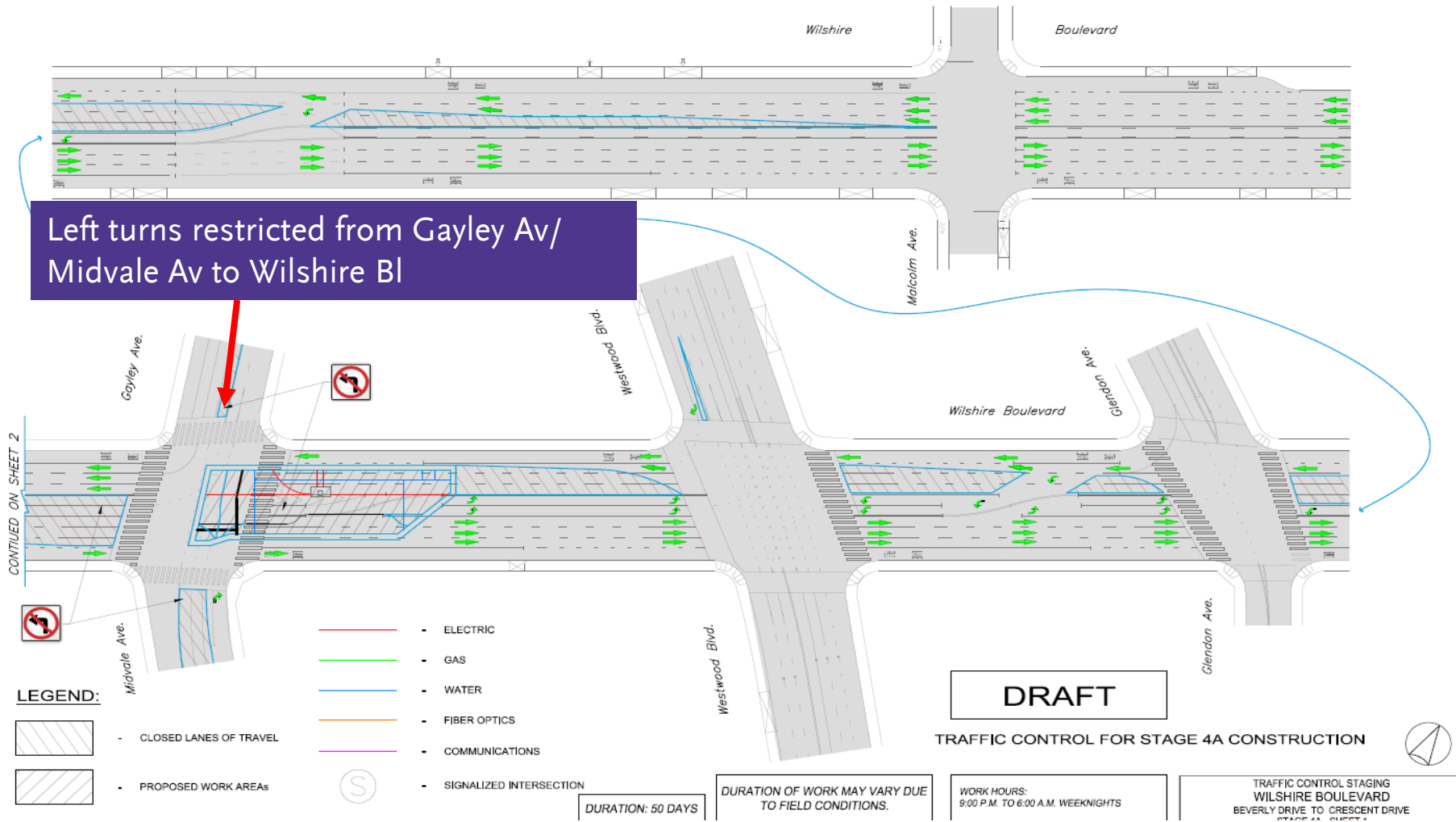
Stage 3: 131 days

Weekday nights 9pm - 6am



Stage 4A: 50 days

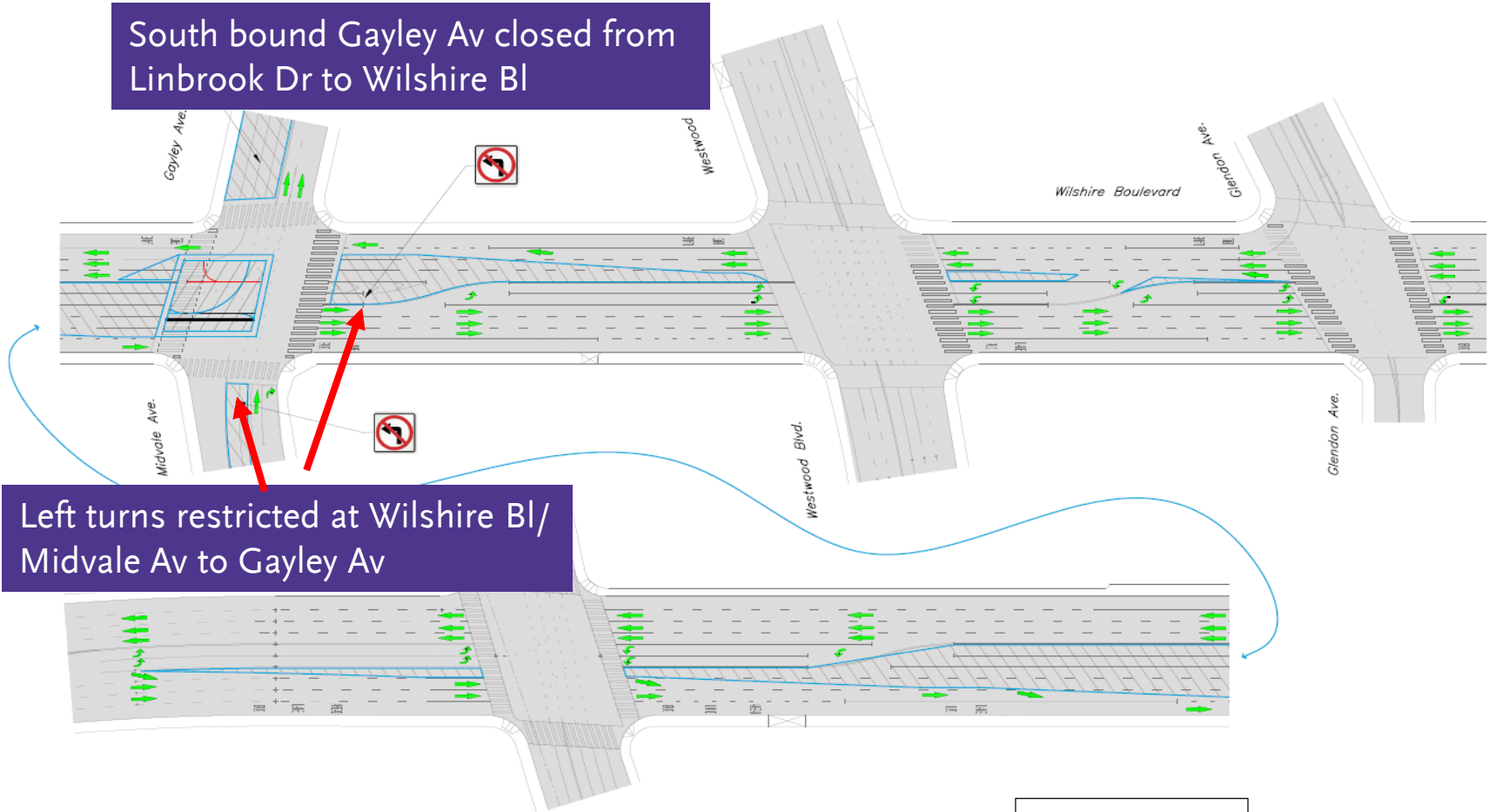
Weekday nights 9pm - 6am



Stage 5A: 24 days



Weekday nights 9pm - 6am




South bound Gayley Av closed from
Linbrook Dr to Wilshire Bl






Left turns restricted at Wilshire Bl/
Midvale Av to Gayley Av

LEGEND:

-  - CLOSED LANES OF TRAVEL
-  - PROPOSED WORK AREAS

-  - FIBER OPTICS
-  - COMMUNICATIONS
-  - SIGNALIZED INTERSECTION

-  - ELECTRIC
-  - GAS
-  - WATER

DURATION: 24 DAYS

DURATION OF WORK MAY VARY DUE
TO FIELD CONDITIONS.

DRAFT

TRAFFIC CONTROL FOR STAGE 5A CONSTRUCTION

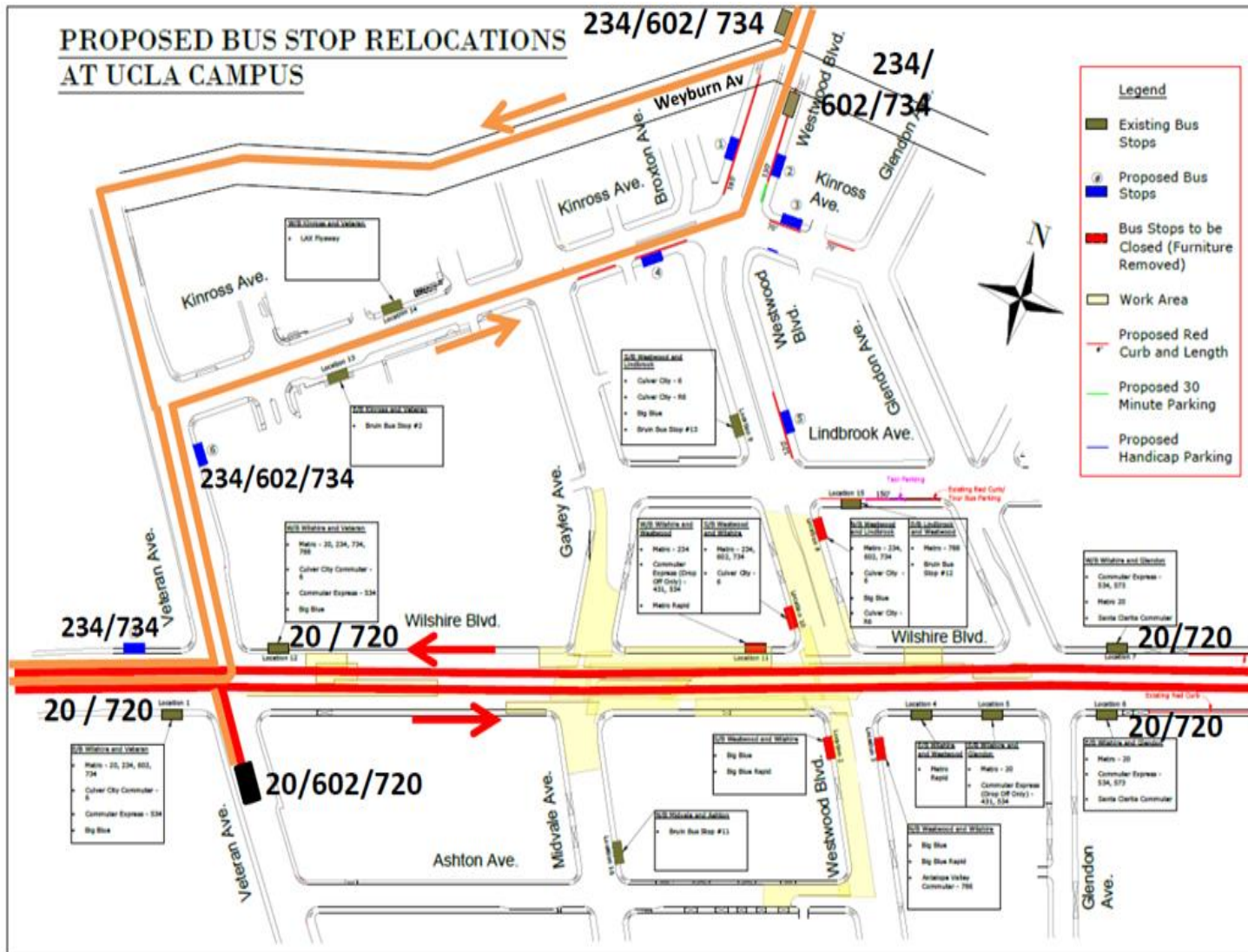
WORK HOURS:
9:00 P.M. TO 6:00 A.M. WEEKNIGHTS

TRAFFIC CONTROL STAGING
WILSHIRE BOULEVARD
BEVERLY DRIVE TO CRESCENT DRIVE



Bus Stops Relocated

Coordination with 7 Transit Agencies



- Culver City
- LADOT Transit
- Santa Monica Big Blue Bus
- Antelope Valley
- Santa Clarita
- UCLA Bruins
- LAX Flyaway
- When northbound Westwood is closed to thru traffic at Wilshire, buses will detour to eastbound Wilshire and then northbound Glendon

Westwood/UCLA

Station Rendering



Westwood/UCLA

Schedule – Key Dates*

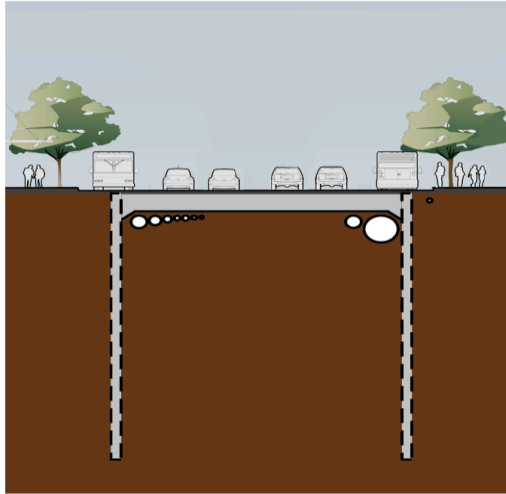
**Dates are approximate and subject to change.*

Activity	Forecast Start	Forecast Finish
Advance Utility Relocation (AUR)	May 2018	April 2020
End-wall piling at UCLA Station	April 2020	September 2020
City sewer/storm drain relocation	October 2020	May 2021
Station piling and decking	April 2021	May 2022
Revenue/service operations	March 2026	

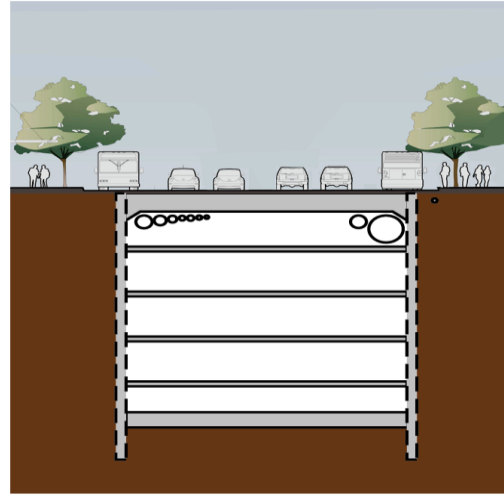
Westwood/UCLA Station Outline



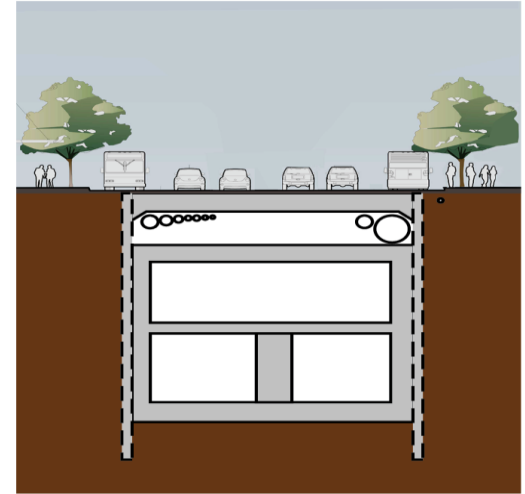
Typical Station Construction



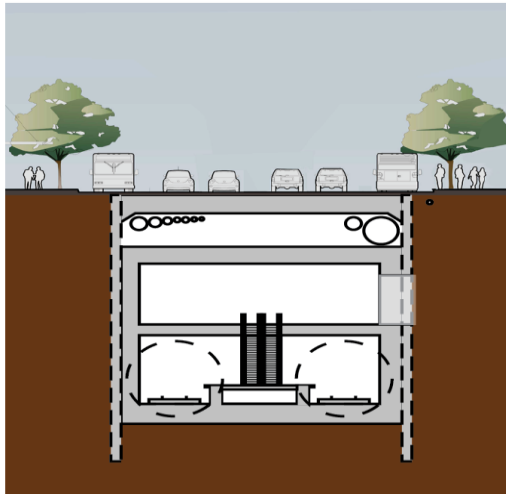
Install Piles and Decking



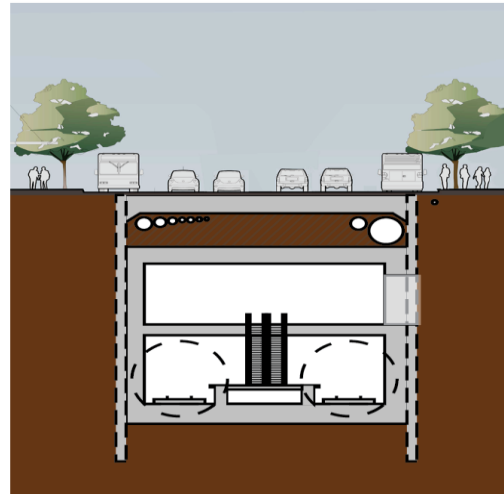
Excavate and Install Supports
(from beneath decking)



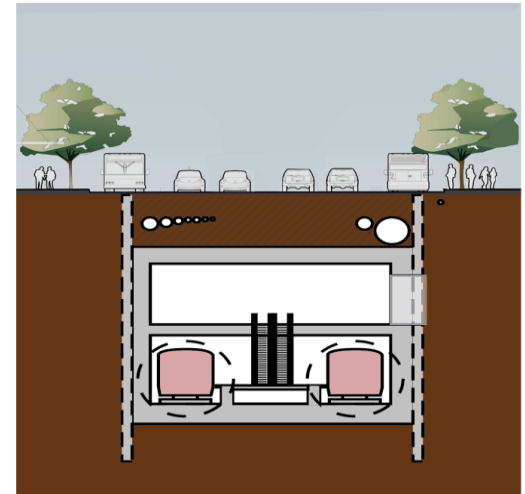
Construct Station Box



Complete Station Box

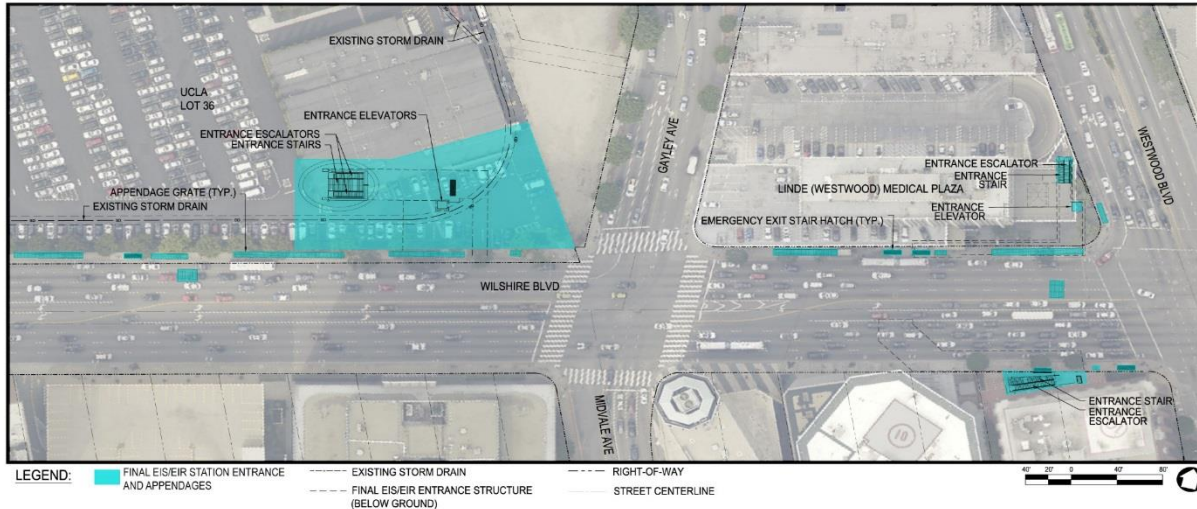


Backfill Above Structure

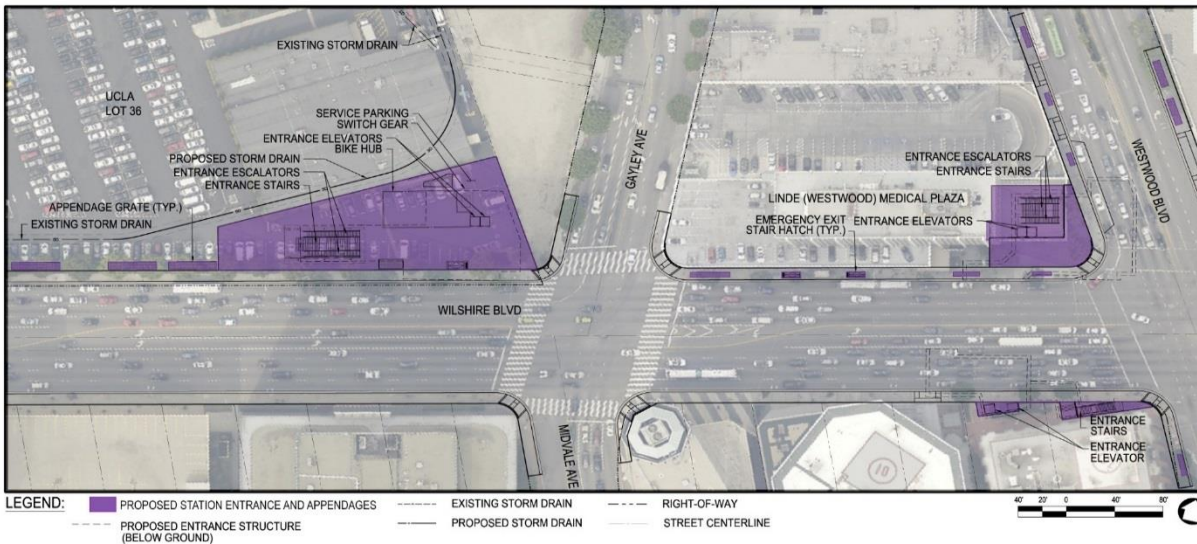


Remove Decking and
Restore Street

Westwood/UCLA Station Entrances

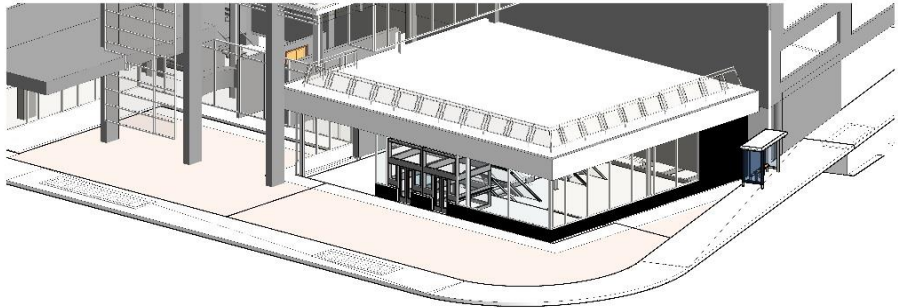
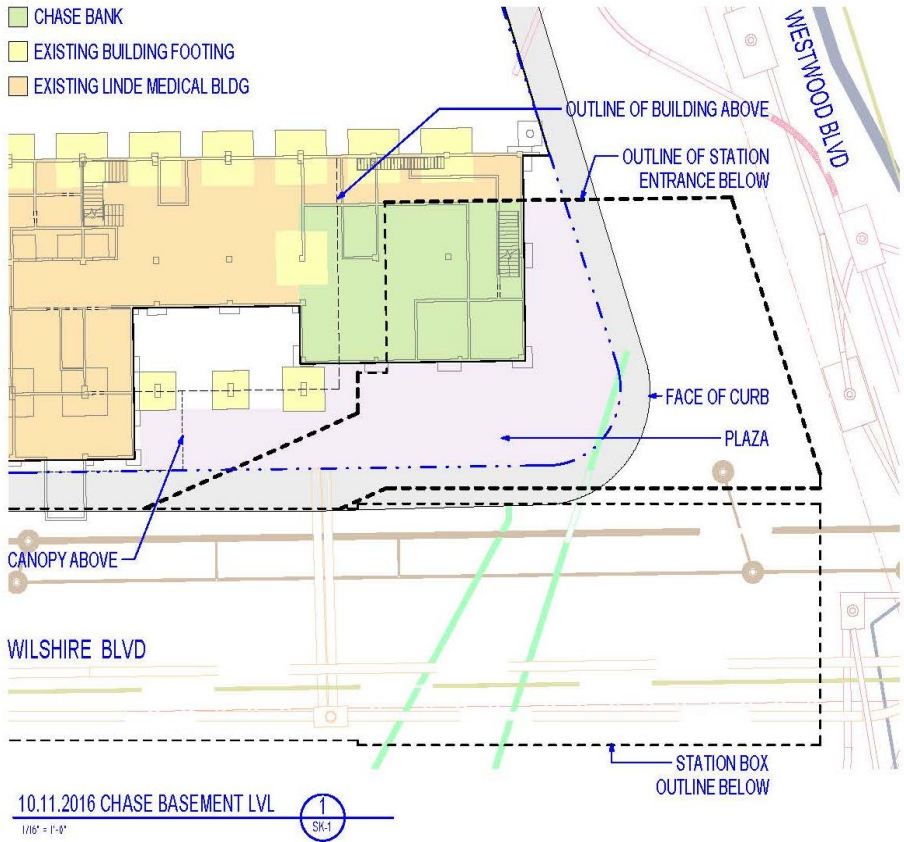


Final EIS/EIR



Current Design

Northeast Full Entrance – Chase Bank



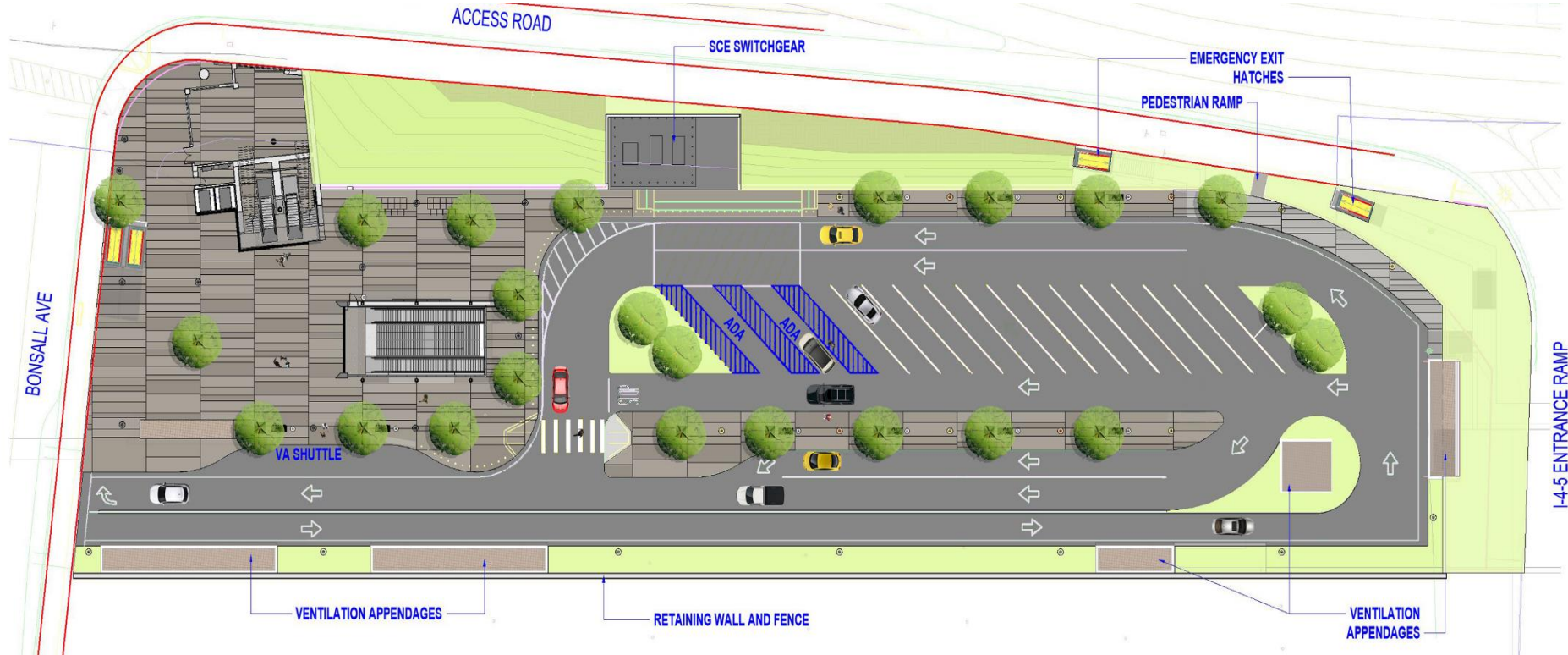
Westwood/VA Hospital

Current Station Rendering



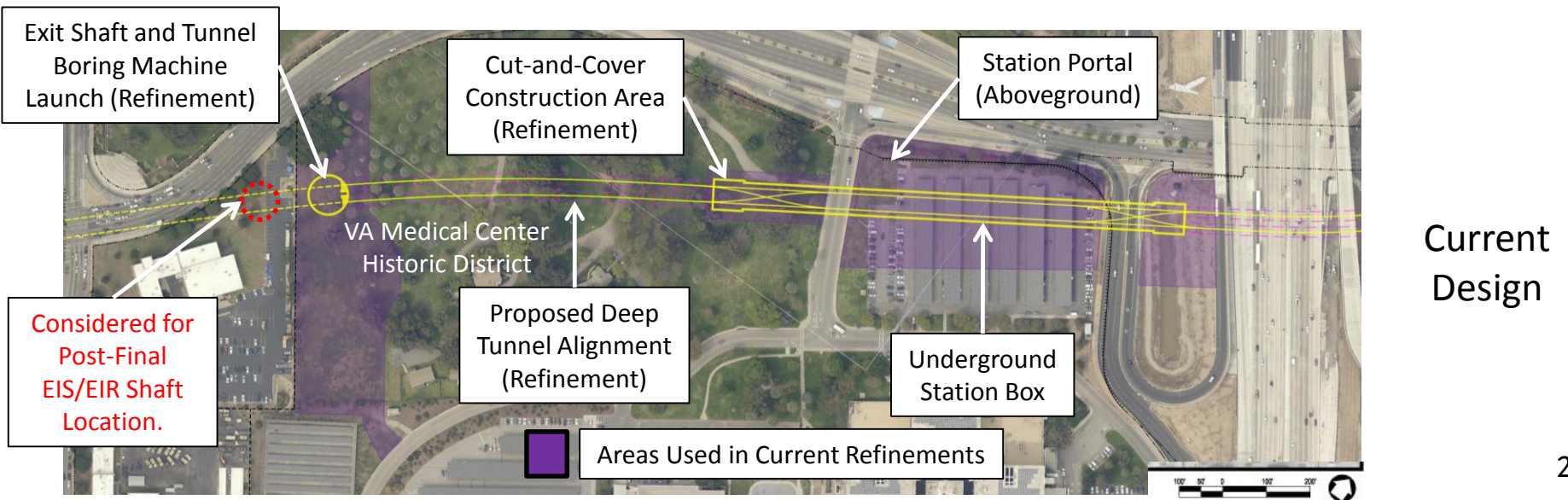
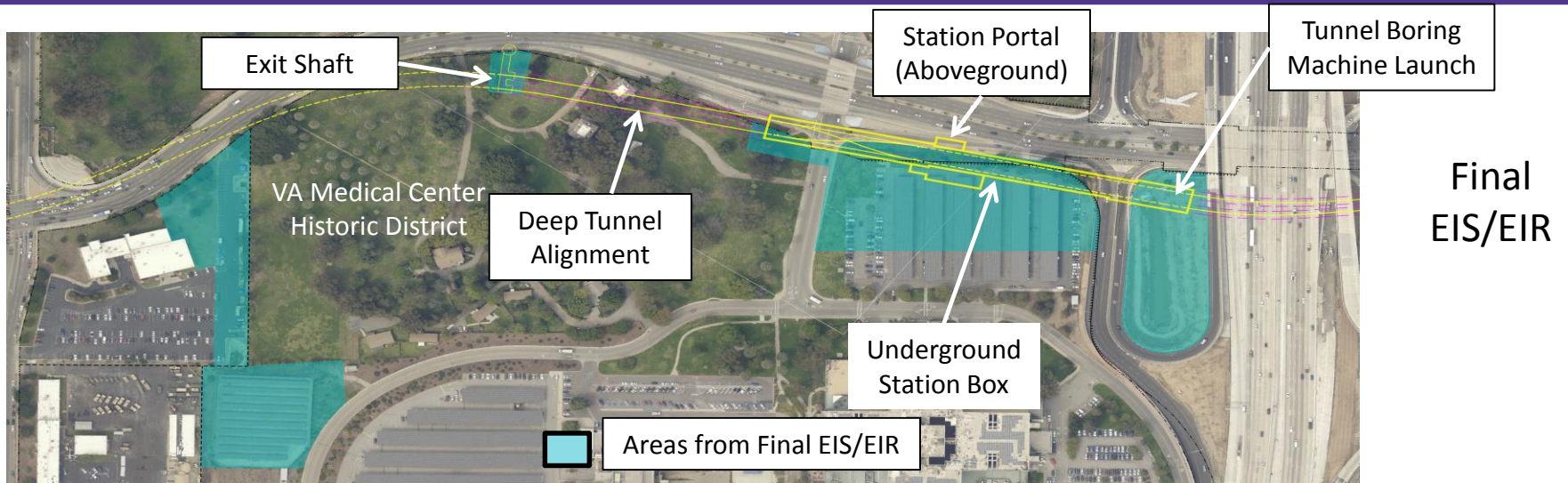
Passenger Pick-up/Drop-off

Current Design



- Short term passenger drop-off and pick up (15-30 minutes max)
- Designed to minimize traffic congestion while maintaining pedestrian and commuter access

VA Station Laydown Area and Alignment



Westwood/VA Hospital

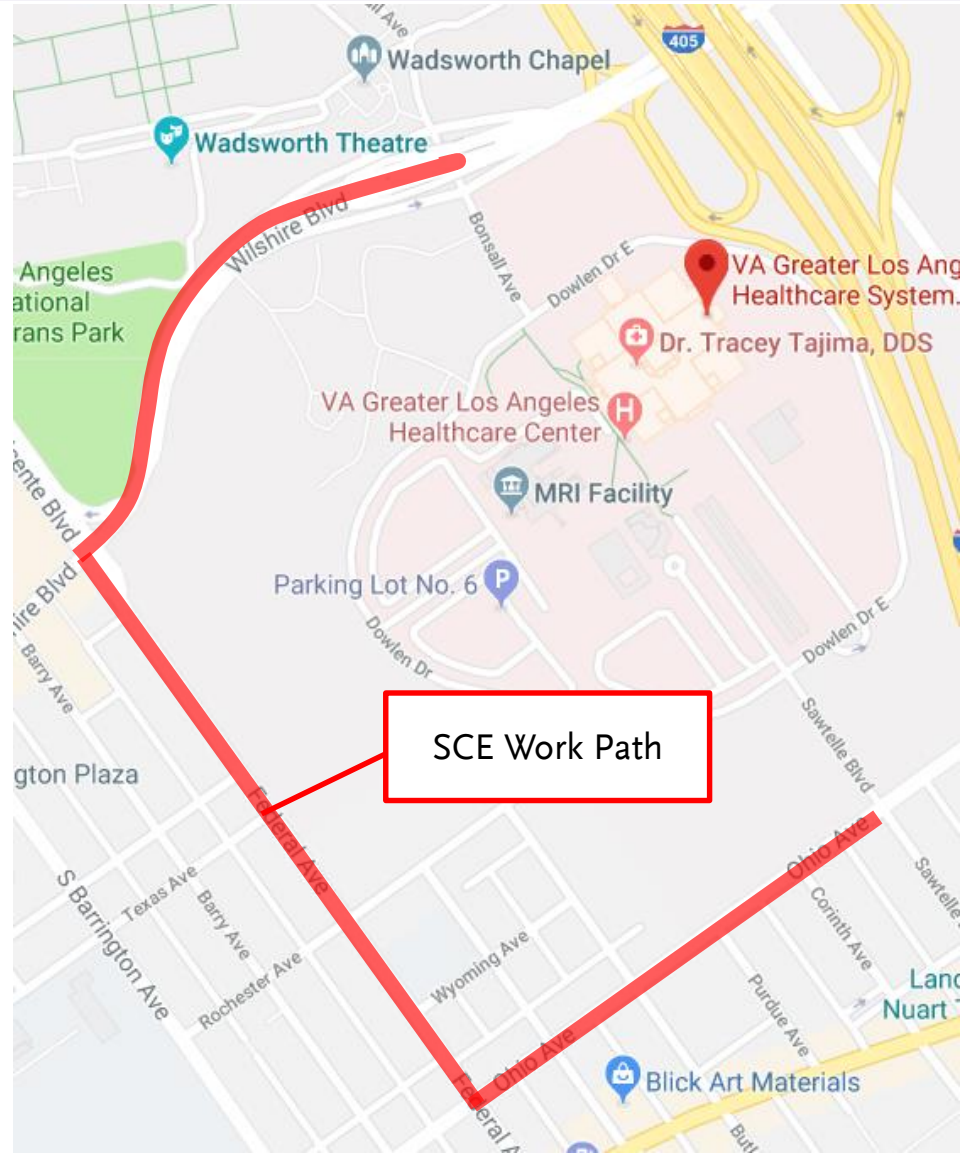
Upcoming SCE Underground Electrical Work

Station/TBM Power Connection

- Anticipated start January 2019, for one year

Work hours

- Ohio/Federal: 9am - 3:30pm
- Wilshire Blvd: 9pm - 6am
- Traffic maintained to one lane each direction
- Temporary parking restrictions and possible detours



Tunnel Subsurface Easements

The standard tunnel subsurface easement is a rectangular box surrounding both tunnels

- 10 ft. above the tunnel crown and 10 ft. below the tunnel invert
- 5 ft. offset from the outer most tunnel wall



Existing Ground

The tunnel boring machine will be under individual parcels for approximately 2-3 days for each tunnel

Tunnel Boring Machine drives for each tunnel will be staggered by approximately 1-2 months

Operation of the subway tunnels are designed to avoid adverse noise/vibration to the occupants

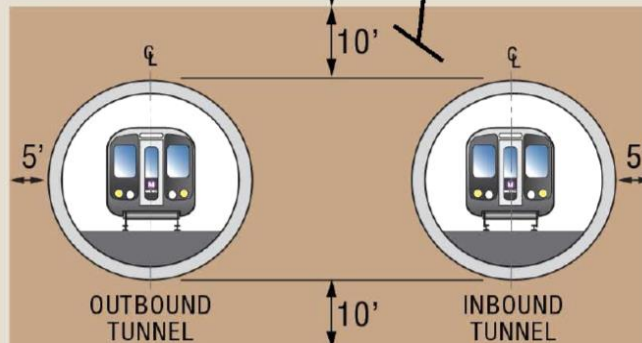
50' – 100'
Typical Depth

The tunnels have been designed to accommodate the existing building(s)

Future construction above the tunnels which requires excavation will be subject to Metro's review and approval which shall not be unreasonably withheld

Tunnel Subsurface Easement

The tunnels will be excavated by an Earth Pressure Balance Tunnel Boring Machine; this type of machine balances soil and groundwater pressure at the tunnel face, controlling the ground movement. As the tunnel is excavated, precast concrete segments are immediately installed within the machine to serve as the permanent tunnel lining.



Not to Scale,
Diagram is for
illustrative
purposes only

Metro's Green Construction Policy

Purple Line Extension design-build contractors must adhere to strict guidelines contained in Metro's **Green Construction Policy**.

- Establish haul truck staging zones where least impact on general public
- Covered haul trucks to reduce dust and dirt
- Haul routes away from congested streets or near sensitive receptors
- Off-road diesel-powered equipment of 50 hp and greater must meet the most stringent EPA emission standards
- Restricted idling of construction equipment to a maximum of five consecutive minutes
- On-road diesel vehicles will have newer engine models

Upcoming PLE Section 3 Community Meeting

Section 3 Pre-Construction
Community Meeting

Thursday, November 15, 2018

6:30pm – 8pm

Location: TBD

Stay Informed



213.922.6934



purplelineext@metro.net



metro.net/purplelineext



@purplelineext



facebook.com/purplelineext



Metro



Purple Line Extension

Community Veterans Engagement Board - Bonsall Ave Mural Update Sept. 19, 2018



Metro

Aerial View Wilshire Blvd at Bonsall Ave



Westwood/VA Station at Bonsall Ave



3-D Rendering Westwood/VA Station

View from Bonsall Ave - North to South



Metro Services for Veterans

Metro's Veterans Hiring Initiative Program

- 6% Annual Veteran Hiring Initiative
- Support and promote economic development for veterans
- Attract qualified talent and their spouses for the many positions & apply transferrable skills to Industry
- Leverage those skills, knowledge, & attributes to showcase military experience
- Educate Veteran Community of Broad/Diverse Opportunities
- Advocate for Veteran Employees & Jobseekers

Application for Discounted TAP Cards for Service Connected Veterans

Translation of Military Experience into Civilian Job Skills



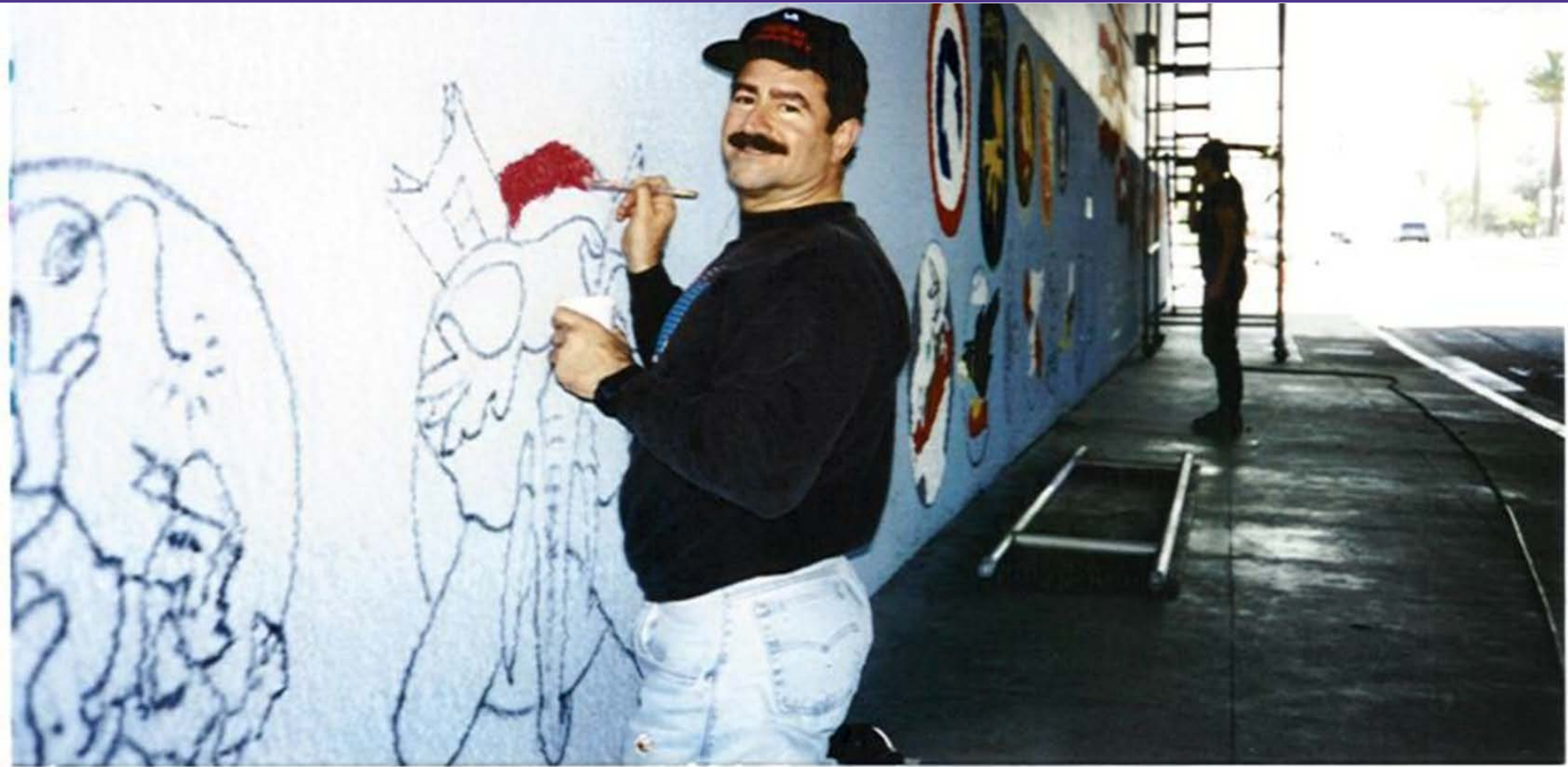
Bonsall Ave Mural History

Artist Peter Stewart

Commissioned through the National Veterans Foundation (NVF)

- Coordinated by Shad Meshad, NVF President & Founder
- Art therapy project
- Volunteer labor & donated materials
- Depicts the American flag; insignias from all the branches of the military & individual units; portraits of men & women in service, & in medical treatment
- Dedicated in 1995
- Artist deceased before mural could be fully completed
- Evidence of deterioration in exposed areas due to the elements
- Location VA owned & county controlled

Bonsall Ave Mural History



Metro®

Bonsall Ave Mural History



Metro®

Bonsall Ave Mural History



Metro®

Current Mural Conditions



Current Mural Conditions



Current Mural Conditions



Current Mural Conditions



Current Mural Conditions





JONES

U.S. ARMY

WORLD WAR II
1941-1945





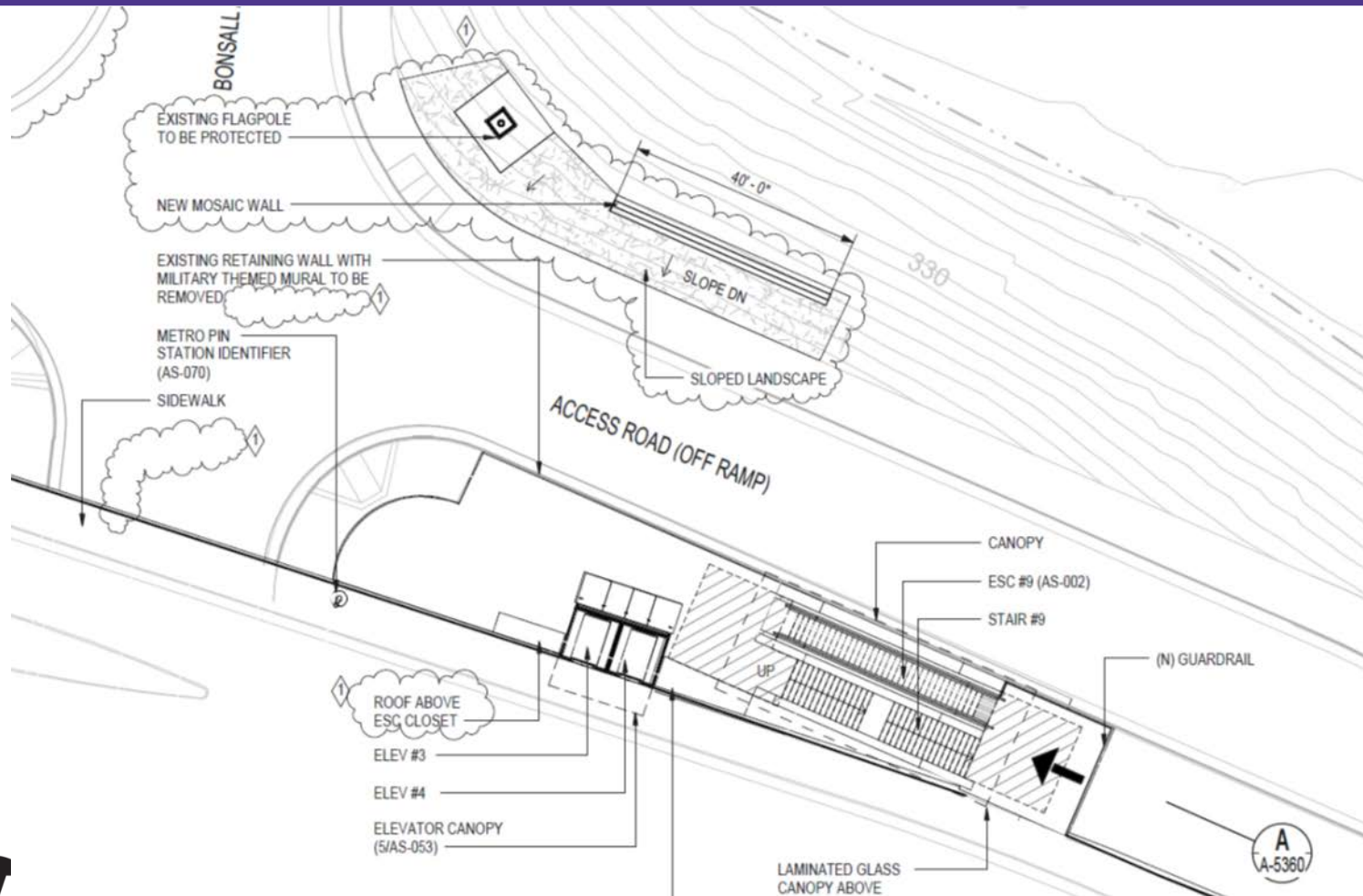
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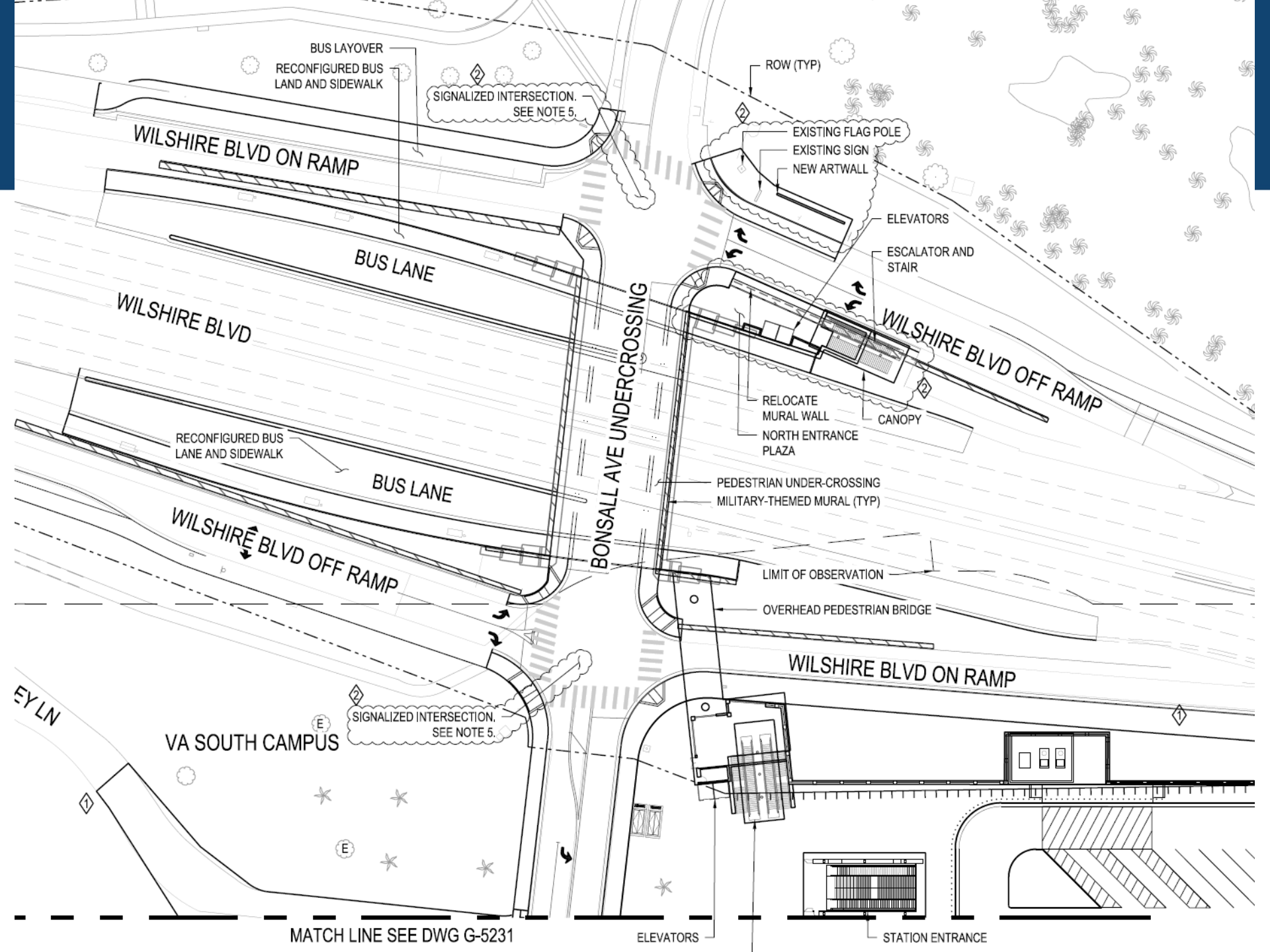
LANIER

USMC



Proposed Site Plan





BUS LAYOVER
RECONFIGURED BUS
LAND AND SIDEWALK

SIGNALIZED INTERSECTION.
SEE NOTE 5.

ROW (TYP)

EXISTING FLAG POLE
EXISTING SIGN
NEW ARTWALL

ELEVATORS

ESCALATOR AND
STAIR

CANOPY

RELOCATE
MURAL WALL
NORTH ENTRANCE
PLAZA

PEDESTRIAN UNDER-CROSSING
MILITARY-THEMED MURAL (TYP)

LIMIT OF OBSERVATION

OVERHEAD PEDESTRIAN BRIDGE

SIGNALIZED INTERSECTION.
SEE NOTE 5.

MATCH LINE SEE DWG G-5231

ELEVATORS

STATION ENTRANCE

VA SOUTH CAMPUS

EY LN

WILSHIRE BLVD ON RAMP

BUS LANE

WILSHIRE BLVD

RECONFIGURED BUS
LANE AND SIDEWALK

BUS LANE

WILSHIRE BLVD OFF RAMP

BONSALL AVE UNDERCROSSING

WILSHIRE BLVD OFF RAMP

WILSHIRE BLVD ON RAMP

Existing Lawn Conditions



Draft Rendering



Placeholder imagery only
Mural to be reinterpreted in mosaic/tile for permanent outdoor display
Landscaping, lighting and dedication plaques included in the scope of work.

Artwork Precedents



Artwork Precedents



Artwork Precedents



Artwork Precedents





Next Steps

- LA County Civic Art Program Approval
- Form community advisory
- Outreach to Veteran community
- Contract with artist/ arts organization to design and fabricate
- Design mural reinterpretation with community input
- Fabricate mural with 'hands on' skills training community participation
- Install mural
- Dedication ceremony
- LA County to own and maintain
- Metro to remove impacted section to commence construction activities
- Remaining mural to stay in place during construction

Stay Informed



213.922.6934



purplelineext@metro.net



metro.net/purplelineext



@purplelineext



facebook.com/purplelineext



Metro





Community Veteran Engagement Board Check-in

Name	Organization	Email
<i>Chair</i> Thomas O'Shaughnessy	<i>L.A. County</i> Veterans Comm.	<i>Thomas.O'Shaughnessy@lacounty.gov</i>
ION VARAT	UCLA	<i>varat@law.ucla.edu</i>
Kathleen Flanagan	CVEB-community rep.	<i>Flanagan1203@gmail.com</i>
GARY PHILLIPS	CVEB	<i>GARY.PHILLIPS@THEWEB.COM</i>
MEGHAN FLANZ	GLA	<i>Meghan.Flanz@va.gov</i>
Rick NORRIS	CVEB	<i>R.NORRIS@Ready2Protect.com</i>
Tom Ruch	CVEB-NCA	
Steve Puck	U.S. VETS	<i>sjpuck@usvetsinc.org</i>
Larry Van Kuren	American Legion	<i>vankuran@ix.netcom.com</i>
Gayle Ocheltree	CVEB	<i>jpgsant7@yahoo.com</i>
Susan Gray	METRO	<i>grays@metro.net</i>
Kasey Shuda	Metro	<i>shudak@metro.net</i>
Ann Bam	GLA	
Erik Qvale	Metro	<i>ERIK@EQVALE.NET</i>
Roger Martin	METRO	<i>MARTIN@metro.net</i>

ARMY	NAVY	Coast Guard	Marines	Air Force
Motto	Motto	Motto	Motto	Motto
Date Est.	Date Est.	Date Est.	Date Est.	Date Est.
Five Branches of SVC				



THOMAS O'SHAUGHNESSY
Commissioner

APPENDIX D PUBLIC OUTREACH PLAN

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Westside Purple Line Extension – Section 3
Public Outreach Plan

Introduction

As part of the Westside Purple Line Extension (WPLE) project for Section 3 (WPLE Project, or Project), this Public Outreach Plan was developed to support the Section 106 consultation and public outreach efforts previously conducted for Section 3, consultation and outreach currently underway, and a path forward for future outreach activities.

Details about how Metro will work with stakeholders prior to and during construction are detailed in the Construction Relations Community Outreach and Engagement Plan.

Project Background

The Westside Purple Line Extension (WPLE) Project is an approximately 9-mile heavy rail transit subway that will operate as an extension of the Metro 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).

The purpose of the Project is to address the mobility needs of residents, workers, and visitors traveling to, from, and within the highly congested Westside Extension Study Area by providing faster and more reliable high-capacity public transportation than existing services which operate in mixed-flow traffic.

The Project will be constructed in three sections, and include seven new stations spaced in approximately 1-mile intervals, as follows:

- Section 1: 3.92-mile section from the existing Wilshire/Western Station to Wilshire/La Cienega with three new stations: Wilshire/La Brea, Wilshire/Fairfax, and Wilshire/La Cienega
- Section 2: 2.59-mile section from Wilshire/La Cienega to Century City with two new stations: Wilshire/Rodeo and Century City Constellation
- **Section 3: 2.56-mile section from Century City to Westwood/VA Hospital with two new stations: Westwood/UCLA and Westwood/VA Hospital**

Final Environmental Impact Statement/Final Environmental Impact Report (EIS/EIR)

A Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Project was completed and approved by the Los Angeles County Metropolitan Transportation Authority (Metro) Board of Directors in April 2012 for Section 1 and in May 2012 for Sections 2 and 3 in accordance with the requirements of the California Environmental Quality Act (CEQA). The Record of Decision (ROD) was issued by FTA for all three phases of the Project in August 2012.

The EIR was part of the joint document, for which an EIS was also prepared to comply with the requirements of the National Environmental Policy Act (NEPA) and the Federal Transit Administration (FTA). The Final EIS/EIR can be viewed on the Metro website at <http://www.metro.net/projects/westside/>.

This Public Outreach Plan focuses on Section 3 of the Project, which includes the final two stations of the Project including Westwood/UCLA station and Westwood/VA Hospital.

130(c) Environmental Technical Memorandum

Since completion of the *Westside Subway Extension Final Environmental Impact Statement/Environmental Impact Report* in March 2012 and issuance of the ROD in August 2012, efforts in support of Advanced Preliminary Engineering and stakeholder coordination have resulted in a limited number of refinements of project features and construction methods that are necessary to improve long-term operational efficiency, minimize previously identified impacts, and/or decrease the construction schedule and project costs. These refinements include:

- Construction Staging Areas
- Alignment at the VA Medical Center and Westwood/VA Station Entrances
- Westwood/VA Hospital Station Access
- Murals
- Construction Method for Westwood/VA Hospital Station West Crossover
- Westwood/UCLA Station Entrances
- Tunnel Size
- Grouting
- Underground Conduits

An environmental technical memorandum (or 130(c) Environmental Technical Memorandum) consistent with 23 CFR 771.130(c) is currently being prepared by the Federal Transit Administration (FTA) and Metro to address the refinements for Section 3 of the Project. The updated Section 106 Consultation underway also seeks to revise the MOA to include the Veterans Administration and the Advisory Council on Historic Preservation (ACHP) as signature parties.

Section 106 Overview

The Project is subject to compliance with Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR 800). The Section 106 process requires federal agencies to consider the effects of their actions on historic properties and provide the Federal Advisory Council an opportunity to comment on the undertaking. A key facet on the Section 106 process is consultation with the individual consulting parties comprised of the State Historic Preservation Officer (SHPO), tribes, local governments, and specific interested individuals or organizations.

The project refinements are proposed in proximity to three historic resources – the West Los Angeles Veterans Affairs Historic District (WLA VA Historic District), the (Westwood) Federal Building, and the

Linde (Westwood) Medical Plaza. As a result of project modifications and refinements, consultation was reinitiated by the Federal Transit Administration (FTA) and Metro with SHPO and the VA in summer 2017 to receive feedback on the proposed refinements. Refer to the Westside Purple Line Extension Project, Section 3 Historic Properties Reassessment of Effects Report for an overview of Section 106 consultation that has occurred.

Section 106 Consultation

Please see the 130(c) Environmental Technical Memorandum for information pertaining to meetings held on Section 106 consultation.

A Section 106 Consulting Party contact list was updated with input from the VA, Metro, and FTA. Any new or updated contacts to be included as a Section 106 Consulting Party should be provided to the FTA and Metro for inclusion in the distribution list for future notifications of project updates or items needing input.

Section 106 consultation, notifications, and project updates may be communicated in emails, teleconference or telephone calls, in-person meetings, web-hosted meetings, letters, or other means per the recommendations of the FTA. Following Section 106 consultations or meetings, meeting summaries or minutes are distributed to meeting attendees for comment with a finalized version submitted for attendee records.

Community Outreach

The community outreach effort was designed to build awareness and understanding to stakeholders of the Section 3 Project refinements that have occurred since the completion of the Final EIS/EIR in 2012, provide opportunities for ongoing stakeholder involvement and input throughout the Section 106 process, and to understand the cultural resources. The public engagement effort showed that the public is supportive of the refinements for Section 3.

Project information and awareness is provided through various methods including:

- Electronic means (e-blasts, social media, and project webpage)
- Community meetings
- Meetings coordinated through outside agencies/cities
- Media relations

Community support is provided by the Project hotline (213) 922-6934 (24 hours a day/7 days a week).

Public outreach means and methods vary slightly depending on any special requests by the hosting agency. For example, regular community meetings hosted quarterly by Community Relations to discuss Construction updates (e.g. on Advanced Utility Relocations) on the Project may include:

- Poster boards of the Project map/alignment and as well as any relevant supporting information,
- PowerPoint presentations

- Microphones
- Wayfinding signage for attendees
- Advanced notice through social media (e.g. Facebook, Twitter, the Metro Homepage, etc.) and emails

Community outreach will also meet with individual stakeholders as necessary.

Agency and Stakeholder Coordination

Coordination efforts conducted by Metro with agencies and other stakeholders are summarized in Chapter 4 of the 130(c) Environmental Technical Memorandum. Stakeholder coordination is inclusive of federal, state, and regional/local agencies; utility companies; Section 106 Consulting Parties; and any other outreach pertaining to Section 3.

Public Outreach

The public outreach undertaken by Metro prior to the start of construction and also during construction is discussed in Chapter 5 of the 130(c) Environmental Technical Memorandum.

Public Outreach Materials

All previous public meetings held related to the Project (all three sections) are listed online at <https://www.metro.net/projects/westside/westside-meeting-presentations/>. Relevant VA service organizations are included in Metro's Construction Relations outreach notification lists to ensure prompt notification of any forthcoming events.

Working Groups

A very effective tool for soliciting substantive community input is to establish working groups where key stakeholders could roll up their sleeves to address focused localized issues. These groups contribute effectively towards identifying important issues, finding compromises, and building consensus.

Westwood/VA Working Groups

Starting Summer 2017, regular meetings to discuss Project refinements as well as a series of biweekly working groups were established to discuss refinements to the Westwood/VA Station. These working groups were assembled under the following categories:

- Communications and Veteran Impact
- Environmental and Historic
- Utilities
- Real Estate and Off-Site Circulation
- Safety and Security

Meetings were either held at the VA West Los Angeles Campus or hosted via teleconference by Metro, FTA, or the VA.

Veteran Service Organizations

In addition to providing project updates and outreach to the VA, Metro also provided outreach to Veteran Service Organizations (VSOs) which include:

- **Community Veterans Engagement Board (CVEB):** a group comprised of representatives from certain VSOs including American Legion, community partners including representatives from UCLA, and local neighborhood groups. This group meets the third Wednesday of each month. The CVEB has a website located at <https://www.lar-cveb.org/board/>.
- **Veterans Community Oversight and Engagement Board (VCOEB):** a separate group established by the Federal Advisory Committee Act (FAC) that meets quarterly on the West LA Campus.

Typically if a VSO would like a project update, they would coordinate this request through the VA who would contact Metro.

In the following examples from late 2018:

- Metro had proactively reached out to the VA via phone and email to coordinate an upcoming project update with the VSOs pertaining to the murals. The VA confirmed with Metro that the CVEB was interested in a project update at their September meeting, and Metro prepared a PowerPoint presentation as part of its presentation (see Attachment C). In addition, Metro staff also reached out to the VA to coordinate a meeting with the VCOEB (managed by the FAC). However, in this instance the FAC confirmed that they were unable to fit in a presentation from Metro in September 2018, however they affirmed that they would try to get Metro on their next meeting scheduled in December 2018. As of this print, Metro outreach to the VCOEB is in progress for inclusion in their next meeting, however to date this has not been finalized.
- The VA confirmed that the VSOs will reach out to Metro (or the VA) if they wish to engage in any communications or have a project update, however Metro affirms its commitment to respond quickly during the completion of the 130(c) Environmental Technical Memorandum and during Project construction.

Metro Construction Relations is committed to working directly with the VA prior to and during construction to create outreach and mitigation plans for their community. While Metro has been proactive in its outreach to the VA and VSOs during the coordination of the 130(c) technical memorandum, it is committed to engaging them similarly during construction, details of which are outlined in the Metro Construction Relations Community Outreach and Engagement Plan.

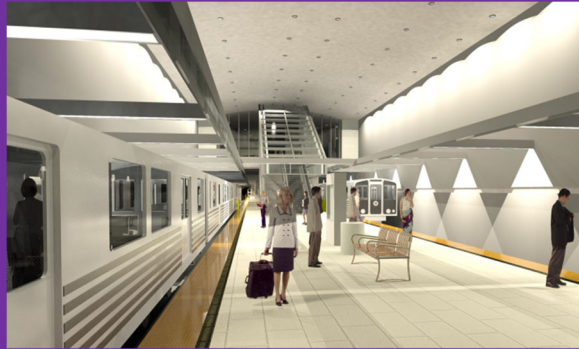
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APPENDIX E CUMULATIVE IMPACTS ASSESSMENT

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LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
WESTSIDE PURPLE LINE EXTENSION PROJECT, SECTION 3
ADVANCED PRELIMINARY ENGINEERING

Contract No. PS-4350-2000



Cumulative Impacts Assessment

Prepared for:



Prepared by:



777 South Figueroa Street, Suite 1100
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December 2018

Table of Contents

1.0	INTRODUCTION	1-1
2.0	PLANNED AND PROPOSED PROJECTS BY OTHERS.....	2-1
2.1	Projects within the City of Los Angeles.....	2-1
2.2	University of California, Los Angeles Campus.....	2-3
2.3	VA West Los Angeles Campus.....	2-4
3.0	CUMULATIVE EFFECTS ASSESSMENT	3-1
3.1	Long-Term Operational Evaluation.....	3-1
3.1.1	Public Transit	3-1
3.1.2	Streets and Highways	3-2
3.1.3	Parking	3-3
3.1.4	Pedestrian and Bicycle Facilities	3-4
3.1.5	Land Use.....	3-5
3.1.6	Communities and Neighborhoods.....	3-6
3.1.7	Acquisition and Displacement	3-8
3.1.8	Visual Quality	3-9
3.1.9	Air Quality	3-10
3.1.10	Greenhouse Gases	3-11
3.1.11	Noise and Vibration	3-11
3.1.12	Energy	3-12
3.1.13	Geologic Hazard	3-13
3.1.14	Hazardous Waste and Materials.....	3-14
3.1.15	Ecosystems/Biological Resources	3-15
3.1.16	Water Resources.....	3-16
3.1.17	Safety and Security	3-17
3.1.18	Parklands and Community Services and Facilities	3-18
3.1.19	Historic and Archeological Resources.....	3-18
3.2	Construction Phase Evaluation	3-20
3.2.1	Construction Phasing of WPLE Project and Other Proposed Projects.....	3-20
3.2.2	Evaluation	3-22
4.0	CONCLUSION	4-1
5.0	REFERENCES	5-1

List of Figures

Figure 2-1:	Proposed Projects within One Mile of Station Areas	2-1
Figure 2-2:	UCLA Capital Program Projects.....	2-4
Figure 2-3:	VA WLA Campus Zones	2-6

List of Tables

Table 2-1:	Proposed Projects within One Mile of Station Areas	2-2
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Acronyms and Abbreviations

ADA	Americans with Disabilities Act
BMP	Best Management Practice
Btu	British thermal units
Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
CO _{2e}	carbon dioxide-equivalent
EIS/EIR	environmental impact statement/environmental impact report
FTA	Federal Transit Administration
GLA DMP	<i>Greater Los Angeles Campus Draft Master Plan</i>
Metro	Los Angeles County Metropolitan Transportation Authority
NO _x	nitrogen oxides
PM ₁₀	particulate matter smaller than or equal to 10 microns in size
PM _{2.5}	particulate matter smaller than or equal to 2.5 microns in size
Project	Westside Purple Line Extension
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS/RTP	Sustainable Communities Strategy/Regional Transportation Plan
UC	University of California
UC Capital Financial Plan	<i>University of California 2015-25 Capital Financial Plan</i>
UCLA	University of California, Los Angeles
VA	U.S. Department of Veterans Affairs
VA WLA Campus	Veterans Affairs West Los Angeles Campus
VMT	vehicle miles traveled
WLA VA Historic District	West Los Angeles Veterans Affairs Historic District
WPLE	Westside Purple Line Extension

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1.0 INTRODUCTION

Regulations from the Council on Environmental Quality regarding implementation of the National Environmental Policy Act defined cumulative effects as those effects that result from incremental impacts of a proposed action when added to past, present, and reasonably foreseeable future actions, regardless of which agency (federal or non-federal) or person undertakes such actions. Cumulative effects can result from individually minor, but collectively significant, actions that occur over time (40 Code of Federal Regulations (CFR) 1508.7).

Chapter 4, Section 4.17 of the *Westside Subway Extension Final Environmental Impact Statement/ Environmental Impact Report* (Final EIS/EIR) (Los Angeles County Metropolitan Transportation Authority (Metro) 2012) summarized the cumulative impacts resulting from operation and construction of the Westside Purple Line Extension (WPLE) Project for the transportation and environmental topics evaluated in Chapters 3 and 4 of the Final EIS/EIR. This evaluation was based on the 2008 *Regional Transportation Plan* (Southern California Association of Governments (SCAG) 2008), which is a regional planning document that established the goals, objectives, and policies for the region's transportation system and established an implementation plan for transportation investments through the year 2035.

In support of the National Environmental Policy Act clearance for the project refinements, the cumulative effects assessment contained in the Final EIS/EIR has been updated in consideration of proposed projects in the City of Los Angeles, the University of California Los Angeles (UCLA) Campus, and the Veterans Affairs West Los Angeles (VA WLA) Campus. Since the completion of the Final EIS/EIR, new development projects have been planned or programmed within and adjacent to Section 3 station areas, including the Westwood/Veterans Affairs (VA) Hospital Station and the Westwood/UCLA Station. These areas formed the basis of the evaluation as the projects in these areas would be located in close proximity to the project refinements and, therefore, have the greatest potential to affect the cumulative impact findings contained in the Final EIS/EIR. The Section 3 cumulative analysis contained within this document accounts for anticipated cumulative growth within these areas, including growth from approved projects that are planned but not yet built in the City of Los Angeles, and planned and programmed projects identified in the *Greater Los Angeles Campus Draft Master Plan* (GLA DMP) (VA 2016) and *University of California 2015-25 Capital Financial Plan* (UC Capital Financial Plan) (University of California 2014). The programmed projects identified in the GLA DMP and UC Capital Financial Plan are major projects that are planned for each campus respectively. These related planned or programmed projects are discussed in further detail in the following sections.

The following cumulative analysis is based on conceptual site plans for the GLA DMP and improvements associated with the *University of California 2015-25 Capital Financial Plan* (UC Capital Financial Plan) (University of California 2014). Future development associated with these plans is dependent on funding and additional ongoing planning. The VA is currently developing a programmatic EIS for the GLA DMP, which would be subject to the VA's approval of the programmatic EIS and future planning efforts.

The assessment for each transportation and environmental topic is organized as follows:

- Summary of findings from the Final EIS/EIR for direct and cumulative effects
- Summary of findings related to direct impacts associated with the project refinements

- Anticipated effects related to proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses
- Cumulative effect conclusion for the project refinements

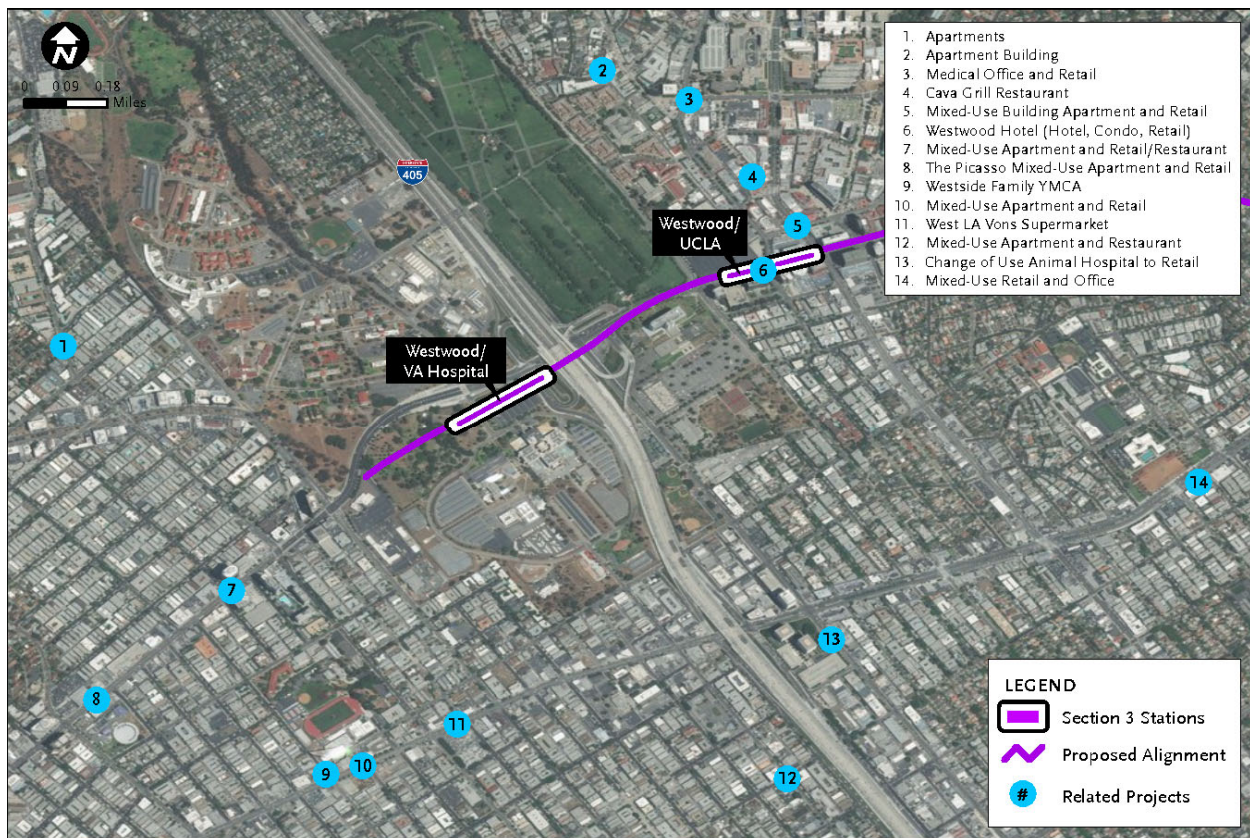
As demonstrated in the following sections, cumulative impacts during operation of the WPLE Project would not be adverse. During construction, impacts would be temporarily adverse but with the mitigation described in prior sections of this technical memorandum, these impacts would not be significant. Further information on the summary of findings can be found in the *Westside Purple Line Extension Project, Section 3, Draft 130(c) Environmental Technical Memorandum* (Metro 2018a) and corresponding technical studies.

2.0 PLANNED AND PROPOSED PROJECTS BY OTHERS

2.1 Projects within the City of Los Angeles

Table 2-1 lists the proposed projects in the City of Los Angeles that would be located approximately 1 mile from the Westwood/VA Hospital Station and Westwood/UCLA Station areas; the locations of the projects are shown on Figure 2-1. In general, the proposed projects include multi-family apartments, mixed-use, hotel, office, and commercial uses. In total, the proposed projects would consist of up to approximately 258,000 square feet of new development, up to 134 new hotel rooms, and up to 831 new multi-family dwelling units. The timing of these projects is currently unknown; however, for the purposes of this analysis it is assumed that construction of these projects would occur concurrently with construction of the WPLE Project. Further, it is assumed that all projects would be complete during operation of the WPLE Project.

Figure 2-1: Proposed Projects within One Mile of Station Areas



Source: TAHA, 2018

Table 2-1: Proposed Projects within One Mile of Station Areas

	Project	Description	Land Use Designation	Address	Distance to Station Area (mile)	Status*
1.	Apartments	24 DU to 46 DU	Medium Residential	625 S. Barrington Ave.	0.9 Westwood/VA Hospital Station	Under construction
2.	Apartment building	31 DU	High Medium Residential	11024 W. Strathmore Dr.	0.6 Westwood/UCLA Station	Completed
3.	Medical office and retail	38,539 SF	Community Commercial	10970 Le Conte Ave.	0.4 Westwood/UCLA Station 0.8 Westwood/VA Hospital Station	Under construction
4.	Cava Grill restaurant	2,328 SF	Community Commercial	1073 S. Broxton Ave.	0.2 Westwood/UCLA Station 0.7 Westwood/VA Hospital Station	Completed
5.	Mixed-use building apartment and retail	33 DU	Neighborhood Commercial	1855 S. Westwood Blvd.	0.9 Westwood/UCLA Station 1.0 Westwood/VA Hospital Station	Pending
6.	Westwood Hotel (hotel, condo, retail)	134 Room 10 DU 16,500 SF	Regional Commercial	10955 W. Wilshire Blvd	0.1 Westwood/UCLA Station 0.6 Westwood/VA Hospital Station	Pending
7.	Mixed-use apartment and retail/restaurant	376 DU 5,000 SF	General Commercial	11750 W. Wilshire Blvd	0.6 Westwood/VA Hospital Station	Pending
8.	The Picasso mixed-use apartment and retail	108 DU 13,000 SF	Community Commercial	12029 W. Wilshire Blvd	0.9 Westwood/VA Hospital Station	Under construction
9.	Westside Family YMCA	65,000 SF	Public Facility	1466 S. Westgate Ave.	0.8 Westwood/VA Hospital Station	Completed
10.	Mixed-used apartment and retail	175 DU 45,000 SF	General Commercial	11800 W. Santa Monica Blvd	0.8 Westwood/VA Hospital Station	Under construction
11.	West Los Angeles Vons supermarket	53,000 SF	Neighborhood Commercial	11660 W. Santa Monica Blvd	0.7 Westwood/VA Hospital Station	Under construction
12.	Mixed-use apartment and restaurant	52 DU 3,300 SF	Neighborhood Commercial	1900 S. Sawtelle Blvd	0.9 Westwood/VA Hospital Station	Completed
13.	Change of use from animal hospital to retail	7,600 SF	Light Manufacturing	1736 S. Sepulveda Blvd	0.8 Westwood/UCLA Station 0.7 Westwood/VA Hospital Station	Pending
14.	Mixed-use retail and office	9,235 SF	General Commercial	10700 W. Santa Monica Blvd	0.9 Westwood/UCLA Station	Completed

Source: Los Angeles Department of Transportation, 2018

Notes:

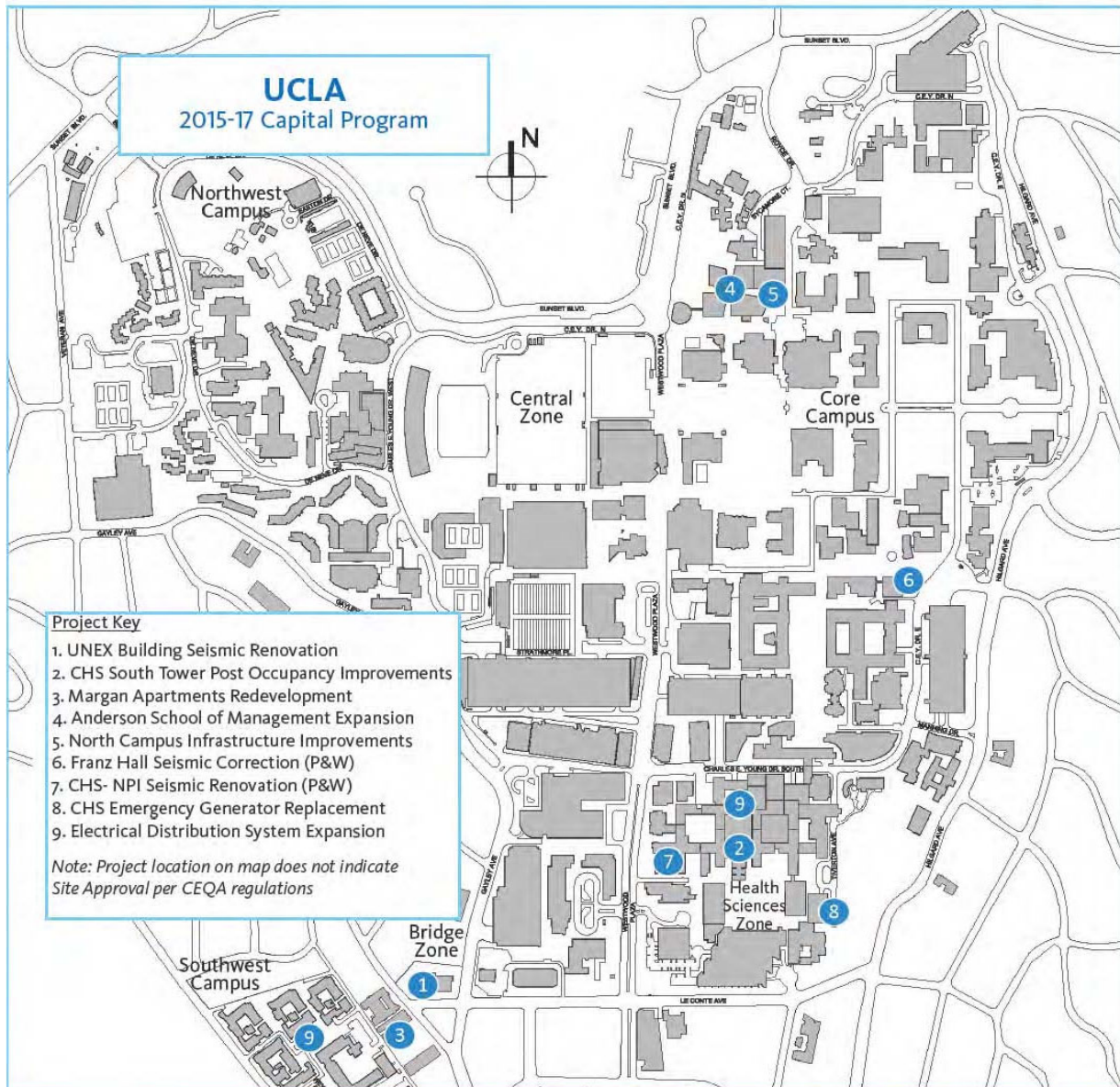
* Projects that are yet to begin construction or approved are noted as "pending".

DU = dwelling unit; SF = square feet; UCLA = University of California, Los Angeles; VA = Veterans Affairs

2.2 University of California, Los Angeles Campus

The UC Capital Financial Plan (University of California 2014) delineates the multi-year program of proposed capital construction projects and renovations throughout UC campuses. The UC Capital Financial Plan framework guides UC campuses in prioritizing capital investments in support of long-range development plans. Programmed projects under the UC Capital Financial Plan are not yet approved, may not have secured funding, and are described in a program manner. As such, the specific timing of these projects is currently unknown. Capital program projects on the UCLA Campus may include seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. The approximately 30 capital-funded projects are anticipated to be developed through 2025 and would occur primarily in the core campus, health sciences zone, and southwest campus of UCLA (Figure 2-2). The nearest capital-funded project to the Westwood/UCLA Station entrance located in Lot 36 would be the Margan Apartments Redevelopment, which would be located approximately 0.36 mile north.

Figure 2-2: UCLA Capital Program Projects



Source: UCLA, 2016

2.3 VA West Los Angeles Campus

The GLA DMP (VA 2016) is a framework to assist the VA in determining the most effective use of the VA WLA Campus for veterans, including chronically homeless veterans; severely disabled veterans; veterans with physical and mental disabilities, such as post-traumatic stress disorder or traumatic brain injuries; substance abusers; veteran families; female veterans; and elderly veterans. With the adoption of the GLA DMP in 2016 and current, conceptual updates as of August 2018, the VA strives to create a 21st Century campus by renovating and protecting the property’s historic features and functions as a home; expanding its resource offerings to meet current demands; enhancing its open spaces and natural

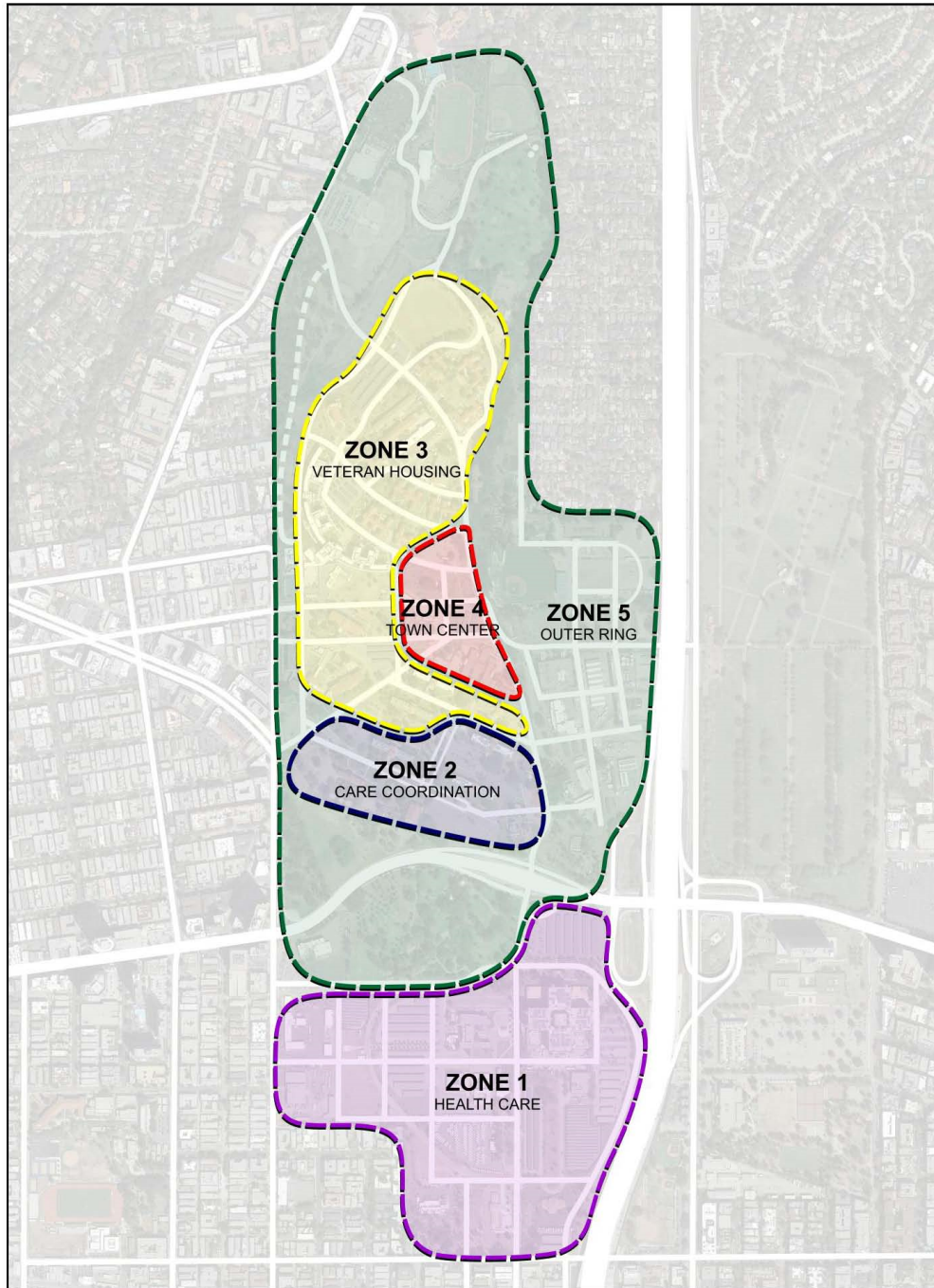
features; improving its internal navigability and circulation; and optimizing its connection to the greater community. In general, long-term projects identified in the GLA DMP are anticipated to meet the vision and goals of the VA to revive the campus in a veteran-focused manner. The vision also includes planning for significant and adequate levels of housing units, time-limited “bridge” and transitional housing, and short-term treatment services that can provide state-of-the-art primary care, mental health, and addiction services to veterans, particularly chronically homeless veterans. The VA plans to provide no less than 1,200 units for permanent supportive housing to meet current demand and the future needs of Los Angeles-area homeless and at risk veterans.

The GLA DMP identified five distinct planning zones that apply design concepts to advance the vision and objectives to transform the campus into a veteran-focused community where veterans can access housing and supportive resources and services as needed. A description of these zones and an overview of future planning are provided as follows and shown on Figure 2-3:

- Zone 1 (Health Care), located in the southern campus, would be the medical science foci of the campus and may include building improvements that collaboratively integrate healthcare, food service, and comprehensive translational research facilities in support of veterans. Improvements may also meet all VA and California seismic mandates for medical center operations.
- Zone 2 (Care Coordination), located in the northern campus, would focus on coordinated care and may include development of a veteran and family resource center, therapeutic supportive services and facilities, and a memorial park.
- Zone 3 (Veteran Housing), located in the northern campus, would concentrate on increasing the housing supply for veterans through future development of short-term housing (i.e., bridge housing, community living center, domiciliary, and transitional housing) and long-term housing (i.e., permanent support housing). In June 2017, the VA completed 54 permanent supportive housing units in Building 209, located in the north campus of the VA WLA Campus. Future planned housing projects would be primarily in Zone 3 located in the north campus.
- Zone 4 (Town Center), located in the north campus, is identified as the “downtown” for the veterans with future plans of a fitness center, café, and a public square.
- Zone 5 (Outer Ring), considered the outer ring and primarily located in the north campus, with the southern portion of Zone 5 located in the south campus, is focused as the green space of the VA WLA Campus.

Proposed projects located in the south campus of VA WLA Campus are anticipated to be primarily located in Zone 1 and in the southern section of Zone 5 (Outer Ring). Based on a conceptual site plan of the south campus provided by representatives of the VA in February 2018, future conceptual planning in the south campus is anticipated to occur at and around the medical facilities and may include a community green, parking structure, outpatient clinics, pedestrian promenade, research building, new central utility plant, central kitchen, and surge building.

Figure 2-3: VA WLA Campus Zones



Source: GLA DMP

In addition to future projects at the medical center and structural improvements in the south campus, the conceptual site plan also illustrates proposed improvements to the circulation on the south campus. Based on this site plan, the peripheral roadway around the medical center on Dowlen Drive would be reconfigured along the west side of the medical campus to provide circulation for proposed housing; however, the remaining portions of Dowlen Drive would be maintained and would continue to provide access to the surrounding parking lots, including a proposed parking structure serving the medical center facilities. Sawtelle Boulevard to the south may be reconfigured north of Dowlen Drive into a turnabout. Access to and from Bonsall Avenue from Dowlen Drive and Wilshire Boulevard in the north and Sawtelle Avenue from Dowlen Drive in the south may be maintained under the conceptual south campus site plan. The proposed circulation pattern is currently designed to also improve the existing pedestrian circulation throughout the medical center with a pedestrian promenade that connects the main medical buildings and hospital. A drop-off area into the medical center and pedestrian promenade is also planned adjacent to the community green, located southeast of Bonsall Avenue. Landscaping and open space is also anticipated throughout the medical center and around the parking lots and structure. Based on the conceptual document, future development does not seem to be proposed within the West Los Angeles Veterans Affairs (WLA VA) Historic District located west of Bonsall Avenue and south of Wilshire Boulevard. The conceptual site plan also identifies the station for the WPLE Project (labeled as “Metro Station”) south of Wilshire Boulevard and east of Bonsall Avenue. This location is consistent with the station entrance evaluated in the 130(c) technical memorandum and corresponding technical studies.

VA representatives provided a conceptual, high level construction schedule for the south campus. This schedule is discussed in Section 3.2.1 of this appendix.

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3.0 CUMULATIVE EFFECTS ASSESSMENT

The following sections evaluate potential cumulative effects associated with operation and construction of the WPLE Project when effects of the Project are combined with proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses.

3.1 Long-Term Operational Evaluation

To address any potential change in circumstances since approval of the Final EIS/EIR, the most up to date information regarding the adopted growth forecast for the Westwood/UCLA and Westwood/VA Hospital Station areas was reviewed. Specifically, the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS)* (SCAG 2016) indicates population growth from approximately 44,000 persons to 53,000 persons and employment growth from approximately 100,000 employees to 114,000 employees within the Westwood/UCLA and Westwood/VA Station areas over the Project's 25-year planning horizon period. Annually, the growth rate in the station areas is forecasted to be less than 1 percent. This rate is slightly lower than the population and employment growth rate used in the Final EIS/EIR. Based on this updated information and the identification of proposed projects approved or planned since the preparation of the Final EIS/EIR, the following sections discuss the potential for cumulative impacts during operation of the Project, including with implementation of the project refinements.

3.1.1 Public Transit

Chapter 3, Section 3.4.2 of the Final EIS/EIR concluded that the Project would result in transit system benefits in terms of reducing transit travel times from various locations around Los Angeles County and improving transit reliability. As a result, passenger comfort and convenience would be improved. The Project would also provide increased frequency of train service and the potential to extend the heavy rail transit system farther west in the future. Due to the improvements in transit travel time and reliability, transit ridership would increase. When combined with other planned transit projects and improvements, the Project would contribute to a beneficial cumulative effect to the transit network (Chapter 4, Section 4.17.4 of the Final EIS/EIR).

Per Section 3.1.1 of the 130(c) technical memorandum, the project refinements would continue to provide transit benefits. One refinement—the alignment at the VA Medical Center and Westwood/VA Hospital Station entrance—resulted in modifications to the Project alignment. However, this refinement improved operating conditions, including for a future extension of the WPLE Project to the west toward Santa Monica. The refinements to the Westwood/VA Hospital Station entrance and the provision of the passenger drop-off area would have no effect on how buses serve the existing bus stops, nor would the refinements introduce new stops for existing routes. Therefore, the impact conclusions in the Final EIS/EIR related to public transit remain unchanged with implementation of the project refinements.

Proposed projects in the City of Los Angeles would consist of residential, mixed-use, hotel, office, and commercial uses that may increase the number of residents, workers, and visitors that use public transit. It is anticipated that growth related to the City of Los Angeles development plans would result in an increase in public transit use. However, the increase in public transit use resulting from the proposed projects would be nominal in relation to projected growth throughout the region. Further, these proposed projects and any associated travel demand have been accounted for in the 2016-2040 RTP.

As described previously, capital-funded projects on the UCLA Campus may consist of seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. These projects would be located entirely within the UCLA Campus. It is anticipated that growth related to the UCLA Campus development could result in an increase in public transit use for transit providers, including Metro, BruinBus, and Big Blue Bus. However, the increase in public transit use resulting from the UCLA Campus development would be nominal in relation to projected growth throughout the region.

Similarly, proposed projects on the VA WLA Campus may increase the number of residents, workers, and visitors that use public transit. However, consistent with other proposed projects, the increase in transit passengers would be nominal in relation to projected growth throughout the region. These proposed projects would benefit from the WPLE Project and the station provided on the VA WLA Campus.

No changes in existing transit service or facilities are proposed based on the scope and description of the proposed projects in the City of Los Angeles or on the UCLA or VA WLA Campuses. The proposed projects may cumulatively increase ridership on transit as a result of increases in the number of residents, workers, and visitors in the Study Area, particularly along major transit thoroughfares such as Wilshire Boulevard, Sepulveda Boulevard, and Westwood Boulevard. However, this level of development would be consistent with the 2016-2040 RTP/SCS population and employment forecasts and while the related projects would increase demand for transit service, the increased demand would be nominal compared to the region as a whole. The increased demand is not anticipated to affect the reliability of the transit system or transit travel times.

The project refinements would result in transit benefits and, when combined with the proposed projects, would not result in new cumulative impacts to transit service. Therefore, the project refinements would not contribute to cumulatively adverse public transit impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.2 Streets and Highways

Chapter 3, Section 3.5.2 of the Final EIS/EIR stated that the Project would result in fewer vehicle trips and vehicle miles traveled (VMT) compared to the No Build Alternative and, therefore, would not result in adverse impacts to the street and highway network. Chapter 4, Section 4.17.4 of the Final EIS/EIR stated that because the Project would result in fewer vehicle trips and VMT compared to conditions without the Project, the incremental effect of the Project on combined traffic impacts would not be cumulatively adverse in Section 3.

As stated in Section 3.2.1 of the 130(c) technical memorandum, the project refinements would not change the number of stations or add project features that would generate new vehicular trips compared to the Project as evaluated in the Final EIS/EIR (e.g., new park-and-ride facilities). The project refinements do not have the potential to affect streets or highways because the refinements would not affect traffic flow (e.g., reduction in lanes), increase traffic volumes, require closures of driveways, or introduce new driveways. The location of the passenger drop-off area at the Westwood/VA Hospital Station has been relocated to within the northern portion of the existing VA Lot 42. Two new traffic signals would be added on Bonsall Avenue at the intersections with the westbound and eastbound ramps to Wilshire Boulevard. Based on the results of the *Westside Purple Line Extension Project Section 3, Westwood/VA Hospital Station Passenger Drop-off Facility Traffic Impact Study* (Metro 2018b) there would be no adverse impacts in 2025 or 2045 associated with relocating the passenger drop-off area to a location

within Lot 42 or adding the traffic signals. The traffic analysis considered increases in background traffic as a result of planned population and employment growth; therefore, this traffic analysis considers cumulative impacts when the WPLE Project is combined with other future projects. As such, the project refinements would not have a cumulative impact to streets and highways.

Vehicular traffic associated with the Westwood/UCLA Station is not anticipated because a passenger drop-off area or park-and-ride are not proposed at this station. Therefore, while performance of the UCLA Campus street network may be affected as a result of proposed UCLA Campus projects, the WPLE Project would not contribute to cumulatively adverse impacts to streets. Further proposed projects on the UCLA Campus would be required to comply with applicable regulations, develop project-specific traffic analyses, implement mitigation measures as necessary, and undergo discretionary review so as to identify and minimize potential impacts to streets and highways.

Proposed projects in the City of Los Angeles and on the VA WLA Campus could result in the increase of vehicle trips and changes to the level of service on arterials also used by motorists accessing the passenger drop-off area at the Westwood/VA Hospital Station. The anticipated future housing growth and the potential medical center expansion projects on the VA WLA Campus could result in an increase in residents, staff, and visitors accessing the campus via personal vehicle and, in turn, could result in an increase in vehicle trips and VMT to the surrounding streets. Proposed projects on the VA WLA Campus would be required to comply with applicable regulations, develop project-specific traffic analyses, implement mitigation measures, and undergo discretionary review for approval to minimize potential traffic impacts. As stated previously, the traffic analysis conducted for the WPLE Project passenger drop-off area assumed increases in background traffic and concluded that the drop off area would not result in adverse impacts to streets.

The project refinements would not result in adverse impacts to streets and highways. When combined with the proposed projects, the refinements would not increase street and highway impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts related to street and highways and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.3 Parking

Chapter 3, Section 3.6.2 of the Final EIS/EIR concluded that Section 3 of the Project would result in on-street parking impacts due to residential neighborhood spillover around the Westwood/UCLA and Westwood/VA Hospital Stations. Additionally, off-street parking loss could occur at the Westwood/UCLA Station. The Final EIS/EIR included construction of a parking structure at the VA WLA Campus to offset permanent parking lost as a result of the Westwood/VA Hospital Station. Parking lost at the UCLA Campus would be accommodated in other parking facilities owned or planned by UCLA. Chapter 4, Section 4.14.4 of the Final EIS/EIR stated that the projected increase in population within a one-quarter mile walking distance of the station locations would increase parking demand; therefore, the WPLE Project would result in cumulatively adverse impacts.

Based on further design in support of the project refinements, there would not be a net loss of off-street parking at either the Westwood/UCLA or Westwood/VA Hospital Stations. Rather, site plans developed for the transit plaza in UCLA Lot 36 show a net increase in parking in that location after construction of the Project. As described in Section 3.3.1 of the 130(c) technical memorandum, spillover parking is not anticipated at the Westwood/VA Hospital Station as the formal passenger drop-off area added as part of

the project refinements would reduce the potential for spillover parking. Additionally, the project refinements would not increase the potential for spillover parking at the Westwood/UCLA Station compared to the Final EIS/EIR. Therefore, the project refinements do not increase the severity of spillover parking impacts identified in the Final EIS/EIR and would not result in new impacts associated with the permanent loss of on- or off-street parking.

Proposed projects in the City of Los Angeles could increase demand for parking due to the future development of residential, hotel, and commercial uses. A majority of these projects would be located along Wilshire, Westwood, and Santa Monica Boulevards. The proposed projects would be required to comply with development-specific parking requirements and would be subject to City review to ensure that adequate parking is provided. It is also anticipated that the proposed projects would incorporate project-specific design features and mitigation measures, as necessary, to minimize potential on- and off-street parking impacts.

Proposed projects on the UCLA Campus could also increase parking demand; however, this increased demand would occur primarily in the campus areas where the future projects are planned (Figure 2-2). The closest proposed project is approximately 0.36 mile from the Westwood/UCLA Station entrance in Lot 36; therefore, the potential overlap in parking demand for the WPLE Project and proposed projects on the UCLA Campus is minimal. The proposed projects on the UCLA Campus would be required to comply with UC Regent parking requirements and subject to discretionary review to ensure adequate parking is provided.

On the VA WLA Campus, construction of new housing and veteran resource facilities in the north campus and expansions to the medical center in the south campus are anticipated, all of which could increase parking demand. On the south campus, the VA proposes construction of a new parking structure adjacent to the western side of the medical center, which would at least partially address the parking demands of the VA WLA program. The VA is preparing a programmatic EIS to evaluate impacts associated with the proposed development. It is anticipated that long-term parking impacts would be evaluated as part of this process to determine if adequate parking supply is adequate to accommodate future projects and the accompanying parking demands on the VA WLA Campus. Provision of the Westwood/VA Hospital Station is anticipated to reduce parking demand on the VA WLA Campus. As stated previously, a parking structure would be constructed in Lot 43 to offset the parking permanently removed in Lot 42 to accommodate the station entrance and passenger drop-off area. The mitigation measures identified in the Final EIS/EIR and summarized in Section 3.3.1 of the 130(c) technical memorandum would continue to apply to the project refinements. Therefore, the WPLE Project would not contribute to cumulative parking impacts on the VA WLA Campus.

The project refinements would not result in the permanent loss of off-street parking or increase the severity of spillover parking impacts compared to the Final EIS/ER. Therefore, when combined with proposed projects, the refinements would not increase parking impacts or result in new cumulative impacts. As such, the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.4 Pedestrian and Bicycle Facilities

Chapter 3, Section 3.7.2 of the Final EIS/EIR stated that the Project would result in impacts to pedestrian, bicycle, and bus transit facilities as a result of the Westwood/UCLA and Westwood/VA Hospital Stations. The Final EIS/EIR concluded that with implementation of the mitigation measures, there would not be adverse impacts to pedestrian, bicycle, or bus transit facilities.

As demonstrated in Section 3.4.1 of the 130(c) technical memorandum, the project refinements would not result in new conflicts to pedestrian or bicycle facilities. Instead the project refinements would provide a benefit in terms of pedestrian circulation at both stations. The refinements would also comply with applicable codes and regulations. Thus, the impact conclusions in the Final EIS/EIR for pedestrian, bicycle, and bus transit remain unchanged with implementation of the project refinements.

Proposed projects in the City of Los Angeles could result in hazards to pedestrians or bicyclists. However, it is anticipated that the proposed projects would apply with applicable codes and regulations and be designed to minimize potential hazards to pedestrians and bicycle facilities. The proposed projects would also integrate project-specific design features and implement mitigation measures as necessary if impacts to pedestrian or bicycle facilities are identified. Proposed projects would also be subject to City review to ensure that they are designed with adequate access/circulation, including standards for sight distance, sidewalks, crosswalks, and pedestrian movement controls.

Proposed projects at the UCLA Campus would also be required to integrate project-specific design features, implement mitigation measures as necessary, and comply with applicable policies, plans, and regulations to ensure pedestrian and bicycle facilities are maintained and minimally impacted. The capital-funded projects do not specifically identify changes or improvements to the campus circulation; however, capital-funded projects may include improvements to the existing pedestrian and bicycle facilities to meet anticipated growth on the UCLA Campus. Proposed projects would also be subject to discretionary review to ensure that they are adequately designed.

Regarding proposed projects on the VA WLA Campus, the GLA DMP and conceptual site plan identify a pedestrian promenade and improvements to circulation that would better serve the veteran community and visitors to the VA. The pedestrian promenade would connect the main medical buildings and hospital to Bonsall Avenue. It is anticipated that the pedestrian circulation features would be designed in compliance with applicable codes and regulations, including those related to Americans with Disabilities Act (ADA) accessibility. Therefore, the changes in circulation on the VA WLA Campus are not anticipated to result in adverse impacts to pedestrians. The proposed changes in the circulation on the VA WLA Campus also would be compatible with the location of the Westwood/VA Hospital Station entrance in Lot 42 and when combined with the circulation elements added by the WPLE Project would not result in adverse impacts to pedestrian and bicycle facilities.

The project refinements would not result in adverse impacts to pedestrian or bicycle facilities. When combined with proposed projects, the refinements would not result in long-term impacts to pedestrian and bicycle facilities and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.5 Land Use

Chapter 4, Section 4.1.3 of the Final EIS/EIR stated that the Project would be consistent with applicable land use and community plans and subject to all applicable requirements and regulations of local jurisdictions where the stations are located. When the Project is combined with other projects included in the 2008 RTP, the Project would not result in cumulative direct land use impacts (Chapter 4, Section 4.17.4 of the Final EIS/EIR).

As shown in the *Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum* (Metro 2018c) and summarized in Section 3.5.1 of the 130(c) technical memorandum, the project refinements would not result in incompatibility or inconsistencies with regional and local land uses plans and surrounding land uses and would not divide an established community. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

The proposed projects in the City of Los Angeles would consist of residential, commercial, office, and hotel uses and would be generally compatible with the adjacent and surrounding land uses. Furthermore, each proposed project would be required to comply with relevant plans, policies, and regulations, and would require City review to ensure potential land use impacts are minimized to the extent feasible.

Proposed projects at the UCLA Campus may include seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. Each proposed project would be required to comply with relevant plans, policies, and regulations, and require discretionary review to ensure land use impacts are minimized to the extent feasible.

Future proposed projects at the VA WLA Campus may include expansions to medical facilities, new residential units, and open space. The VA is in the process of preparing a programmatic EIS, for which comments would be sought. Because the VA would oversee all development on the campus and would consider public review, it is anticipated that the proposed projects would be consistent and compatible with existing land use.

The project refinements would not result in adverse impacts to land use. When combined with the proposed projects, the refinements would not result in an increase of long-term land use impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse land use impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.6 Communities and Neighborhoods

Chapter 4, Section 4.2.3 of the Final EIS/EIR stated that the Project would not affect existing pedestrian or vehicular traffic, negatively affect community cohesion, or displace community assets. The Project would be designed consistent with ADA requirements and would be designed to ensure accessibility to all persons. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, the Project, when combined with other future projects, would provide opportunities for future station area development. This development is anticipated to enhance circulation and connectivity within the greater region, which in turn may help enhance the character and cohesion of these communities and neighborhoods. In addition, the new and expanded transit services would provide enhanced access directly to those neighborhoods, and by upgrading service throughout the day, the Project combined with other projects in the 2008 RTP would improve access to and support of employment opportunities and job retention, as well as the use of community, institutional, education, and recreational facilities in those areas. No adverse cumulative impact was therefore anticipated.

As shown in the *Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum* (Metro 2018c) and summarized in Section 3.6.1 of the 130(c) technical memorandum (Metro 2018a), the project refinements would not result in adverse impacts to community assets and community cohesion or create a barrier within the community. Overall, the project refinements would benefit transit passengers, including veterans with destinations at the VA Main Hospital (Building 500).

The proposed projects in the City of Los Angeles would consist of residential, commercial, office, and hotel uses and are not anticipated to result in new impacts to community assets and community cohesion or create barriers within the community. Projects at the UCLA Campus may include seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. Projects such as these are not anticipated to result in new impacts to community assets, community cohesion, or otherwise create barriers within the community. Each proposed project would require discretionary review to ensure potential impacts to the physical community are minimized.

Future proposed projects at the VA WLA Campus would be veterans-focused, particularly for homeless veterans, including underserved populations such as female veterans, aging veterans, and those who are severely physically or mentally disabled. The proposed projects are anticipated to advance the vision and objectives of the GLA DMP to transform the campus into a veteran-focused community where veterans can access housing and supportive veteran resources and services as needed. The VA also proposes redesigning the circulation of the south campus in a manner that would improve vehicular circulation, create better access between the north and south campuses, and improve the existing pedestrian circulation throughout the medical center with a pedestrian promenade that connects the main medical buildings and hospital. These proposed projects would be beneficial to the VA WLA Campus community. Based on the scope and location of these projects, there is limited potential for an adverse cumulative impact on communities and neighborhoods when combined with the WPLE Project. Furthermore, the VA is in the process of preparing a programmatic EIS for the VA's proposed development, for which comments would be sought. Because the VA would oversee all GLA DMP development on the campus and would consider public review, it is anticipated that proposed projects on the VA WLA Campus would not result in adverse impacts to communities or neighborhoods, including to the veteran community.

The project refinements would not result in adverse impacts to communities and neighborhoods. When combined with proposed projects, the refinements would not increase in long-term impacts to communities and neighborhoods and would not result in new cumulative impacts. The project refinements would not result in adverse impacts to community assets and community cohesion or create a barrier within the community because a majority of the refinements would be underground, temporary, or provide accessibility improvements for transit patrons. The Project and associated refinements would not displace identified community assets associated with the VA WLA Campus or otherwise affect access to identified community assets. Project refinements would shift the station entrance closer to the VA Main Hospital (Building 500) and the Project would provide a replacement parking structure within VA Parking Lot 43 to offset temporary and permanent parking loss resulting from displacement of VA Parking Lot 42. Overall, the project refinements would benefit the community, particularly members of the veteran community and the VA WLA Campus traveling to and from the VA Main Hospital (Building 500). While the WPLE Project would displace the northeast mural along Bonsall Avenue, Metro proposes providing a mosaic that conveys the story of the mural on an embankment

located across from its current location in Los Angeles County property. Metro is coordinating with the VA, veterans groups, and other stakeholders regarding elimination of the northeast mural and conveying the story in mosaic to help avoid any potential adverse impacts related to community assets. When combined with proposed projects, the refinements would not increase long-term impacts to communities and neighborhoods and would not result in new cumulative impacts as related projects associated with the VA's GLA DMP do not pose any permanent adverse impacts to community assets associated with the VA WLA Campus. Therefore, the project refinements would not contribute to cumulatively adverse communities and neighborhoods impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.7 Acquisition and Displacement

Chapter 4, Section 4.2.2 of the Final EIS/EIR stated that the Project would require permanent easements for station entrances. Owners and tenants of those parcels requiring easements or displacement would be given advance written notice and informed of their eligibility for payments for use of their space for the station entrances. While the Final EIS/EIR stated that adverse impacts would not occur as a result of permanent easements, mitigation measures were identified that would further minimize potential impacts associated with displacement and relocation.

As demonstrated in Section 3.7.1 of the 130(c) technical memorandum, the project refinements would not require new full acquisitions; however, two new permanent surface easements would be required, one of which is in California Department of Transportation (Caltrans) right-of-way for emergency exit stairs. New permanent surface easements would also be required on the VA WLA Campus (1) within the northern portion of Lot 42 for the passenger drop-off area and station entrance plaza, (2) immediately west of Bonsall Avenue for methane vents, and (3) adjacent to the U.S. Army Reserve site for an emergency exit hatch, ventilation grates, and an emergency walkway. Coordination is occurring with representatives of both Caltrans and the VA regarding these new permanent surface easements. Permanent surface easements on other properties would decrease as a result of the project refinements. However, to accommodate the Westwood/UCLA Station entrance adjacent to the Linde (Westwood) Medical Plaza, an existing Chase Bank would be displaced. Based on discussions with the property owner, Chase Bank is interested in relocating to a currently vacant space within the Linde (Westwood) Medical Plaza that was previously occupied by a bank. The property owner has already begun discussions with Chase Bank regarding this relocation. Therefore, the changes to permanent easements required as a result of the project refinements would not result in new adverse impacts.

Proposed projects on the UCLA Campus and VA WLA Campus are generally anticipated to utilize existing land and property owned or leased by the respective project proponents, namely the UC Regents and the VA. Proposed projects in the City of Los Angeles could require property acquisitions and could potentially displace existing owners or tenants. However, based on the location, scope, and schedules of these proposed projects, it is unlikely that substantial numbers of people or housing units would be displaced such that replacement housing would be necessary. Further proposed projects in the City of Los Angeles may consist of housing projects that would replace or increase housing units in the area. The proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses would be required to undergo discretionary review and if new easements are required, coordination with owners and tenants of those parcels would occur. Thus, adverse impacts associated with acquisitions and displacements for proposed nearby projects are not anticipated.

The project refinements would not result in adverse impacts as a result of acquisitions or displacements. When combined with the proposed nearby projects, the refinements would not increase acquisition and displacement impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse acquisition and displacement impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.8 Visual Quality

Chapter 4, Section 4.3.3 of the Final EIS/EIR stated that the Project would not result in adverse impacts to visual quality; however, mitigation measures were identified to avoid or minimize impacts related to conflicts between scale and visual character; building removal and right-of-way acquisition; removal of mature vegetation; location of ancillary features; and introduction of new sources of light and glare. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, when combined with other projects identified in the 2008 RTP, the Project would not contribute to significant cumulative impacts or result in cumulatively adverse impacts.

Impacts to visual quality were evaluated in Section 3.8.1 of the 130(c) technical memorandum. The project refinements would not create a new source of substantial light or glare compared to the Project as evaluated in the Final EIS/EIR. The project refinements would not introduce new project features that would conflict with the scale or visual character of the surrounding area. While the refinement to the northeast station entrance for the Westwood/UCLA Station (adjacent to the Linde (Westwood) Medical Plaza) would remove the existing Chase Bank building, the façade of the station entrance would replicate pertinent features of this portion of the Linde (Westwood) Medical Plaza when it was first opened, restoring the character of this portion of the building compared to today. As part of the refinement to the northeast Westwood/UCLA Station entrance, Metro proposes removing four planters and the associated vegetation, including tall palms, from the plaza adjacent to the Chase Bank to improve pedestrian circulation and safety. Planters on other portions of the property would remain. The trees are not consistent with similar landscaping on adjacent properties nor the heights of existing street trees along Wilshire Boulevard. Therefore, the loss of trees would not result in an adverse visual impact. Coordination is ongoing with the VA regarding replacement for trees lost on the VA WLA Campus as a result of construction staging areas. Based on this coordination, there would not be adverse visual impacts on the campus as a result of the temporary removal of trees. Therefore, there would not be adverse visual impacts associated with the project refinements.

Proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses may introduce multi-story buildings to the visual environment which could alter or otherwise affect visual character or views of their surroundings. Discretionary review and approval of those projects would be required, and it is anticipated that mitigation measures for visual impacts would be identified and implemented if any such impacts were to occur. Additionally, proposed projects in the City of Los Angeles are dispersed throughout the Study Area and are not concentrated in any single viewshed such that a cumulative visual effect would be identifiable among the projects in the City of Los Angeles.

While the UCLA Campus is likely an aesthetically sensitive environment, the proposed projects on the campus may consist primarily of upgrades and retrofits to existing buildings and do not pose a substantial change to the visual character of the campus.

The visual setting of the VA WLA Campus may change as a result of improvements to the greenspaces and buildings, particularly on the south campus. It is anticipated that the visual setting of the south

campus could be improved through implementation of the GLA DMP and the corresponding public review process in support of the programmatic EIS being prepared by the VA. Accordingly, the cumulative effect of the proposed projects on the VA WLA Campus as part of the GLA DMP are anticipated to be beneficial to the visual character and quality of the campus.

Accordingly, no adverse cumulative effects on visual quality are anticipated to result from the nearby proposed projects in the Study Area. In addition, proposed projects in the Study Area would be subject to applicable jurisdictional requirements, including adopted guidelines and standards related to visual quality and lighting and would be subject to discretionary review to ensure the proposed projects are consistent with the surrounding areas.

The project refinements would not result in adverse impacts to visual quality. When combined with the proposed projects, the refinements would not result in an increase of visual quality impacts and would not result in a new cumulative impact. Therefore, the project refinements would not contribute to cumulatively adverse visual quality impacts, and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.9 Air Quality

Chapter 4, Section 4.4 of the Final EIS/EIR stated that the Project would lower regional pollutant burden levels in both the region and subarea during operation compared to the No Build Alternative. The Project would be powered by electricity and would not emit pollutants. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, the Project would have a beneficial impact on air quality and therefore would not result in cumulatively adverse impacts.

The project refinements would not increase air quality impacts and would continue to operate on electrical power and would not generate local air pollution during operation, as summarized in Section 3.9.1 of the 130(c) technical memorandum. Traffic analyses were conducted in support of the passenger drop-off area and two new signalized intersections, as documented in the *Westwood/VA Hospital Station Passenger Drop-Off Facility Traffic Impact Study* (Metro 2018b). Based on the analyses, the passenger drop-off area and the addition of traffic signals would not result in traffic impacts or air quality impacts associated with a degradation in level of service. Furthermore, idling restrictions would be in place, with multiple signage within the passenger drop-off area indicating that the area is a no-idle zone. As such, no air quality impacts are expected from these refinements and the impact conclusions in the Final EIS/EIR remain unchanged.

Proposed projects in the City of Los Angeles, the UCLA Campus, and the VA WLA Campus could increase vehicular trips, which would increase air emissions. None of the proposed projects are anticipated to result in land uses that would emit pollutants (e.g., factories). Discretionary review and approval of those projects would be required, and it is anticipated that mitigation measures would be identified and implemented if an individual project would result in emissions of criteria pollutants that exceed the South Coast Air Quality Management District's (SCAQMD) recommended daily thresholds for project-specific impacts. Further, this level of development would be consistent with 2016-2040 SCS/RTP population and employment forecasts, for which an air quality assessment was conducted. Therefore, adverse air quality impacts are not anticipated as a result of the proposed projects.

The project refinements would not result in adverse impacts to air quality. When combined with proposed projects, the refinements would not increase emissions of air pollutants and would not result

in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts related to air quality and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.10 Greenhouse Gases

Chapter 4, Section 4.5 of the Final EIS/EIR stated that operation of the Project is expected to decrease regional VMT, which would reduce energy consumption and lower emissions of some air pollutants, including greenhouse gases, resulting in beneficial climate change effects. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, as the Project would have beneficial impacts to climate change, it would not result in cumulatively adverse impacts on greenhouse gas emissions.

Per Section 3.10.1 of the 130(c) technical memorandum, the project refinements are minor changes and would not affect overall operations of the Project or VMT in the region or Project Area. The project refinements would be consistent with applicable regulation plans and policies to reduce emissions. Therefore, the beneficial greenhouse gas effects identified in the Final EIS/EIR remain unchanged with implementation of the project refinements.

Each of the proposed projects could generate greenhouse gases through increases in vehicular trips and energy consumption, which would contribute to climate change. Discretionary review and approval of those projects would be required, and it is anticipated that mitigation measures would be identified and implemented if an individual project would result in adverse greenhouse gas impacts.

The project refinements would not result in adverse greenhouse gas impacts. When combined with the proposed projects, the refinements would not increase long-term impacts related to climate change and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts related to climate change and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.11 Noise and Vibration

Chapter 4, Sections 4.6.3 of the Final EIS/EIR stated that noise from rail operations, including the interaction of wheels on tracks, signaling and warning systems, and traction power substations, would occur well below ground and would not be audible at ground level. At ground level, ventilation system fans and emergency ventilation system fans at the Westwood/UCLA and Westwood/VA Hospital Stations would be audible. The ventilation system fan would be designed to comply with Metro Design Criteria. With application of the design criteria, the fan noise would not exceed the Federal Transit Administration (FTA) Noise Impact Criteria at sensitive receivers near the stations. The Project would also not result in adverse vibration impacts. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, the Project would not contribute to cumulative noise or vibration impacts.

The evaluation of noise and vibration associated with the project refinements is detailed in the *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements* (Metro 2018d) and Section 3.11.1 of the 130(c) technical memorandum. The project refinements would not result in noise or vibration impacts during operation of the Project and, therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

None of the proposed projects in the City of Los Angeles or UCLA Campus are anticipated to introduce land uses that would generate sources of noise (e.g., introduction of a new outdoor amphitheater). The

proposed projects in the City of Los Angeles would increase noise levels along arterial roadways (e.g., Westwood Boulevard, Wilshire Boulevard) related to increased vehicle traffic; however, such increases are anticipated to be consistent with the urban development of the Study Area and are unlikely to result in a significant cumulative impact related to noise. Proposed projects on the UCLA Campus may consist of existing building renovations and retrofits, which are unlikely to substantially increase vehicular trips or result in land uses that generate noise. The proposed Margan Apartments redevelopment would result in an increase in vehicle trips that could have a measurable cumulative effect on the noise environment when considered with other proposed projects in the City of Los Angeles near Westwood Boulevard (see projects 2 – 6 on Figure 2-1). None of the proposed projects in the City of Los Angeles or on the UCLA Campus are anticipated to generate adverse vibration levels during operations.

Proposed projects on the VA WLA Campus may result in a long-term cumulative effect on the noise environment of the campus and its surroundings due to the programmed increase in patients and residents that would be supported by the various projects identified in the GLA DMP. The increase in patient beds and housing on the VA WLA Campus could increase vehicle trips to and from the campus which would, in turn, generate increased traffic-related noise. However, this area is already subject to traffic noise from Wilshire Boulevard and the I-405. Increases in noise levels related to development on the VA WLA Campus and corresponding increases in vehicular traffic could have an adverse effect on sensitive receptors on the VA WLA Campus, as well as nearby residents along San Vicente Boulevard. None of the proposed projects on the VA WLA Campus are considered to have particularly noisy operations. The proposed projects on the VA WLA Campus are also not expected to generate adverse vibration levels during operations. The VA is currently preparing a programmatic EIS in support of updates to the GLA DMP. It is anticipated that the VA would identify mitigation to address impacts posed by proposed projects in the GLA DMP if adverse noise or vibration impacts occur. Therefore, adverse impacts from proposed projects on the VA WLA Campus are not anticipated.

The project refinements would not result in adverse noise or vibration impacts. When combined with the proposed projects, the refinements would not increase long-term impacts related to noise and vibration and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts related to noise and vibration and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.12 Energy

Chapter 4, Section 4.7.3 of the Final EIS/EIR stated the Project would use energy during operation; however, the Project is expected to reduce automobile passenger-miles of travel and associated fossil-fuel based energy consumption and would overall decrease regional energy consumption. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, reducing automobile travel would also reduce vehicle congestion, which would reduce energy consumption associated with vehicle idling and vehicle travel at slower speeds. Because the Project would reduce regional energy consumption, it would not result in a cumulatively adverse impact when combined with other projects identified in the 2008 RTP.

As shown in Section 3.12.1 of the 130(c) technical memorandum, the project refinements are minor changes and would not affect overall operations of the Project or VMT in the region or Project Area. Additionally, the project refinements would not increase energy demands for the Project. Coordination is underway with representatives of VA regarding the removal of solar panels located in Lot 42. Further, Metro power requirements will not affect the VA's power supply because Southern California Edison is

planning to upgrade the Sawtelle substation for Metro's use. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

Proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses would all require energy for operation; however, none of these appear to have particularly intensive energy needs that could not be met, individually or cumulatively, by local utility service. While the proposed projects would have a cumulative effect related to energy consumption, it is not anticipated that the cumulative impact on energy would be significant given the scope and use of the proposed projects. In addition, such effects could be reduced through the incorporation of project-specific design features and implementation of Best Management Practices (BMPs) to reduce overall energy consumption.

The project refinements would not result in adverse energy impacts. When combined with the proposed nearby projects, the refinements would not result in long-term energy impacts in the City of Los Angeles or on the UCLA or VA WLA Campuses and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse energy impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.13 Geologic Hazard

Chapter 4, Section 4.8 of the Final EIS/EIR stated that the Section 3 of the Project would not result in adverse impacts related to seismic ground shaking, fault rupture at tunnel or station locations, liquefaction, seismic settlement, or hazardous subsurface gas with implementation of mitigation and design requirements. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, the Project is unlikely to contribute to cumulative impacts related to regional geotechnical hazards. As discussed in the Final EIS/EIR, since the Project involves subsurface tunneling, there is potential for long-term subsidence; however, when considered with the proposed projects, there is no potential for a cumulative impact related to subsidence as none of the proposed projects are anticipated to require tunneling or substantial below grade improvements. Impacts related to seismic ground shaking, hazardous gases, liquefaction, expansive soils, subsidence, and collapse would not be significant with implementation of mitigation measures.

Geotechnical investigations have continued since the completion of the Final EIS/EIR and the Project design has been revised based on the investigations. Section 3.13.1 of the 130(c) technical memorandum evaluates geologic hazards related to the project refinements. The project refinements are not in the vicinity of known active faults. The refinements are also in similar soil conditions as the Project as evaluated in the Final EIS/EIR. Metro would continue to comply with applicable regulations and implement the mitigation and design measures identified in the Final EIS/EIR. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

The proposed projects are located on previously disturbed land and it is assumed each proposed project would be subject to limited risk related to liquefaction, expansive soils, subsidence, or collapse due to unstable geologic units. It is anticipated that the proposed projects in the City of Los Angeles would require limited ground disturbance restricted to the footprint of their respective sites and may require excavation and soil removal for underground parking structures, setting foundations, and related activities consistent with other development in the Study Area. It is anticipated that design and development would comply with applicable codes and regulations to minimize risk associated with geologic hazards.

Proposed projects on the UCLA Campus generally do not consist of major development that would require much if any ground disturbance. Further, several of the proposed projects on the UCLA Campus involve seismic retrofits to address potential geologic hazards which would improve safety for students and visitors to the campus. It is anticipated that development and design would comply with applicable codes and regulations to minimize risk associated with geologic hazards.

Projects on the VA WLA Campus similarly do not pose substantial risks related to geological hazards. The proposed parking structure on the south campus may involve ground disturbance and excavation if subterranean parking is included; however, such a project would not pose a substantial risk of geologic hazards given the heavily disturbed nature of the south campus. In addition, the proposed projects on the VA WLA Campus generally consist of new or replacement buildings that are anticipated to be designed and constructed using newer building code requirements and materials, which would generally improve safety for patients, residents, employees, and visitors at the VA WLA Campus compared to existing, older buildings.

In general, each of the proposed projects are subject to some degree of geologic hazard given the seismically active nature of the region, but none would increase, exacerbate, or otherwise pose increased risks of geologic hazard individually or when considered cumulatively. Each of the proposed projects would be required to comply with applicable state and local building regulations and requirements to minimize potential geological hazard impacts. It is also anticipated that the proposed projects would be designed in compliance with applicable codes and regulations and would implement project-specific design features and mitigation measures to minimize impacts.

The project refinements would not result in adverse impacts associated with geologic hazards. When combined with the proposed projects, the refinements could result in long-term geological hazard impacts as identified in the Final EIS/EIR, but would not result in a new cumulative impact. Therefore, the project refinements could contribute to cumulatively adverse geological hazard impacts but the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.14 Hazardous Waste and Materials

As discussed in Chapter 4, Section 4.9 of the Final EIS/EIR, the potential exists for hazardous materials/waste spills to occur during operation of the Project; however, it is assumed that the storage and disposal of hazardous materials/waste would be conducted in accordance with applicable federal and state regulatory requirements that are intended to prevent or manage hazards. If a spill does occur, it would be remediated. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, operation of the Project is not anticipated to result in exposure to acutely hazardous materials and would not contribute to cumulatively adverse impacts regarding hazardous materials.

The project refinements would not increase the risk for hazardous materials/waste spills or require the transport of hazardous materials during operation of the Project, as summarized in Section 3.14.1 of the 130(c) technical memorandum. Therefore, the impact conclusions of the Final EIS/EIR related to hazardous waste and materials remain unchanged with implementation of the project refinements and no long-term hazardous materials impacts are anticipated during operations of Section 3 of the Project.

None of the proposed projects in the City of Los Angeles would require particularly hazardous operations as they consist primarily of residential, hotel, and commercial uses consistent with existing development. Similarly, proposed projects on the UCLA Campus do not include uses that would create

new hazards or generate substantially more hazardous wastes (e.g., introduction of a new laboratory) than under existing conditions as a majority of those projects consist of renovation or retrofit of existing buildings and uses. The projects proposed on the VA WLA Campus are more likely to result in new or increased hazardous materials as the proposed central kitchen, hospital, utility plan, and research building are likely to result in an increase in biohazardous wastes and use hazardous materials related to the programmed increase in patients at the hospital and associated clinics. Routine transport and use of typical hazardous materials (e.g. fertilizers, cleaning products, solvents) can be expected to result from proposed projects in the Study Area. However, given the scope of these projects, it is unlikely that any cumulative impact related to the transport and use of hazardous waste and materials would occur. The proposed projects in the City of Los Angeles and on the UCLA and the VA WLA Campuses would also be required to comply with applicable federal and state regulatory requirements and would implement clean-up plans in the event spills occur.

The project refinements would not result in adverse impacts associated with hazardous waste and materials. When combined with the proposed projects, the refinements would not result in long-term impacts related to hazardous waste and materials and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse hazardous waste and materials impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.15 Ecosystems/Biological Resources

Chapter 4, Section 4.10 of the Final EIS/EIR stated that the Project is located in a densely developed urban land area with limited ecosystem/biological resources. No special status species, sensitive vegetation communities, significant wildlife habitats or corridors, or wetlands were observed within the Study Area. Therefore, the Project would not result in adverse impacts to ecosystems or biological resources.

Impacts to ecosystems/biological resources related to the project refinements are evaluated in Section 3.15.1 of the 130(c) technical memorandum. Consistent with the Final EIS/EIR, the project refinements would be located in a densely developed urban area and are not located near sensitive ecosystems or biological resources. Trees and palms removed at the VA WLA Campus would be replaced upon the completion of construction and, therefore, there would not be a long-term impact to biological resources at the VA WLA Campus. The palms and other vegetation adjacent to the Chase Bank at the Linde (Westwood) Medical Plaza that would be removed during construction would not be replaced when construction is complete. However, other trees that would provide suitable habitat would remain on and adjacent to the property. Therefore, the impact conclusions of the Final EIS/EIR remain unchanged.

Proposed projects in the City of Los Angeles would have limited potential for impacts to ecosystems or biological resources as there is limited to no habitat for wildlife in the vicinity of these projects. Both the UCLA and VA WLA Campuses contain green spaces that can serve as habitat for urban wildlife, but it is unlikely that sensitive species reside in these areas. While the proposed projects on the UCLA Campus do not pose substantial modification to open space areas on the campus, there is potential that the proposed projects could result in the removal of trees that may support nesting birds. The VA WLA Campus projects would make alterations to the open spaces on the campus, which may require removal and replacement of trees on the campus. Given the limited presence of biological resources in the Study Area and the scope and location of the proposed projects, there is no potential for adverse cumulative impacts on biological resources posed by proposed projects.

The project refinements would not result in impacts to biological resources. When combined with the proposed projects, the refinements would not result in long-term impacts to ecosystems/biological resources and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse ecosystems/biological resource impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.16 Water Resources

Chapter 4, Section 4.11 of the Final EIS/EIR stated that the Project would not result in an increase in impervious surface, siltation, or changes in the existing amount or runoff patterns within the watershed. The Project would also comply with applicable regulations and would implement appropriate BMPs to reduce post-construction pollutants in stormwater discharges. Chapter 4, Section 4.17.4 of the Final EIS/EIR stated that when combined with other projects, the WPLE Project would not contribute to cumulatively adverse impacts.

The project refinements would not increase impervious areas or change drainage patterns compared to the Final EIS/EIR. Project refinements would comply with existing regulations, as summarized in Section 3.16.1 of the 130(c) technical memorandum. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

Proposed projects in the City of Los Angeles and on the UCLA Campus would be located on sites that are already developed and thus would not substantially increase impervious surfaces or otherwise generate substantial runoff or stormwater beyond existing conditions. Residential, hotel, and commercial uses proposed in the City of Los Angeles and on the UCLA Campus would likely increase demands on water supplies and increase generation of wastewater, although the density and scope of these proposed projects are consistent with existing development. Proposed projects in the City of Los Angeles and on the UCLA Campus would also be required to comply with existing regulations and implement project-specific design features and BMPs to reduce post-construction pollutants.

Proposed projects on the VA WLA Campus may include new development of housing and medical facilities, which could increase the demand on water supplies and the generation of increased wastewater. While some increase in impervious surfaces could be expected from implementation of some of the projects in the GLA DMP, the master plan generally proposes reuse of existing buildings where possible, and open/undeveloped areas on the campus are anticipated to be maintained such that substantial changes to stormwater and runoff flows are not expected. The VA is currently preparing a programmatic EIS in support of updates to the GLA DMP. It is anticipated that mitigation would be implemented if adverse impacts occur to water resources resulting from proposed projects in the GLA DMP. Therefore, adverse impacts from proposed projects on the VA WLA Campus are not anticipated.

The project refinements would not result in adverse impacts to water resources. When combined with the proposed projects, the refinements would not result in long-term impacts or new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse water resources impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.17 Safety and Security

Chapter 4, Section 4.12 of the Final EIS/EIR evaluated long-term safety and security impacts during operation of the Project in terms of employee safety, fire protection safety, pedestrian and bicycle safety at stations, suicide prevention at stations, crime prevention and security, security to prevent terrorist attacks, and emergency response. The Final EIS/EIR concluded that with mitigation, the Project would not result in adverse impacts to safety and security.

As demonstrated in Section 3.17.1 of the 130(c) technical memorandum, the project refinements would not introduce new project elements that would pose a new (previously unidentified) risk to safety or security. Coordination is ongoing with representatives of the VA to address safety and security concerns of the VA related to the introduction of a station on the VA WLA Campus. The VA has expressed concerns about the potential for safety and security to arise as a result of transit patrons utilizing the VA WLA Campus to access the transit system. Mitigation Measure SS-6 requires inclusion of security features and law enforcement at stations; with this measure, safety and security issues would not arise at the VA WLA Campus. The mitigation measures identified in the Final EIS/EIR would continue to be applicable to the project refinements. Therefore, the impact conclusions of the Final EIS/EIR related to safety and security remain unchanged with implementation of the project refinements.

The increase of residential, office, commercial, and hotel uses combined with future growth forecasted for the City of Los Angeles would result in a cumulative increase in demand for emergency services. Proposed projects on the UCLA Campus may primarily consist of seismic building upgrade projects; campus infrastructure and expansion projects; student housing projects; and medical health center expansion, renovation, and structure improvements. Several of the capital-funded projects would benefit the UCLA Campus and its constituents regarding seismic safety and building safety. Nonetheless, expansion projects and student housing projects may also increase the demand for emergency services. However, implementation of these projects would include coordination with emergency service providers (e.g., police and fire) to reduce potential impacts to emergency services. The proposed projects would also be required to comply with building code and design standards related to safety. The proposed projects are also anticipated to implement operational design features to enhance safety within and immediately surrounding each individual proposed project.

Proposed projects identified in the GLA DMP for the VA WLA Campus include building improvements that may include a central kitchen, outpatient clinics, medical research building, central utility plant, hospital bed tower, parking structure, and community green in the south campus; and short-term and long-term housing in the north campus. The increase of housing and the expansion of the medical center would increase the number of residents and visitors to the VA WLA Campus and could result in the need for more safety and security measures. However, the proposed projects would implement project-specific design features to increase security and safety within the VA WLA Campus and the surrounding area and would comply with design standards related to safety. It is anticipated that safety and security impacts that may result from proposed projects included in the GLA DMP would be mitigated as part of the programmatic EIS that is being prepared by the VA.

The project refinements would not result in adverse impacts to safety and security. When combined with the proposed projects, the refinements would not result in long-term safety and security impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse safety and security impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.18 Parklands and Community Services and Facilities

As stated in Chapter 4, Section 4.13.3 of the Final EIS/EIR, the Project would not reduce the amount of existing public parkland or require full acquisition of community facilities. Enhanced transit access would reduce travel time and increase local and regional connectivity to facilities and parks. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, the Project, when combined with other regional projects, would not result in cumulatively adverse impacts to parklands and other community facilities.

Parklands and community facilities are evaluated in Section 3.18.1 of the 130(c) technical memorandum and include the VA WLA Campus, Los Angeles National Cemetery, and the UCLA Campus, among others. As stated in Section 3.18.1, the project refinements would not result in new adverse impacts to parklands and community facilities. This conclusion considers impacts including, but not limited to, noise, vibration, aesthetics, and access. The Project would have the potential to increase the use of medical facilities on the VA WLA Campus and facilities associated with the UCLA Campus as a result of improved access via transit. However, the proposed projects contemplated as part of the GLA DMP and UCLA Campus Capital Program Project would address this potential increase in use by providing updated facilities.

The proposed projects are not anticipated to result in direct impacts on parklands or community facilities. Proposed projects in the City of Los Angeles and housing units proposed on the UCLA Campus would result in an increase in population, thereby increasing use of available parklands and community facilities. New developments in the City of Los Angeles would be required to pay development fees to help offset impacts on parklands related to increased use. In addition, each proposed project may be required to coordinate with the City of Los Angeles to ensure that such facilities are considered and potential impacts are minimized through project-specific design features or mitigation measures.

The VA WLA program includes projects that would improve open and green spaces on the campus for its visitors, patients, staff, and residents. Accordingly, if the GLA DMP program is implemented, it can be expected that a beneficial impact on parkland, open space, and associated facilities on the VA WLA Campus would be realized. The GLA DMP may result in development of new housing units, which may increase the use of parklands and community facilities in the Study Area. It is anticipated that impacts to parklands and community facilities would be evaluated as part of the programmatic EIS and mitigation would be identified if required. The project refinements would not result in impacts to parklands or community services and facilities. When combined with the proposed projects, the project refinements would not result in long-term impacts to parklands and community services and facilities in the City of Los Angeles or on the UCLA or VA WLA Campuses and would not result in a new cumulative impact. Therefore, the project refinements would not contribute to cumulatively adverse parklands and community services and facilities impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.1.19 Historic and Archeological Resources

As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, while the Project would remove one historic resource (Ace Gallery), which is considered an adverse impact, the Project would not result in cumulatively adverse impacts to historic resources. This resource is located in Section 2 of the WPLE Project. Adverse impacts to historic resources were not identified in Section 3 of the WPLE Project. Operation of the Project does not include ground disturbance and, therefore, impacts to archaeological resources would not occur.

Cumulative effects related to historic resources are detailed in the *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report* (Metro 2018e) and summarized in Section 3.19.2.1 of the 130(c) technical memorandum. The Section 106 regulations at 36 CFR 800.5 note that, “Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.” While there have been prior changes to the WLA VA Historic District unrelated to the WPLE Project, the project refinements would not result in a cumulative adverse effect. Most of the effects to the historic district would be temporary, and affected areas would be restored or improved at construction completion.

For this undertaking, all prominent project elements would be located outside the historic district within an existing, approximately 5-acre parking lot that currently contains large solar arrays. Smaller permanent project elements, including grates, a gravel walkway, and hatches, would be located within the WLA VA Historic District but would be at ground level and unobtrusive to the district’s setting. A reasonably foreseeable future and separate undertaking, the GLA DMP, proposes changes within a minimum 50-acre area that occurs adjacent to and outside the historic district property boundary. These changes include alterations to pedestrian and vehicular circulation patterns, new buildings, and increased green space. In general, these alterations occur outside the WLA VA Historic District in areas where the WPLE Project has no effects and where the setting has been altered continuously since the campus’ development through new building construction and parking, circulation, and power infrastructure. While the WPLE Project would likely bring more visitors to the VA WLA Campus, most visitors would not receive services within areas of the WLA VA Historic District that are affected by the Project. The creation of transit service would not result in an adverse effect.

Because FTA has no role in developing or evaluating impacts associated with the GLA DMP, the VA may determine during Section 106 review the plan’s effects on the WLA VA Historic District and whether the existing circulation patterns and buildings within the area are significant and warrant inclusion in an expanded National Register of Historic Places historic district that includes resources comprising the Third Generation Veterans Hospital era (1946-1958). These buildings, landscapes, and circulation patterns are outside the project Area of Potential Effect and were not assessed as part of this undertaking. The GLA DMP was developed independent of the current undertaking, and its contents are not a “reasonably foreseeable effect” caused by the Project. FTA cannot otherwise avoid, minimize, or mitigate effects to historic properties pursuant to 36 CFR 800 due to the VA’s future plans for its own property, and it is assumed the GLA DMP would be implemented with or without completion of the WPLE Project. As a result, the WPLE Project would have no adverse cumulative effect on historic properties. It is recommended that the VA consider cumulative effects during its Section 106 review for the GLA DMP and avoid, minimize, or mitigate the undertaking’s effects as necessary due to plans proposing substantial changes to the area’s setting and feeling through construction of new facilities, parking structures, and buildings, including a new multi-story hospital.

The work associated with the WPLE Project would not affect the character-defining features of any contributing elements and would not diminish the district’s integrity of location, design, setting, materials, workmanship, feeling, or association. Therefore, the Project would have No Adverse Effect on the WLA VA Historic District.

None of the proposed projects in the City of Los Angeles or on the UCLA Campus appear to involve historic structures. It is anticipated that an assessment of impacts to historic resources would occur prior to construction of the proposed projects and that impacts to historic resources would be avoided or

minimized as part of that process. Because all project activity in the vicinity of the (Westwood) Federal Building is underground, no cumulative impacts to that resource are anticipated.

None of the projects in the City of Los Angeles, UCLA Campus, or VA WLA Campus would require ground disturbance during operation and, therefore, would not result in impacts to archaeological resources.

The project refinements would not result in adverse effects on historic or archaeological resources. When combined with proposed nearby projects, the refinements would not result in an increase in adverse effects to historic resources and would not result in new cumulative impacts. None of the proposed projects or the project refinements require ground disturbance during operation. Therefore, the project refinements would not contribute to cumulatively adverse impacts to historic and archaeological resources and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2 Construction Phase Evaluation

The following sections evaluate potential cumulative impacts when impacts associated with construction of the project refinements are combined with other proposed projects.

3.2.1 Construction Phasing of WPLE Project and Other Proposed Projects

Section 3 of the Project is anticipated to begin construction in 2019 (Year 1) and be complete by 2025 (Year 7). The construction schedule is largely consistent with the construction timeline presented in the Final EIS/EIR. However, Metro proposes expediting the construction schedule of Section 3 in order to have the system in operation by the 2028 Olympic Games that would be held in Los Angeles. To meet this expedited schedule, Metro must advance the tunnel and station contracts concurrently. In comparison, the Final EIS/EIR did not assume that these contracts would overlap. An overview of construction activities associated with Section 3 of the WPLE Project is provided in Section 2 of the 130(c) technical memorandum (Metro 2018a).

It is anticipated that construction of several of the proposed projects and Section 3 of the WPLE Project could occur concurrently. In addition, new projects and plans may also be approved during the construction phase of the Project. The exact construction schedules for the proposed projects identified in the City of Los Angeles are currently unknown. Additionally, programmed projects in the *UC Capital Financial Plan* (University of California 2014) are not yet approved, may not have secured funding, and are described in a program manner. Nonetheless, construction of proposed projects on the UCLA Campus are not anticipated to conflict with the construction of the WPLE Project because the capital-funded projects would be located primarily away from UCLA Lot 36 where construction of the WPLE Project would occur. Even though the construction phasing and scheduling of the proposed projects identified in the City of Los Angeles and on the UCLA Campus are currently unknown, for purposes of providing a conservative analysis, it was assumed that construction of all of these projects would overlap with construction of the Project.

According to the conceptual construction schedule provided by the VA in August 2018 for the south campus, the construction schedule for Section 3 and the proposed projects on the VA WLA Campus could overlap as follows:

Year 1

- WPLE Construction: Tunnel boring machine launch box piling and excavation at the Western VA construction staging area on the VA WLA south campus. This construction activity would be completed at the end of Year 1.
- VA Construction: Construction of a proposed food and nutrition kitchen at the medical center on the south campus and construction of housing units at Buildings 205 and 208 in the north campus is also anticipated to begin.

Year 2

- WPLE Construction: Section 3 tunneling activities and concurrent station construction of the Westwood/UCLA Station and Westwood/VA Hospital Station are anticipated to begin.
- VA Construction: VA anticipates construction of housing units at Buildings 156, 157, and 158 in the north campus to begin. On-going construction of the proposed food and nutrition kitchen would continue in Year 2.

Year 3

- WPLE Construction: Section 3 tunneling activities would be completed during Year 3 and construction activities for the cross-passage would begin. Station construction would continue through Year 3.
- VA Construction: Site utility work in the south campus and construction of housing units at Buildings 156, 157, and 158 in the north campus would be completed during Year 3. VA anticipates initiating construction on a new bed tower in the south campus, and begin housing construction at Buildings 206, 207, 210, 256, and 257 in the north campus.

Year 4

- WPLE Construction: Cross-passage construction and station construction would continue through Year 4.
- VA Construction: VA construction of the bed tower and demolition of Buildings 345, 401, and 402 in the south campus, and housing construction at Buildings 206, 207, 210, 256, and 257 in the north campus may be completed.

Year 5

- WPLE Construction: In addition to ongoing station construction, tunnel invert and walkway construction would occur during Year 5. The tunnel invert and walkway construction would be completed in Year 5.
- VA Construction: VA anticipates the beginning of construction of a new central utility plant and a research building in the south campus and the construction of additional housing units in the north campus.

Year 6

- WPLE Construction: Completion of station construction and start of station backfill and street restoration, as applicable. Additionally, systems installation and facilities would begin.

- VA Construction: VA construction activities related to the bed tower, research building, and central utility plant in the south campus and construction of housing units in the north campus would continue through Year 6.

Year 7

- WPLE Construction: The construction of Section 3 systems installation and facilities, and station backfill and street restoration would be completed and would signal the end of construction activities for Section 3 of the Project.
- VA Construction: VA anticipates construction of the bed tower, research building, and central utility plant would be completed in the south campus and construction of new outpatient clinics would begin in the last quarter of Year 7. VA construction activities related to housing unit construction in the north campus would continue through Year 7 and is anticipated to be completed one year after construction of Section 3 has ended.

Additional construction activities are anticipated to occur on the south campus during the early operating years of Section 3 of the Project. These future projects could include the demolition of Buildings 304 and 500 and the construction a new VA parking garage to serve the medical center.

3.2.2 Evaluation

The following sections evaluate potential cumulative effects associated with construction of the WPLE Project when effects of the Project are combined with proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses.

3.2.2.1 Public Transit

Chapter 3, Section 3.8.3 of the Final EIS/EIR stated that temporary street closures would require temporary rerouting of bus routes and additional bus stop locations, which could increase transit travel time. Metro committed to coordinating with transit providers prior to temporary street closures or other changes that affect bus stop locations or operations. The Final EIS/EIR also included Mitigation Measure TCON-6 (Temporary Bus Stops and Route Diversions) to minimize impacts at each construction location. The Final EIS/EIR concluded that although impacts to transit are temporary and would be reduced with mitigation, impacts would remain adverse and unavoidable during construction.

As detailed in Section 3.1.2 of the 130(c) technical memorandum, one project refinement—construction of underground conduits—would change street closures from those identified in the Final EIS/EIR. However, construction of the underground conduit would not result in adverse impacts to buses on Wilshire Boulevard because the bus-only lane would remain open during peak periods; bus stops would not need to be relocated; and detour routes for the bus would not be required. Therefore, the impact conclusions in the Final EIS/EIR related to construction-related impacts to public transit remain unchanged.

Construction of proposed projects in the City of Los Angeles located along Wilshire, Santa Monica, or Westwood Boulevards may require temporary bus stop closure or relocation; however, it is not anticipated that multiple projects would disrupt service at overlapping times on a single route. Each proposed project would be required to coordinate transit service disruptions with Metro or Big Blue Bus to minimize potential impacts on public transit.

Construction of proposed projects on the UCLA Campus may include construction activities, such as lane closures and the transport of construction materials, that could temporarily affect BruinBus service or bus stops. However, the BruinBus service provides service internal to the UCLA Campus and Westwood Village. Given the relatively small service area, it is likely that any potential disruptions to BruinBus service could be addressed by detours or other coordinated planning. Accordingly, proposed projects in the City of Los Angeles and on the UCLA Campus are not anticipated to have a cumulative impact on transit service.

Construction of the proposed projects on the VA WLA Campus included in the GLA DMP appear unlikely to involve roadway modifications or other construction activities that would have effects on public transit service or bus stops. In general, potential projects in the GLA DMP involve renovation of existing buildings, construction of new facilities internal to the campus, and improvements to internal circulation. It is therefore unlikely construction of any of these projects would affect bus service along Wilshire Boulevard, San Vicente Boulevard, Bonsall Avenue, or on Dowlen Drive. These improvements may affect transit service operated by the VA; however, it is anticipated that new bus stops and bus detours would be identified such that public transit would not be adversely affected during construction. Therefore, construction of the proposed projects on the VA WLA Campus is not anticipated to result in adverse impacts to transit service.

Construction of the project refinements would not increase impacts to transit service compared to the Final EIS/EIR. When combined with construction of the proposed projects, the refinements would not result in an increase of public transit impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse public transit impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.2 Streets and Highways

Chapter 3, Section 3.8.2 of the Final EIS/EIR evaluated construction-related impacts to traffic circulation from construction staging areas and other construction activities, truck haul routes, and grout injection. The Final EIS/EIR concluded that although impacts to traffic circulation are temporary and would be reduced with mitigation, impacts would remain adverse and unavoidable during construction. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, construction of the Project would result in the temporary disruption and rerouting of traffic, which would contribute to the cumulative increases in congestion within the Study Area.

As demonstrated in Section 3.2.2 of the 130(c) technical memorandum, construction of the project refinements would not increase the impacts to streets and highways that were identified in the Final EIS/EIR. The project refinements would not affect access by existing driveways, require roadway closures or detours that were not previously identified in the Final EIS/EIR, or substantially increase the number of truck trips. Consistent with Mitigation Measure TCON-1 (Traffic Control Plans), the construction contractor would prepare site-specific traffic-control plans to minimize construction impacts to the degree possible for each work zone. Therefore, there would not be an increase in severity of the adverse and unavoidable impacts identified in the Final EIS/EIR.

Construction of the proposed projects in the City of Los Angeles and on the UCLA Campus may result in increased truck traffic and worker trips on roadways that would also be used by construction vehicles for the WPLE Project. Given the scale and scope of these proposed projects, it is unlikely that a cumulative impact would occur to streets and highways, even if the construction activities overlap.

Truck trips associated with construction of the Westwood/UCLA Station would increase by up to 40 trips per day, from 100 trips per day to 140 trips per day compared to the Final EIS/EIR. When spread throughout the off-peak period, less than 4 additional trips would be added to Wilshire Boulevard east of I-405 per hour during that timeframe. When compared to traffic volumes on that segment of Wilshire Boulevard, this increase in traffic would be minor. As such, construction of the Project would not contribute to cumulatively adverse impacts to Wilshire Boulevard.

Proposed projects on the VA WLA Campus may lead to cumulatively adverse impacts on Wilshire Boulevard and the I-405 on- and off-ramps at Wilshire Boulevard. At the request of the VA, the Western VA construction staging area would include a shared driveway from Wilshire Boulevard for use by the Metro and VA construction contractors. The shared driveway was added at the request of the VA to minimize the number of access points used by construction traffic for access to and from the south campus. This would reduce the potential for cumulative impacts to occur on Bonsall Avenue as VA-related construction traffic would have direct access to Wilshire Boulevard. As shown in Figure 3-4 in Section 3.2.2 of the 130(c) technical memorandum, the greatest number of construction trips associated with the WPLE Project would occur in Year 4, of which 160 vehicles per day would utilize the Western VA construction staging area. During this time, VA anticipates construction of a new bed tower and demolition of Buildings 345, 401, and 402 in the south campus and housing construction at Buildings 206, 207, 210, 256, and 257 in the north campus may be completed. Given the amount of potential construction activity programmed on the VA WLA Campus and the limited means of access to the north and south campuses, it is likely that a cumulative impact could occur on circulation within and surrounding the VA WLA Campus related to congestion on roadways, including Wilshire Boulevard, Bonsall Avenue, and along the on- and off-ramps to I-405 at Wilshire Boulevard. Construction truck activity on the VA WLA Campus in support of the WPLE Project would be limited to Bonsall Avenue to access Lot 42 and the northeastern portion of Dowlen Drive to access Lot 43, except in emergencies. Therefore, there would not be cumulative effects to the majority of the intercampus circulation on the south campus when VA construction activities are underway. Accordingly, while construction traffic associated with the WPLE Project and GLA DMP would occur concurrently, there would be minimal overlap on VA WLA Campus roadways. As described in Section 3.2.2.1 of the 130(c) technical memorandum, haul truck activity associated with the WPLE Project would be spread throughout the off-peak hours to the extent feasible, which would amount to approximately 25 trips per hour on Wilshire Boulevard and 40 trips per hour on I-405. Based on the off-peak volumes associated with these roadways, these construction truck trips would not result in adverse impacts. As such, construction of the Project would not contribute to cumulatively adverse impacts to Wilshire Boulevard or I-405.

As stated in Section 3.2.2.4 of the 130(c) technical memorandum, construction of the underground conduits would require short-term closures of the eastbound far right travel lane on Wilshire Boulevard during off-peak hours. Additionally, construction of the vaults within Wilshire Boulevard could require closure of up to two eastbound lanes; however, the remaining eastbound lane would remain open. Construction of vaults on Ohio and Federal Avenues could require up to two weeks of closures; however, the limits of construction are small and there are only three to four vaults on each street. Intermittent partial (directional) closures would also be required for side streets that intersect with Federal or Ohio Avenues when work occurs in proximity to that side street. These partial closures would occur during off-peak periods for two to three days. Non-contiguous lane closures may be permitted. None of the projects identified in the City of Los Angeles would occur along these streets. Further, construction activities for proposed projects on the VA WLA Campus would not require closures of lanes along these streets. Therefore, construction of the Project would not contribute to cumulatively adverse impacts.

Construction of the project refinements would not result in new impacts to streets and highways or increase the severity of previously identified impacts. Therefore, the impact conclusions in the Final EIS/EIR related to cumulative impacts to streets and highways remain unchanged and have not increased in severity.

3.2.2.3 Parking

Chapter 3, Section 3.8.4 of the Final EIS/EIR stated that during construction, existing on-street parking and loading zones would be temporarily removed where traffic lanes are closed or eliminated temporarily. In addition, a number of off-street parking spaces would be removed during construction of the Westwood/UCLA and Westwood/VA Hospital Stations. These impacts remain adverse after mitigation. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, when combined with other projects pursuant to the 2008 RTP and the localized nature of this impact, the public parking loss during construction of the Project would not be cumulatively adverse.

The project refinements would not increase the off-street parking impacts identified in the Final EIS/EIR; however, on-street parking impacts would change along Ohio and Federal Avenues to accommodate construction of the underground conduit, as described in Section 3.3.2 of the 130(c) technical memorandum. Construction of the conduits would require the temporary closure of approximately 120 feet of the parking lane each day, which equates to the loss of approximately 6 on-street parking spaces at a time. It is anticipated that only one 120-foot stretch of the parking lane would be closed at a time; however, parking spaces would be affected for multiple off-peak periods as construction advances along the roadway. The parking lane on Ohio Avenue would not be affected at the same time as the parking lane on Federal Avenue. Construction of the electrical vaults would require closure of parking lanes for up to 10 days. With mitigation, impacts to on-street parking on Ohio and Federal Avenues would not be adverse and, therefore, would not contribute to a cumulative effect.

Construction of the proposed projects in the City of Los Angeles and on the UCLA Campus may result in the temporary displacement of on- and off-street parking for the purpose of construction-vehicle access or staging. Based on the scope of these proposed projects, construction work is unlikely to displace a substantial number of parking spaces both individually and cumulatively.

Construction of proposed projects on the VA WLA Campus may result in the temporary use of all or portions of surface parking lots on the campus, particularly on the south campus, which is a relatively confined area with substantial development per the conceptual site plan. However, a parking structure would be constructed by Metro to offset the temporary and permanent parking lost in Lot 42 as a result of the WPLE Project. Further, provision of the new parking structure may help to offset potential impacts to parking associated with potential VA WLA Campus improvements. The footprint of the Western VA construction staging area has been modified to avoid impacts to the solar farm, which has been identified by the VA as a potential location for staging construction of VA projects, thereby minimizing the WPLE Project's contributions to cumulative impacts to parking. As such, construction of the Project would not contribute to cumulatively adverse impacts to parking on the VA WLA Campus.

Construction of the project refinements would not result in new impacts to on- or off-street parking or increase the severity of previously identified impacts. When combined with construction of the proposed projects, the refinements would not result in an increase of parking impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to

cumulatively adverse parking impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.4 Pedestrian and Bicycle Circulation

Chapter 3, Section 3.8.5 of the Final EIS/EIR stated that, in general, sidewalk access would be maintained on both sides of the street throughout the construction period. Additionally, pedestrian access to all businesses would be maintained during essential business operating hours. Bike routes would also be maintained past construction sites. The Final EIS/EIR concluded that although impacts to pedestrians and bicyclists are temporary and would be reduced with mitigation, impacts would remain adverse and unavoidable during construction. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, when combined with pedestrian and bicycle significant impacts associated with projects pursuant to the 2008 RTP and given the localized nature of this impact, the pedestrian and bicycle impacts would not be cumulatively adverse.

As stated in Section 3.4.2 of the 130(c) technical memorandum, the refinements would not require sidewalk or bicycle facility closures that were not previously identified in the Final EIS/EIR or increase detour routes. Therefore, the project refinements would not affect the sidewalk and bicycle impact conclusions presented in the Final EIS/EIR or increase the severity of the impacts.

The proposed projects in the City of Los Angeles and on the UCLA Campus have the potential to result in temporary sidewalk closures, disruptions, and pedestrian detours if construction activities take place on or adjacent to sidewalks. None of the proposed projects would require roadway modification and thus are not anticipated to result in construction-related impacts on bicycle circulation. Potential impacts on pedestrian or bicycle circulation would be localized and confined to the vicinity of the proposed projects. Thus, proposed projects in the City of Los Angeles and on the UCLA Campus are unlikely to result in cumulative impacts on pedestrian and bicycle circulation.

The proposed projects on the VA WLA Campus would be confined to the campus and would have no potential to impact pedestrian or bicycle circulation outside the campus. Within the campus, proposed projects could affect internal pedestrian circulation on the south campus based on the conceptual site plan because pedestrian movement would be restricted through active construction zones. It is anticipated that measures to minimize impacts on veterans, patients, visitors, and staff, such as temporary wayfinding signage and detours, would be implemented during construction as appropriate. It is also anticipated that access would be maintained to buildings on the VA WLA Campus. While impacts on pedestrian circulation can be anticipated, they would not be cumulatively adverse.

On the VA WLA Campus, construction of the WPLE Project would not require closure of sidewalks. Further, the construction contract specifications for the WPLE Project require the contractor to develop a VA Hospital Access Plan that considers patient, employee, and vendor access, and includes the means by which access by sidewalk along Bonsall Avenue would be maintained to the hospital at all hours of the day. It is anticipated that the VA would participate in the preparation and review of this document. Therefore, construction of the WPLE Project would not result in adverse impacts to sidewalks on the VA WLA Campus.

Therefore, construction of the project refinements would not change the impact conclusions in the Final EIS/EIR related to pedestrians and bicyclists and there would be no new contributions to potential cumulative impacts to pedestrian and bicycle circulation.

3.2.2.5 Land Use

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that construction would not directly conflict with identified local land use plans, policies, and regulations of the City of Los Angeles and Los Angeles County. Construction staging areas are on parcels that are primarily commercial, vacant, or used for parking, and would not substantially alter land uses. The Final EIS/EIR stated that construction activities would result in temporary adverse impacts related to the physical division of established communities as a result of temporary street and sidewalk closures and traffic detours; however, these impacts would end with the completion of construction. With the implementation of these mitigation measures, construction would not result in the physical division of established communities.

Per Section 3.5.2 of the 130(c) technical memorandum, the refinements to construction activities, equipment, and methods are consistent with the Project as evaluated in the Final EIS/EIR and would not introduce new physical barriers, alter or create a division of an established community, or require temporary easements on new properties. Construction of the project refinements would not result in incompatibility with the surrounding land uses. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

Proposed projects in the City of Los Angeles and on the UCLA Campus are anticipated to comply with identified local land use plans, policies, and regulations. Construction of the proposed projects could include short-term temporary activities and require construction staging, materials stockpiling, hauling of dirt and materials, temporary street and lane closures, and temporary easements. However, construction activities would be temporary and, as a result, potential impacts to land use would also be short-term and temporary. Therefore, no adverse construction effects related to land use are anticipated to occur.

Proposed projects on the VA WLA Campus are also anticipated to comply with applicable land use plans, policies, and regulations. Due to the sensitivity of the veteran community on the VA WLA Campus, construction on the VA WLA Campus may result in temporary adverse impacts related to the physical division of established communities as a result of temporary street and sidewalk closures and traffic detours, if required. However, it is anticipated that the VA would coordinate with the veteran community and implement a construction management plan to ensure adequate and safe access throughout the VA WLA Campus is maintained during construction activities. Staging areas for the proposed projects would be temporary and are not anticipated to result in adverse impacts to adjacent surrounding uses. The VA is preparing a programmatic EIS, which would be distributed to the public for review and comment. It is anticipated that VA would identify further mitigation measures if it is found that construction of proposed projects in the GLA DMP would result in temporary adverse impacts to land uses. Further, potential construction impacts related to land use would be temporary and would be end once construction is completed. Therefore, no adverse construction effects related to land use are anticipated to occur.

It is anticipated that proposed projects in the Study Area would be required to comply with relevant plans, policies, and regulations, and would require discretionary review to ensure potential land use impacts are minimized during construction to the extent feasible. Construction of the project refinements would not result in adverse impacts to land use. When combined with the proposed projects, the refinements would not result in construction-related land use impacts and would not result in a new cumulative impact. Therefore, the project refinements would not contribute to cumulatively adverse land use impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.6 Communities and Neighborhoods

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that construction activities would result in temporary adverse impacts related to the physical division of established communities. However, implementation of mitigation measures and Metro's commitment to develop and implement a community outreach plan to notify local communities of construction schedules, road and sidewalk closures, and detours would reduce potential construction-related impact to communities and neighborhoods. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, if construction of the Project occurs at the same time as other projects in a particular community, cumulative effects associated with noise and vibration; street closures and traffic; parking; aesthetics; access to businesses, parks, and public facilities; and other construction-related effects would be significant during construction.

As demonstrated in Section 3.6.2 of the 130(c) technical memorandum, construction of the project refinements would not result in temporary adverse impacts to communities and neighborhoods, including the VA WLA Campus and the Westwood and UCLA community. This determination considers impacts associated with noise and vibration, construction-related traffic and roadway and lane closures, on- and off-street parking, visual resources, and access to businesses, parks, and other community facilities. Mitigation measures identified in the Final EIS/EIR would also be applicable to construction of the project refinements and minimize potential impacts to the extent feasible. Specifically, Mitigation Measures CON-1 (Signage), TCON-1 (Traffic Control Plans), TCON-2 (Designated Haul Routes), TCON-3 (Emergency Vehicle Access), TCON-4 (Transportation Management Plan), TCON-7 (Parking Management), TCON-8 (Parking Monitoring and Community Outreach), TCON-10 (Pedestrian Routes and Access), and TCON-11 (Bicycle Paths and Access) identified in the Final EIS/EIR would be implemented with the project refinements to minimize potential adverse construction-related effects to the VA WLA Campus as well as the surrounding community. Mitigation Measures CON-85 (Informational Program to Enhance Safety) and CON-86 (Traffic Control), as identified in Section 4.15 of the Final EIS/EIR, would also continue to reduce construction-related adverse effects to community facilities.

Construction of the proposed projects in the City of Los Angeles (e.g., residential, commercial, office, and mixed-use projects) and on the UCLA Campus (e.g., building structure improvements, student housing) are anticipated to require construction staging, materials stockpiling, and hauling of dirt and materials. Potential effects to streets, parking, and pedestrian and bicycle circulation from these projects are described in Sections 3.2.2.2, 3.2.2.3, and 3.2.2.4, respectively. Noise and vibration effects are described in Section 3.2.2.11 and air quality in Section 3.2.2.9. Construction of proposed projects in the City of Los Angeles and on the UCLA Campus would be site specific and would not be anticipated to result in the physical division of an established community. It is anticipated that construction would be staged in a manner that would maintain access to adjacent land uses. Further, construction activities would be temporary and construction-related effects to the surrounding community would end at the completion of construction activities. Therefore, no adverse construction effects related to communities and neighborhoods are anticipated to occur.

Construction of proposed projects on the VA WLA Campus may occur concurrently on the south and north campus and result in construction-related impacts that could physically divide the veteran community. Specifically, construction activities on the VA WLA Campus may result in temporary street and sidewalk closures, traffic detours, or changes in circulation. The VA is preparing a programmatic EIS to evaluate impacts associated with construction of the proposed projects. As part of this process, the VA is coordinating with members of the veteran community. It is anticipated that construction-related

impacts to the veteran community, including potential divisions of the community, would be evaluated as part of this process and mitigation would be identified if impacts would occur from construction of the proposed projects in the GLA DMP. In addition, it is anticipated that mitigation for impacts related to noise, access, traffic, aesthetics, and air quality would be mitigated to the extent feasible. Therefore, adverse construction-related effects to communities and neighborhoods are not anticipated to occur.

Construction of the project refinements would not result in adverse impacts to communities and neighborhoods. When combined with the proposed projects, the refinements would not result in construction-related impacts to communities and neighborhoods and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts to communities and neighborhoods, and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.7 Acquisition and Displacement

Chapter 4, Section 4.2.2 the Final EIS/EIR concluded that temporary easements would not result in adverse impacts as the use of the parcels would be temporary.

The temporary construction area footprints and temporary subsurface easements required for the project refinements are presented in Section 3.7.2 of the 130(c) technical memorandum. As stated in this section, the project refinements would not require construction area footprints on parcels that had not previously been identified in the Final EIS/EIR. As a result of the project refinements, temporary construction area footprints have decreased in size at five locations, increased by 2 percent at one parcel, and increased at the VA WLA Campus. The increase in temporary construction area footprint on the VA WLA Campus would occur in three areas of the campus and would not result in adverse impacts to operation of the VA WLA Campus. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

Proposed projects in the City of Los Angeles and UCLA Campus are anticipated to be site-specific projects that may require temporary easements during construction. These easements would be temporary and ownership of the area would return to the property owner when construction is complete. Therefore, temporary easements required for proposed projects in the City of Los Angeles and on the UCLA Campus would not result in adverse cumulative impacts.

Proposed projects associated with the GLA DMP would be located entirely on the VA WLA Campus. Construction staging areas required to support construction of the proposed projects could be required on multiple portions of the north and south campus concurrently; however, it is anticipated that construction phasing would be implemented in a manner that would minimize construction-related impacts to the extent feasible. Temporary easements would be returned to previous conditions once construction is complete. Thus, temporary easements on the VA WLA Campus are not anticipated to result in adverse impacts to the campus.

Construction of the project refinements would not result in adverse impacts to acquisitions and displacements. When combined with the proposed projects, the refinements would not result in construction-related impacts to acquisitions and displacements and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts to acquisitions and displacements, and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.8 Visual Quality

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that construction activities may introduce adverse heavy equipment and new lighting sources into the view corridor of public streets, sidewalks, and properties, which would conflict with the existing visual quality and character of commercial, recreation, and residential areas. Nighttime lighting would also result in adverse impacts. With the implementation of mitigation measures, there would not be adverse visual impacts during construction. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, visual effects associated with construction of projects are local in nature. Therefore, when construction of the Project is combined with similar effects associated with construction of other projects pursuant to the 2008 RTP, the combined impact would not result in cumulatively adverse impacts to visual resources and quality.

Per Section 3.8.2 of the 130(c) technical memorandum, the construction equipment and methods required for the project refinements are consistent with those evaluated in the Final EIS/EIR with the exception of the tower crane and vertical conveyor belt storage towers identified at the Western VA construction staging area and the work area in the Caltrans infiltration basin north of Wilshire Boulevard and west of I-405. The project refinements would not result in adverse impacts to visual resources or quality during construction.

Construction-related impacts on visual quality posed by the proposed projects would include the temporary presence of construction equipment (e.g. cranes, bulldozers, graders, and trucks) and materials, barriers, and fencing, as well as removal of existing structures and architectural treatments. Such impacts would be confined to the individual project sites associated with each proposed project and, with the exception of tall construction equipment such as cranes, generally would not be cumulatively visible within a given viewshed such that an adverse cumulative impact would result.

Based on the conceptual construction schedule provided by the VA in August 2018, multiple projects on the VA WLA Campus would be under construction concurrently, which could have a temporary cumulative impact on the visual character of the campus depending on the proximity of these projects to one another. Concurrent construction of multiple projects in the south campus is anticipated to occur between 2021 and 2026 with up to three major activities—demolition of buildings B345, B401, and B402; construction of the new bed clinic; and construction of the new research building—taking place concurrently in a relatively confined area. These concurrent activities could result in a noticeably diminished visual environment on the south campus, although the impact would be temporary. The VA is in the process of preparing a programmatic EIR, and it is anticipated that construction-related visual impacts would be mitigated to the extent feasible.

Visible elements of WPLE Project construction would be limited to construction staging areas. During construction, the construction staging areas would be enclosed behind approximately 20-foot-high temporary noise barrier walls, although tall construction equipment, such as cranes, would be visible above the walls. Metro has minimized impacts to existing palms and trees on the VA WLA Campus to the extent feasible; these trees would screen construction equipment and staging areas from certain vantage points. The analysis concluded that construction of the project refinements on the VA WLA Campus would not result in adverse visual impacts. Therefore, even though construction of the WPLE Project is anticipated to occur concurrently with projects on the south campus in support of the GLA DMP, the WPLE Project's contribution is not anticipated to be cumulatively adverse.

Construction of the project refinements would not result in adverse impacts to visual quality. When combined with the proposed projects, the refinements would not result in construction-related impacts to visual quality and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse impacts to visual quality and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.9 Air Quality

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that emissions of volatile organic compounds, carbon monoxide, nitrogen oxides (NO_x), particulate matter smaller than or equal to 10 microns in size (PM₁₀), and particulate matter smaller than or equal to 2.5 microns in size (PM_{2.5}) would exceed SCAQMD thresholds and, therefore, result in an adverse impact. The Final EIS/EIR identified measures to mitigate adverse air quality impacts; however, emissions would continue to exceed SCAQMD thresholds during construction and, therefore, air quality impacts would remain adverse. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, construction of the Project would contribute to a cumulative effect of NO_x, PM₁₀, and PM_{2.5}. When combined with construction-related emissions generated by other projects, the cumulative air quality impacts for NO_x and particulate matter would be significant, although temporary and limited to the duration of construction. Nonetheless, when combined with similar air quality impacts associated with other projects pursuant to the 2008 RTP and the localized nature of this impact, the air quality impacts would not be cumulatively adverse.

An assessment was conducted of the air quality impacts associated with construction of the project refinements, as detailed in the *Westside Purple Line Extension Project Section 3, Air Quality Technical Memorandum* (Metro 2018f) and summarized in Section 3.9.2 of the 130(c) technical memorandum. The updated analysis determined that construction emissions associated with construction of Section 3 of the WPLE Project would be lower than those presented in the Final EIS/EIR and would not exceed any SCAQMD thresholds. Therefore, construction of the project refinements would not result in an increase in severity of air quality impacts identified in the Final EIS/EIR.

Construction activities associated with each proposed project would generate localized dust impacts and air emissions associated with the operation of heavy construction equipment and trucks. Proposed projects in the City of Los Angeles and on the UCLA Campus do not pose a potential for cumulatively adverse construction air quality impacts because these projects are relatively dispersed throughout the area and it is unlikely that localized dust or equipment emissions impacts would combine resulting in a potentially more severe impact. Each of the proposed projects would be required to comply with regulatory requirements related to air quality, including SCAQMD rules pertaining to dust control measures.

Within the VA WLA Campus, construction of multiple projects could occur concurrently over a seven-year period, which could result in adverse air quality impacts related to dust and vehicle emissions. The VA is preparing a programmatic EIS to evaluate impacts associated with construction of the proposed projects. It is anticipated that construction-related air quality impacts would be evaluated as part of this process and mitigation would be identified if impacts from the proposed projects in the GLA DMP would occur. Additionally, construction activities on the VA WLA Campus would be required to comply with regulatory requirements related to air quality, including SCAQMD rules pertaining to dust control measures and emissions from construction equipment.

Construction activities on the south campus that are concurrent with the WPLE Project would occur to the south of the Metro staging areas from approximately 2019 to 2031. Maximum daily construction emissions associated with the WPLE Project would occur in the second quarter of year 2021 and would not exceed SCAQMD thresholds, including localized impacts on sensitive receptors such as patients at the VA Medical Center. Most construction activities on the south campus would take place in the years following the peak emissions of the WPLE Project. The exception to this is construction activities associated with site utilities, the kitchen AVG tunnel, and B212, all of which commence in 2021. As the peak emissions for the WPLE Project are well below the SCAQMD thresholds, it is not expected that these construction activities would contribute emissions to the point of exceeding either the regional or localized SCAQMD thresholds.

The planned buildings that would be located closest to the Metro construction staging areas include the future research building and parking structure. Construction of the research building is expected to start in mid-2023 and take place over the course of two and a half years; this is toward the end of Metro's construction schedule, which would taper off by late 2025. Furthermore, construction of the parking structure would not commence until 2030, well beyond the end of Metro's construction activities. Demolition of the buildings closest to Metro's construction staging areas, identified as Building 304 (Eye Clinic/Polytrauma/Employee Health) and Building 500 (Main Hospital), would not commence until 2029, also well beyond the end of Metro's construction activities.

In conclusion, the major construction activities on the south campus are scheduled to occur following peak construction activities at the WPLE Project. Furthermore, the construction activities closest to the Metro construction staging areas would occur well beyond the end of Metro's construction activities. Accordingly, cumulative adverse impacts on sensitive receptors such as patients at the VA Hospital are not anticipated because pollutants from the WPLE Project and projects associated with the GLA DMP improvements would not combine in concentrations that could exceed SCAQMD thresholds for localized air quality impacts. Both regional and localized construction period air quality impacts associated with the project refinements would be minor and would not represent a significant contribution to a cumulative impact. Therefore, no cumulative impacts are anticipated with construction of the proposed projects.

3.2.2.10 Greenhouse Gases

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that construction of the Project would increase carbon dioxide-equivalent (CO_{2e}) emissions by less than 0.1 percent compared to existing conditions, which would not result in an adverse impact. Additionally, the Final EIS/EIR stated that construction of Section 3 of the Project would generate approximately 102 metric tons of CO_{2e} per day, which is approximately 66,000 metric tons of CO_{2e} over the construction duration for Section 3. In the long run, operation of the Project would reduce emissions of greenhouse gases, thereby offsetting the short-term increase during construction. The mitigation measures identified for air quality impacts during construction would also reduce climate change effects during construction.

In support of the project refinements, the energy use and resulting greenhouse gas emission burdens associated with construction of all of Section 3 of the Project was estimated based upon the latest construction schedule and equipment, as detailed in Section 3.10.2 of the 130(c) technical memorandum. Construction activities associated with all of Section 3 (including the Westwood/VA Hospital Station, Westwood/UCLA Station, and associated tunneling and hauling) would require

approximately 289 billion British thermal units (Btus) of energy and result in approximately 96,000 metric tons of CO₂e. Therefore, construction of Section 3 of the Project would not result in significant impacts related to greenhouse gases during construction.

Construction activities associated with each proposed project, such as operation of heavy equipment and construction worker trips, would generate greenhouse gas emissions. Proposed projects in the City of Los Angeles, on the UCLA Campus, and on the VA WLA Campus are not anticipated to generate substantial amounts of greenhouse gas emissions, although some cumulative contribution to greenhouse gases can be attributed to any project that includes construction activities. Each of the proposed projects would be required to comply with regulatory requirements related to air quality and climate change.

As described, emissions of criteria pollutants and greenhouse gases associated with larger portions of the Project (i.e., Section 3) would be significantly lower than those presented in the Final EIS/EIR. Therefore, construction of Section 3 of the Project would not result in new cumulatively adverse impacts related to greenhouse gases and climate change during construction.

3.2.2.11 Noise and Vibration

Chapter 4, Section 4.15.3 of the Final EIS/EIR concluded that noise and vibration from construction would comply with the City of Los Angeles' California Environmental Quality Act Threshold Guidelines, the City of Los Angeles noise ordinance, the County of Los Angeles noise ordinance, and the Metro Baseline Specifications Section 01565, Construction Noise and Vibration Control. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, when combined with concurrent construction of other projects pursuant to the 2008 RTP and given the localized intermediate nature of this impact, the noise and vibration impacts associated with the WPLE Project would not be cumulatively adverse.

A detailed construction-related noise and vibration analysis was conducted in support of the project refinements, as documented in *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements* (Metro 2018d) and summarized in Section 3.11.2 of the 130(c) technical memorandum. As shown in that memorandum, with mitigation, there would not be construction-related noise or vibration impacts to sensitive receivers.

The proposed projects in the City of Los Angeles would likely result in increased noise levels due to noise from on-site construction equipment, construction haul trucks, and equipment delivery trucks traveling along arterial roadways (e.g., Westwood, Wilshire, and Santa Monica Boulevards). Proposed projects on the UCLA Campus generally consist of existing building renovations and retrofits and are not likely to generate on-site construction noise atypical of the urban environment or off-site construction noise related to a significant increase in the number of truck trips. Noise from proposed projects could combine and result in impacts when construction activities are within 500 feet of each other. Beyond this distance, noise generally attenuates to a level that would not be cumulatively adverse. Two projects are located within 500 feet of the Westwood/UCLA Station construction area: the Westwood Hotel project and a 33-unit mixed-use building (see projects 5 and 6 on Figure 2-1). The construction schedule of these projects is unknown, but if construction of the Westwood/UCLA Station were to coincide with construction of these two projects, noise generated from construction would combine, resulting in temporary noise impacts to nearby sensitive receptors. Since construction activities would be temporary and subject to local regulations restricting hours of construction, it is not anticipated that the cumulative

noise impacts would be adverse. These proposed projects would be required to comply with applicable noise thresholds and would implement project-specific design features and mitigation measures to minimize potential impacts. Off-site truck noise would be generated by the combination of different truck trips from the WPLE Project (up to 140 daily trips) and the proposed projects. However, the anticipated haul routes are already heavily traveled by haul trucks and other traffic from existing projects, and it is unlikely that Project and proposed project trips would result in significant increases in noise levels above existing conditions. Construction-related noise impacts associated with the WPLE Project would not exceed applicable thresholds with implementation of mitigation. Furthermore, as different projects are completed noise levels would fluctuate or be reduced due to the decrease in construction activity.

Construction of proposed projects on the VA WLA Campus are likely to result in increases in noise due to on-site construction equipment, construction haul trucks, and equipment delivery trucks traveling along arterial roadways. As stated previously, noise impacts could combine when construction activities are within 500 feet of each other. It is possible that projects proposed by the VA on the VA WLA Campus could be constructed concurrently resulting in cumulative construction noise impacts at nearby sensitive receivers. Further, construction noise associated with construction of the WPLE Project could combine with construction noise associated with VA proposed projects within 500 feet. The VA is preparing a programmatic EIS to evaluate impacts associated with construction of the proposed developments. It is anticipated that construction-related noise impacts would be evaluated as part of this process and mitigation would be identified by the VA to address potential noise impacts associated with the GLA DMP if impacts would occur to sensitive receivers. Further, construction-related noise impacts associated with the WPLE Project would not exceed applicable thresholds with implementation of mitigation. Therefore, construction of the project refinements would not result in new cumulative impacts or contribute to cumulatively adverse construction-related noise impacts.

With regard to construction vibration, vibration is a localized event and dissipates after a few feet. It is unlikely that cumulative vibration impacts would occur. Therefore, construction of the project refinements would not contribute to cumulatively adverse impacts related to construction-related vibration and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.12 Energy

Chapter 4, Section 4.15.3 of the Final EIS/EIR stated that approximately 2,309 billion Btus would be used to construct the Project's tunnels, stations, and ancillary facilities, which is approximately 0.03 percent of the total energy consumed per year in the State of California. Of this, approximately 671 billion Btus would be required for construction of Section 3 of the Project. In the long-run, operation of the Project would reduce regional mobile source energy consumption, offsetting short-term increases during construction. The contractor would be required to implement energy conserving BMPs including, but not limited to, the use of energy-efficient equipment and maintaining equipment and machinery in good working condition. The Final EIS/EIR concluded construction of the Project would not result in wasteful, inefficient, or unnecessary usage of fuel or energy during construction and, therefore, would not result in adverse impacts during construction.

As stated in Section 3.13.2 of the 130(c) technical memorandum, the overall construction methods, approach, and schedule associated with the project refinements remain consistent with those analyzed in Section 4.15.3 of the Final EIS/EIR in terms of energy demand. An updated energy analysis was

conducted for construction activities associated with Section 3 of the Project, including with implementation of the project refinements. Based on the latest construction information, it is estimated that 289 billion Btus of energy would be required, which is a decrease from the energy requirements reported in the Final EIS/EIR. It should be noted that the construction staging area in Lot 42 would displace the solar panels located in the parking lot, which were also added subsequent to the Final EIS/EIR. Metro is coordinating with the VA regarding the displacement of the solar panels as part of the real estate agreement. Therefore, construction of the Project would not lead to a wasteful, inefficient, or unnecessary use of energy and the impacts conclusions presented in the Final EIS/EIR remain unchanged.

Each of the proposed projects would include construction activities that consume energy through the operation of equipment that uses electricity or burns fossil fuels. None of the proposed projects in the Study Area are of a scope or size such that construction activities, when considered individually or cumulatively, would consume a significant amount of energy.

Construction of the project refinements would not result in adverse impacts to energy. When combined with the proposed projects, the refinements would not result in construction-related energy impacts and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse energy impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.13 Geologic Hazard

Chapter 4, Section 4.15 of the Final EIS/EIR evaluated the potential for construction-related activities to encounter geological hazards and subsurface hazardous substances. Construction of the Project would not result in adverse impacts related to seismic and liquefaction, subsidence and settlement due to tunneling, or hazardous subsurface gas with implementation of mitigation and design measures. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, construction of the Project would not contribute to a significant cumulative effect to geologic hazards.

As stated in Section 3.13.2 of the 130(c) technical memorandum, construction activity associated with the project refinements would be susceptible to surface fault rupture and seismic ground shaking due to the subterranean nature of the Project. Dewatering of the excavations made during construction could result in damaging subsidence adjacent to the construction area. However, experience in much of the corridor is that the soils have previously undergone numerous cycles of ground-water fluctuation and therefore have previously experienced the settlements associated with lowering of the ground. Analysis conducted during Preliminary Engineering of Section 3 of the Project, including in consideration of the project refinements, confirms that impacts to adjacent properties due to dewatering would not be adverse. Impacts from seismic ground shaking, hazardous gases, liquefaction, expansive soils, subsidence, and collapse would not be adverse with implementation of mitigation measures.

Construction of proposed projects are located on previously disturbed land and it is assumed each project would be subject to limited risk related to liquefaction, expansive soils, subsidence, or collapse due to unstable geologic units. Construction of proposed projects in the City of Los Angeles would require limited ground disturbance that would be restricted to the footprint of their respective sites. Excavation and soil removal for underground parking structures, setting foundations, and related activities consistent with other development in the Study Area may be required. Construction of proposed projects on the UCLA Campus generally do not consist of major development that would

require substantial ground disturbance. It is anticipated that design and construction of proposed projects in the City of Los Angeles and on the UCLA Campus would be performed by qualified professionals in consideration of geologic conditions and hazards associated with the site and that necessary design measures would be implemented to minimize potential impacts. Therefore, adverse impacts resulting from geologic hazards is not anticipated.

Proposed projects on the VA WLA Campus similarly do not pose substantial risks related to geological hazards. The proposed parking structure on the south campus may involve substantial ground disturbance and excavation if subterranean parking is included; however, such a project would not pose a substantial risk of geologic hazard given the heavily disturbed nature of the south campus. It is anticipated that design and construction of proposed projects on the VA WLA Campus would be performed by qualified professionals in consideration of geologic conditions and hazards associated with the site and that necessary design measures would be implemented to minimize potential impacts. Therefore, adverse impacts resulting from geologic hazards is not anticipated.

Construction of the project refinements would not result in adverse impacts associated with geologic hazards. When combined with construction of the proposed projects, the refinements would not result in adverse impacts related to geological hazards. Therefore, the project refinements would not contribute to cumulatively adverse impacts related to geologic hazards and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.14 Hazardous Waste and Materials

Section 4.15.3 of the Final EIS/EIR evaluated the risk presented by hazardous wastes and materials during construction. The Final EIS/EIR stated that the tunnel would be under the lowest point of most contaminated soils, although risks could result from hazardous materials extracted by the TBMs and at station sites. Construction activity would involve routine transport, use, or disposal of hazardous materials, namely contaminated soils and ground water; however, these materials are not expected to be acutely hazardous. All hazardous materials would be removed and disposed of in accordance with state and federal regulatory guidelines. With implementation of mitigation, there would not be adverse impacts related to hazardous materials during construction. As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, spoils would be disposed of off-site at licensed disposal facilities. However, because all tunneling would be performed with pressure-face tunnel boring machines, spoils would undergo partial treatment (drying of spoils or de-sanding and other processing of slurry spoils) on-site before being loaded on trucks for off-site disposal. After treatment, those spoils would be disposed of at appropriate licensed facilities. Since there is only a limited number of disposal facilities within the SCAG region, when combined with disposal associated with the construction of other projects pursuant to the 2008 RTP, the cumulative effect of transporting hazardous materials outside the SCAG region would be cumulatively adverse.

Per Section 3.13.2 of the 130(c) technical memorandum, the project refinements do not require the use of new hazardous materials during construction from those considered in the Final EIS/EIR. Geotechnical investigations undertaken for the project refinements indicate that the general soil conditions in the areas of excavation remain consistent with those identified in the Final EIS/EIR. There is no history of known contaminated soils near the project refinements. The mitigation measures identified in the Final EIS/EIR would continue to apply to construction of the refinements. The project refinements do not increase the volume of hazardous spoils requiring disposal such that the cumulative impact identified in

the Final EIS/EIR would be more severe. Therefore, the impact conclusions in the Final EIS/EIR related to hazardous materials remain unchanged during construction of the project refinements.

The majority of proposed projects in the City of Los Angeles and on the UCLA and VA WLA Campuses would not require significant ground disturbance, with the potential exception of a proposed parking structure on the VA WLA south campus that could result in hazardous materials, if present, being uncovered if the structure includes subterranean parking. Construction of the proposed projects is not anticipated to involve the use and disposal of hazardous materials outside of those typical for construction. All hazardous materials would be removed and disposed of in accordance with state and federal regulatory guidelines. Should hazardous materials be encountered, they would be disposed off-site at disposal facilities within and outside the SCAG region, which may result in a cumulative impact.

Since there is only a limited number of disposal facilities within the SCAG region, when combined with hazardous materials disposal of proposed projects, effects related to hazardous materials would potentially be cumulatively adverse. However, the project refinements are not anticipated to increase the volume of spoils requiring disposal at specialized disposal facilities compared to the Final EIS/EIR such that the cumulative impact would be more severe. Therefore, the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.15 Ecosystems/Biological Resources

Chapter 4, Section 4.15.3 of the Final EIS/EIR evaluated the impacts of construction on ecosystems and biological resources. Construction of Section 3 of the Project may require the removal or disturbance (including trimming) of mature trees located at the construction sites. Because the majority of the Study Area provides only low quality habitat for migratory birds, indirect impacts are not expected to be substantial, as only a small number of migratory birds would be displaced, if any. Tree removal would require compliance with all applicable local tree protection codes, including the City of Los Angeles's Native Tree Protection Ordinance, to ensure impacts are reduced. With implementation of these measures, there would not be adverse impacts to ecosystems or biological resources during construction. As stated in Chapter 4, Section 4.17.4 of the Final EIS/ER, the Study Area is a densely developed urban area with limited biological resources. The potential for construction of the Project to contribute to adverse cumulative effects on biological resources—including wetlands, sensitive habitats, and wildlife movement corridors—is limited and the contribution of the Project to cumulative impacts is therefore less than cumulatively adverse.

As stated in Section 3.15.2 of the 130(c) technical memorandum, the project refinements would result in the removal of trees. However, no trees protected under the Native Tree Protection Ordinance were identified in these areas. An arborist has identified a nest in a Canary palm that would need to be removed to accommodate the Western VA construction staging area. Other Canary palms would remain in this location, and it is anticipated that a nest could be built in one of the remaining trees. The Canary palm with the nest would not be removed while the nest is active. The impact conclusion of the Final EIS/EIR related to ecosystems and biological resources remain unchanged during construction of the project refinements.

Proposed projects in the City of Los Angeles have limited potential for impacts to ecosystems or biological resources as there is limited to no habitat or wildlife-supporting land in the vicinity of these projects. Both the UCLA and VA WLA Campuses contain green spaces that can serve as habitat for urban wildlife, but it is unlikely that sensitive species reside in these areas. While the proposed projects on the

UCLA Campus do not pose substantial modification to open space areas on the campus, there is potential for the proposed projects to result in the removal of trees that may support nesting birds. Proposed projects on the VA WLA Campus could result in alterations to the open spaces on the campus; however, it is anticipated that trees removed during construction would be replaced as part of the VA's program. Given the limited presence of biological resources in the Study Area and the scope and location of the proposed projects, there is no potential for an adverse cumulative impact on biological resources posed by construction of proposed projects.

Construction of the project refinements would not result in adverse impacts to biological resources. When combined with the proposed projects, the refinements would not result in new construction-related impacts to ecosystems/biological resources in the City of Los Angeles or on the UCLA and VA WLA Campuses and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse ecosystems/biological resource impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.16 Water Resources

Chapter 4, Section 4.15.3 of the Final EIS/EIR evaluated the potential impacts of construction of Section 3 of the WPLE Project on water resources in terms of water supply, ground water, drainage, and water quality. The Final EIS/EIR stated that water use would not adversely affect the municipal water supply. In terms of ground water, the Final EIS/EIR stated that construction would require dewatering during station construction. If contaminated ground water is encountered, it would be managed in compliance with applicable permits and regulations. The Final EIS/EIR also stated that tunnel construction is deep enough to avoid impacts to existing drainage structures; however, construction of the stations would affect drainage structures. Structures would be resized or relocated to prevent flooding or ponding. However, as stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, the contribution of the Project to cumulative impacts on water quality from other projects would be cumulatively adverse.

As demonstrated in Section 3.16.2 of the 130(c) technical memorandum, the project refinements would not change water needs compared to the construction means and methods evaluated in the Final EIS/EIR. The project refinements include modification to a Caltrans infiltration basin located north of Wilshire Boulevard and west of I-405 to replace the water quantity volume displaced by construction within the south basin. This modification would offset potential impacts to drainage that could result from construction in the south infiltration basin. BMPs would continue to be implemented to minimize impacts to water quality, including for the staging areas. The mitigation measures identified in the Final EIS/EIR related to ground water, dewatering, and drainage would also be implemented during the construction of the project refinements, as applicable. Therefore, the impact conclusions in the Final EIS/EIR related to water resources remain unchanged during construction of the refinements.

Proposed projects within the City of Los Angeles and the UCLA Campus are located on sites that are previously developed; therefore, it is anticipated that impervious surfaces would not be increased; drainage patterns would not be changed; and the water supply would not be substantially affected. Water use during construction would most likely be limited to control of fugitive dust on the project site. It is further anticipated that construction of these projects would comply with applicable codes and regulations and BMPs would be implemented as appropriate.

Projects on the VA WLA Campus similarly do not pose substantial risks related to water resources. It is anticipated that mitigation measures and BMPs would be implemented during construction to control possible impacts related to water resources.

The project refinements would not result in adverse impacts to water quality or water resources. The project refinements would not increase the severity of the cumulative water quality impacts identified in the Final EIS/EIR. When combined with the proposed projects, the refinements would not result in new construction-related impacts to water resources in the City of Los Angeles or on the UCLA or VA WLA Campuses. Therefore, the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.17 Safety and Security

Chapter 4, Section 4.12.3 the Final EIS/EIR evaluated the potential safety and security impacts of construction of Section 3 of the WPLE Project. This section stated that the safety of construction workers and the general public would be a key element of construction activities. Construction would comply with applicable federal and state policies and regulations. A Construction Safety and Security Plan (referred to as Mitigation Measure SS-3) would be implemented for each section of construction to minimize impacts related to construction safety. As a result, there would not be adverse impacts to safety and security during construction.

The project refinements would not introduce new safety concerns during construction, as stated in Section 3.17.2 of the 130(c) technical memorandum. Construction of the project refinements would still be in accordance with applicable federal and state policies and regulations, and the Construction Safety and Security Plan (Mitigation Measure SS-3) would be implemented prior to the start of work in this location. Therefore, the impact conclusions of the Final EIS/EIR related to safety and security remain unchanged during construction of the project refinements.

Proposed projects within the City of Los Angeles and the UCLA Campus are located on sites that are previously developed and previously disturbed, and it is unlikely that there are unknown safety hazards associated with development of these projects. Construction of each proposed project would be subject to typical safety and security hazards associated with construction work, but there are no projects identified that appear to have greater or more severe safety risks. Each project would be required to adhere to Occupational Safety and Health Administration standards and requirements for worker and public safety. Therefore, a cumulatively adverse impact is not anticipated.

Proposed projects on the VA WLA Campus similarly do not appear to pose greater risks of safety or security based on the scope outlined in the GLA DMP. However, given that these projects may be constructed on an active medical facility site, it is possible that disabled veterans could be subject to increased risks associated with construction safety. As with other proposed projects, each project that could be constructed on the VA WLA Campus would be required to comply with Occupational Safety and Health Administration standards and requirements for worker and public safety.

Construction of the project refinements would not result in adverse impacts to safety and security. When combined with the proposed projects, the refinements would not result in construction-related impacts to safety and security and would not result in new cumulative impacts. Therefore, the project refinements would not contribute to cumulatively adverse safety and security impacts and the cumulative impact conclusions of the Final EIS/EIR remain unchanged.

3.2.2.18 Parklands and Community Services and Facilities

Chapter 4, Section 4.15.3 of the Final EIS/EIR evaluated the construction impacts of the Project on parklands and community services and facilities. The Final EIS/EIR stated that because Metro's construction policy is to ensure that streets and alleys remain accessible to residences, businesses, and other uses, access to parks, recreation centers, and museums would be maintained during construction. Construction of the project refinements related to the Westwood/UCLA Station entrances and grouting would be consistent with the conclusions of the Final EIS/EIR. Construction of the project refinements also would not affect access to police and fire stations because none are adjacent to these activities. Police and fire emergency response routes could be disrupted; however, to minimize disruptions, the Los Angeles County Sheriff's Department, the Beverly Hills Police Department, and the Los Angeles Police Department would be informed of lane closures and detours prior to construction so that emergency routes can be adjusted accordingly. With implementation of mitigation, construction of the project refinements would not result in adverse impacts to parks or community services and facilities and the impact conclusions in the Final EIS/EIR remain unchanged.

The project refinements would not result in new construction-related impacts to parklands and community services and facilities, including the VA WLA Campus and the Los Angeles National Veterans Park, Linde (Westwood) Medical Plaza, and UCLA Lot 36 Kinross Building South, as stated in Section 3.18.2 of the 130(c) technical memorandum. Therefore, the impact conclusions in the Final EIS/EIR remain unchanged.

None of the proposed projects in the City of Los Angeles or on the UCLA Campus are proposed on or adjacent to parkland or other community facilities. While construction activities associated with some of the proposed projects may result in temporary disruptions such as lane closures and traffic delays, it is not anticipated that access to parklands or emergency access would be affected. It is not anticipated that any of the proposed projects, either individually or cumulatively, would result in adverse impacts on parklands or community facilities. The proposed projects may be required to coordinate with the City of Los Angeles and the UC Regents to ensure that such facilities are considered and that emergency service providers are notified of potential construction disruptions.

Within the VA WLA Campus, numerous proposed projects included in the GLA DMP could result in construction impacts to the grassy area south of Wilshire Boulevard and west of Bonsall Avenue and Los Angeles National Veterans Park (north campus), which while a part of the VA WLA Campus, is not open to the public. Construction of the WPLE Project would not have impacts to the Los Angeles National Veterans Park.

During construction, a portion of grassy area south of Wilshire Boulevard would be unavailable in the location of the cut-and-cover construction area for the Westwood/VA Hospital Station west crossover and the Western VA construction staging area. However, the majority of the grassy area would remain open and available during construction. Construction-related impacts associated with noise, aesthetics, and air quality have been minimized such that adverse impacts to this area associated with construction of the WPLE Project are not anticipated. Therefore, construction would not result in an adverse impact. It should be noted that the conceptual site plan did not specifically identify proposed development within the area that would be occupied by the cut-and-cover construction area for the Westwood/VA Hospital Station west crossover and the Western VA construction staging area. With implementation of mitigation measures identified in the Final EIS/EIR, construction of the project refinements would not

result in adverse impacts to parks or community facilities and the cumulative impact conclusions in the Final EIS/EIR remain unchanged.

3.2.2.19 Historic and Archeological Resources

As stated in Chapter 4, Section 4.17.4 of the Final EIS/EIR, while the Project would remove one historic resource (Ace Gallery), which is considered an adverse impact, the Project would not result in cumulatively adverse impacts to historic resources. This resource is located in Section 2 of the WPLE Project. Adverse impacts were not identified in Section 3 of the WPLE Project. As also stated in the Final EIS/EIR, no archaeological resources have been identified within the Area of Potential Effect for the Project; however, undocumented cultural resources, including intact archaeological deposits, could be affected during construction. Construction activities may encounter subsurface prehistoric and/or historic archaeological deposits. Based on the density of standing historic-period buildings and structures, the sensitivity for the discovery of historic-era archaeological sites is higher between the Westwood/UCLA and Century City Stations. Therefore, when combined with potential effects of other projects on archeological resources, this impact would be cumulatively adverse.

As detailed in the *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report* (Metro 2018g) and summarized in Section 3.19.3 of the 130(c) technical memorandum, surveys using ground-penetrating radar were conducted for areas of the VA WLA Campus within the footprint of the project refinements. The surveys did not identify anomalies that would yield data potential. Consistent with the Final EIS/EIR Mitigation Measure R-1 (Unanticipated Discoveries and Consultation with Native American Individuals, Tribes and Organizations and Treatment of Cultural Remains and Artifacts) would apply during construction of the Project. Adverse impacts to archaeological resources are not anticipated during construction of the project refinements. As such, the Project would not result in a cumulatively adverse contribution to impacts to archaeological resources.

The proposed projects are not anticipated to require substantial ground disturbance likely to uncover previously unknown archaeological resources. However, the Final EIS/EIR identified higher sensitivity for the discovery of historic-era archaeological sites in the vicinity of the Westwood/UCLA Station. Accordingly, there is increased potential for the Westwood Hotel project to impact archaeological resources given its proximity to identified archaeologically sensitive areas if construction of this project requires ground disturbance into areas that were not previously disturbed.

Refer to Section 3.1.19 for the cumulative impact assessment for historic resources.

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4.0 CONCLUSION

The project refinements would not result in new long-term or construction-related adverse effects, increase the severity of previously identified impacts, or require new mitigation measures beyond those already analyzed in the Final EIS/EIR. Mitigation measures identified in the Final EIS/EIR would be implemented and, with mitigation, impacts would not be adverse. Further, the proposed projects would require discretionary review and therefore are not anticipated to result in new adverse cumulative impacts, either long term or during construction. As such, the cumulative impact conclusions in the Final EIS/EIR remain unchanged.

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5.0 REFERENCES

- Los Angeles County Metropolitan Transportation Authority (Metro). 2012. *Westside Subway Extension Final Environmental Impact Statement/Environmental Impact Report*. March.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2018a. *Westside Purple Line Extension Project, Section 3, Draft 130(c) Environmental Technical Memorandum*.
- Los Angeles Department of Transportation. 2018a. Correspondence regarding proposed projects for the Metro Purple Line Project, April 4, 2018.
- Los Angeles Department of Transportation. 2018b. *Westside Purple Line Extension Project Section 3, Westwood/VA Hospital Station Passenger Drop-off Facility Traffic Impact Study*.
- Los Angeles Department of Transportation. 2018c. *Westside Purple Line Extension Project Section 3, Land Use, Community and Neighborhoods, and Environmental Justice Technical Memorandum*.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2018d. *Westside Purple Line Extension Project Section 3, Construction and Operation Noise and Vibration Assessment for Section 3 Project Refinements*.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2018e. *Westside Purple Line Extension Project Section 3, Historic Properties Reassessment of Effects Report*.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2018f. *Westside Purple Line Extension Project Section 3, Air Quality Technical Memorandum*.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2018g. *Westside Purple Line Extension Project Section 3, Archaeological Extended Identification Report*.
- Southern California Association of Governments (SCAG). 2008. *Regional Transportation Plan*.
- Southern California Association of Governments (SCAG). 2016. *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*.
- University of California. 2014. *University of California 2015-25 Capital Financial Plan*.
- U.S. Department of Veterans Affairs (VA). 2016. *West Los Angeles Campus Draft Master Plan*.

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APPENDIX F COORDINATION

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DEPARTMENT OF TRANSPORTATION

CALTRANS, DISTRICT 7
100 SOUTH MAIN STREET
LOS ANGELES, CA 90012-3606
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*Making Conservation a
California Way of Life.*

October 2, 2018

Mr. Manjeet Ranu, AICP
Senior Executive Officer
Los Angeles County Metropolitan Transportation Authority (Metro)
1 Gateway Plaza
Los Angeles, CA 90012

Dear Mr. Ranu:

The Los Angeles County Metropolitan Transportation Authority (Metro), in cooperation with the Federal Transit Administration (FTA), successfully completed a Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Westside Purple Line Extension Project. As a part of this environmental evaluation, in support of the National Environmental Policy Act (NEPA), and pursuant to Title 23 of the Code of Federal Regulations § 771.130(c); a Traffic Impact Analysis was prepared, identified as the *Westwood/VA Hospital Station Passenger Drop-off Facility Traffic Impact Study*. This study evaluated traffic factors of concern to Caltrans.

The study area for this traffic impact analysis document included the ramps to and off of Interstate 405 at Wilshire Boulevard. Prior to the preparation of this traffic study, Metro submitted the Traffic Impact Analysis for the Westside Purple Line Extension at the Interstate 405 at Wilshire Boulevard interchange (EA 07-285700), which was approved as part of the PSR-PR project on April 21, 2017. The recent Traffic Impact Analysis, aligns in support of NEPA as well as maintains consistency with the previously approved traffic study. Caltrans understands that the study does not include any permanent reconstruction of the freeway facilities. It is further understood that as part of the final design stage, Metro in coordination with Caltrans will ensure that Transportation Management Plans (TMP) shall be developed to facilitate traffic flow and to incorporate strategies to mitigate the impacts of construction activities on the freeway facilities and the surrounding roadway network.

Therefore, in concurrence with the results of the *Westwood/VA Hospital Station Passenger Drop-off Facility Traffic Impact Study*, Caltrans accepts the study methodology and analysis. We agree that ultimately the approval of this study is under the jurisdiction of the FTA, the NEPA lead agency, and Metro as the lead agency under the California Environmental Quality Act (CEQA).

Mr. Ranu, AICP
LA Metro Senior Executive Officer
October 2, 2018

If you have any further question please feel free to contact Ron Kosinski, Deputy District Director of Environmental Planning by dialing (213) 897-0362. We look forward to your continued support as we work together to make California highways great.

Sincerely,



SHIRLEY C. CHOATE
Interim District Director

CITY OF LOS ANGELES
CALIFORNIA

Seleta J. Reynolds
GENERAL MANAGER



ERIC GARCETTI
MAYOR

DEPARTMENT OF TRANSPORTATION

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(213) 972-8470
FAX (213) 972-8410

October 1, 2018

Manjeet Ranu, AICP
Senior Executive Officer
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza, Mail Stop: 99-22-1
Los Angeles, CA 90012-2952

**Subject: Westside Purple Line Extension Project Section 3: Westwood/VA Hospital Station
Passenger Drop-Off Facility Traffic Impact Study**

Dear Mr. Ranu,

The City of Los Angeles Department of Transportation (LADOT) conducted an initial review of the Westwood/VA Hospital Station Passenger Drop-Off Facility Traffic Impact Study (Draft), June 2018. Metro prepared the study, in cooperation with the Federal Transit Administration (FTA), to evaluate potential traffic access and circulation impacts associated with a proposed passenger drop-off area at the future Purple Line Westwood/VA Hospital Station.

The traffic impact study serves as an element of the environmental evaluation in support of the National Environmental Policy Act (NEPA) and pursuant to 23 Code of Federal Regulations 771.130(c) for the Westside Purple Line Extension Project. The traffic impact study includes intersections along Wilshire Boulevard in the vicinity of the interchange with the I-405 Freeway that are under the jurisdiction of Los Angeles County. Previously, Metro prepared and received approval of a Traffic Impact Analysis Report in support of the Westside Purple Line Extension Project Final Environmental Impact Statement/ Environmental Impact Report (March 2012). The traffic impact study for the passenger drop-off facility maintains consistency with the previously approved traffic study, including the significance criteria used to determine impacts.

Therefore, the City of Los Angeles Department of Transportation accepts the study methodology, significance thresholds, and the analysis and understands that ultimately the approval of this study is under the jurisdiction of FTA as the lead agency under NEPA and Metro as the lead agency under the California Environmental Quality Act.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tomas Carranza".

Tomas Carranza
Principal Transportation Engineer



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, *Director*

Julianne Polanco, State Historic Preservation Officer

1725 23rd Street, Suite 100, Sacramento, CA 95816-7100

Telephone: (916) 445-7000 FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

October 15, 2018

Reply In Reference To: FTA090722B

Mr. Edward Carranza, Jr.
Acting Regional Administrator
Federal Transit Administration
90 Seventh Street, Suite 15-300
San Francisco, CA 94103-6701

Re: APE Modification, Westside Purple Line Extension Project, Section 3, City and County of Los Angeles, CA

Dear Mr. Carranza:

The State Historic Preservation Officer (SHPO) received, on September 18, 2018, the letter continuing consultation for the above-referenced undertaking in order to comply with Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 300101) and its implementing regulations at 36 CFR § 800. The Federal Transit Administration (FTA) provided the previous and update Area of Potential Effects (APE) maps and consultation log.

FTA is providing an updated consultation package due to minor refinements in Section 3 from the Westwood/UCLA Station to the Westwood/VA Hospital Station as well as both station sites. Those refinements are discussed in detail in the consultation package. The APE was expanded to include conduit locations on Ohio and Federal Avenues. The remaining refinements are within the existing APE.

FTA has requested comments on the revised APE. After reviewing the information submitted with your letter, the following comments are offered:

- The expanded APE is sufficient for the undertaking, per 36 CFR § 800.4(a)(1).
- Please be advised that under certain circumstances, such as an unanticipated discovery or a change in project description or method of implementation, the FTA may have future responsibilities for this undertaking under 36 CFR § 800.

Mr. Edward Carranza, Jr.
October 15, 2018
Page 2 of 2

FTA090722B

If you have any questions, please contact Kathleen Forrest, Historian, at (916) 445-7022 or Kathleen.Forrest@parks.ca.gov.

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'J' followed by a horizontal line that tapers to the right.

Julianne Polanco
State Historic Preservation Office

Carlson, Kristin

From: Martin, Roger <MartinR@metro.net>
Sent: Tuesday, October 30, 2018 7:33 PM
To: Abreu, Hector M. (CFM) (Hector.Abreu@va.gov); Andrew Strain (astrain@concoursefederal.com)
Cc: Carlson, Kristin; Foell, Stephanie; Ellwood, Martin; Blanchard, Guy V.; Sah, Maressa
Subject: WPLE - Section 3 - Historic Properties Reassessment of Effects Report
Attachments: Preliminary Potential MOA Amendments 2018-10-30.docx; Copy of Environmental Commitment Crosswalk MSE_FTA rev 1.pdf; FW: Construction methods for bus layover area; Pedestrian_Survey_and_GPR_Survey_Anamoloy 2018-10-25.pdf; Pedestrian_Survey_and_GPR_Survey 2018-10-25.pdf; C1151 General Requirements TOC.PDF; C1151 Spec Section 01 56 19.pdf; C1151 Spec Section 01 57 19.pdf; C1152 General Requirements TOC.PDF; C1152 Spec Section 01 56 19.pdf; C1152 Spec Section 01 57 19.pdf; GC-25 - Protection of Existing Structures, Equipment & Vegetation.pdf; FW: Section 106/Effects Report Meeting Summary for October 23, 2018; Meeting Minutes 10-30-2018.docx

Importance: High

Hello Hector and Andrew,

Thanks again (to everyone) for taking time out of your day today to meet with FTA, Metro/WSP, and VA staff to discuss VA's approval of the *Historic Properties Reassessment of Effects Report* (Effects Report) for the Westside Purple Line – Section 3. Per VA's direction from today's meeting, included in this email are the various attachments to support the actions items that came out of our last meeting on October 23, 2018 and the meeting summary from October 30. This would include:

1. Meeting Minutes from October 30
2. Meeting notes from October 23
3. Maps showing: (1) where only pedestrian surveys were completed, (2) where only GPR surveys occurred, and (3) an overlay of WPLE construction activities.
4. Contractor specifications for noise and vibration monitoring, and inadvertent damage.
5. Overview of the construction methods for the bus layover area, including equipment.
6. Outline of the amended MOA
7. "Crosswalk" of commitments in documents.

At this time, we are requesting VA's concurrence/approval of the Effects Report, which was provided to VA on October 4, 2018 for review. FTA can then send the Effects Report to SHPO to start their 30-day review.

Best,

Roger

—

Roger Martin, AICP, ENV SP
Metro Los Angeles
Transportation Planning Manager, Countywide Planning

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Westside Purple Line Extension Project
Section 106 Meeting to Discuss Potential Memorandum of Agreement Content
October 30, 2018
1:30pm (Pacific)

Participants:

Hector Abreu, VA
Roger Martin, Metro
Maressa Sah, Metro
Mary Nguyen, FTA
Charlene Lee Lorenzo, FTA
Kristin Carlson, WSP
Martin Ellwood, WSP
Stephanie Foell, WSP
Guy Blanchard, WSP
Andrew Strain, Concourse Federal Group

Meeting Summary:

Roger Martin (Metro) provided an overview of the purpose of call, which was to discuss the “crosswalk” of project environmental documents and potential stipulations and format for the forthcoming amended Section 106 Memorandum of Agreement (MOA) as these subjects relate to project-related work within the West Los Angeles Veterans Affairs (WLA VA) Historic District.

Martin Ellwood (WSP) began with an overview of the “crosswalk,” which is a cross-reference of items in the project’s environmental documents. Martin emphasized that specific commitments may not be covered in the MOA but are covered in other contract documents. He then described how the spreadsheet is organized. Martin noted that the Access and Easement Agreement (AEA) between Metro and VA can be amended if VA would like to provide supplemental language to the AEA that may not exist in the current MOU. VA could reinforce what it wants to see as far construction site data (vibration, noise, etc.) in the AEA, and Metro can ensure that the appropriate level of information is provided to VA. Metro and VA can discuss this further to determine what additional language, if any, is desired.

Hector Abreu (VA) asked about a schedule timeline regarding the MOU when compared to the MOA. Martin Ellwood noted that the MOU is nearly finalized, so it is important to begin discussing details in the AEA since now is the time to make any changes to that document.

Hector Abreu indicated that providing those kinds of monitoring details within the MOA or AEA is fine. He noted that VA is specifically seeking language within the MOA that speaks to the VA Campus as a separate entity, perhaps as a separate stipulation. Within VA property, for example, a more nuanced approach to certain project impacts or construction vibration is desired. The existing project contract specifications may not be as detailed as VA would want to see and review, and VA would want to be more involved in that review process. This is something that may be handled in the AEA or addressed in the MOA.

Martin Ellwood noted that Metro would put timeframes on submittals to VA. This is something typically seen in an MOU but also can be in the AEA. Parties should confirm certain project work (construction activities monitoring) in the AEA and let the MOA address Section 106 items.

Mary Nguyen (FTA) stated that parties should determine the most practical location to have information on the processes and participants involved in project monitoring, for example. Items specific to historic resources should be within the MOA amendment. The MOA amendment will cover all of Section 3 and will include monitoring. The MOA amendment will set forth the structure and plan development, then the plan itself will include the specifics of review, what is being monitored, and cross-reference other contract documents.

Hector Abreu emphasized that because the MOA amendment includes other parties and properties, it needs to be clear that certain stipulations are specific to the VA. The VA does not want to be responsible for consulting on historic properties other than the VA WLA Campus.

Stephanie Foell (WSP) asked Hector Abreu if he was referring to a system of reporting on construction monitoring results related to VA resources. Hector Abreu said yes and stated that the document needs to include issues such as construction monitoring, reporting impacts, how any issues will be addressed, etc. VA needs to be engaged with all project construction monitoring and activities within the VA WLA Campus and the MOA amendment needs to be clear on how this would work.

Stephanie Foell asked if the HRMDP would be specific to a single historic property such as the WLA VA Historic District or to all of Section 3. Mary Nguyen indicated that the HRMDP would cover all of Section 3, but some elements may be specific to VA or GSA, for example. The HRMDP would include details like a notification process that describes who receives notification and when. This would be part of a Historic Resources Monitoring and Discovery Plan (HRMDP). She stated that as the parties proceed to discuss the MOA amendment and HRMDP, it will feel more organic. Mary emphasized an earlier point that the MOA develops the structure while the HRMDP includes the details. The HRMDP may be developed either prior to or subsequent to MOA amendment execution, and this should be discussed with other signatories.

Hector Abreu stated that VA has no major issues with the crosswalk and felt it was instructive and helpful. He noted that certain resources, including Buildings 90, 91, 23; Spanish-American War Monument; and Wilshire Gatehouses may need additional monitoring despite the Effects Report indicating that no additional monitoring is needed. Stephanie Foell stated that the effects determination was based upon technical reports by subject-matter experts, but that if Metro agreed, monitoring for sites perceived as sensitive could be offered; Roger Martin agreed that Metro could provide additional monitoring if requested. Hector Abreu stated that this request did not conflict with VA's agreement with the effects assessment.

Stephanie Foell provided a brief overview of the proposed MOA amendment stipulations and noted that the format will follow ACHP guidance while the signatories will have flexibility to use it as it suits the project. Parties have the ability to amend the MOA to include VA as an agency and design stipulations specific for VA's property.

Hector Abreu stated that he agreed on all proposed stipulations in the outline. He emphasized that during MOA development, it may be best to have a separate stipulation for the VA or VA WLA Campus. There is a need to ensure that the parties understand that there are project-specific items unique to VA and only applicable to VA property. Some nuanced language may be needed. For example, there is no need to over-involve consulting parties who don't have direct involvement with VA's property with VA's design review process.

Hector Abreu stated that the approach for the landscape elements was perfect.

Hector Abreu noted that VA is currently developing a programmatic agreement (PA) for the campus master plan EIS that addresses the WPLE project. Metro and VA will need to determine if there is overlap in content with the WPLE MOA amendment; this can be discussed during consultation. The group agreed that the two documents would need to be consistent or at least should accommodate the content of the other. The VA campus master plan PA should be executed by February. Mary Nguyen stated that the master plan PA presents a great opportunity to build consistency between both efforts. She also noted that the HMRDP is a living document that can always be amended and updated if issues are identified.

Hector Abreu stated that the first draft of the PA was just sent out to consulting parties for review. Mary Nguyen asked for a copy and Hector Abreu stated he would send one. It is now with consulting parties for review and moving ahead. Stephanie Foell noted that Metro and FTA are working toward a February-March timeline to execute the WPLE MOA amendment.

Hector Abreu emphasized the need for the HMRDP to keep VA separate from how other properties like Linde (Westwood) Medical Plaza are treated.

Hector Abreu noted that the consultation section of the overview is fine and concurred that there is no need to add a second dispute resolution process. However, it may need to be amended to add the VA and perhaps add an interim step prior to engaging the SHPO and ACHP with the hope that FTA, Metro, and VA will be able to resolve any potential issues. This is something to be considered during the MOA amendment consultation.

Hector Abreu stated that this call and the provided documentation was very helpful and an important exercise. The information provided clarified in general terms how the project will move forward to incorporate information and cleared up any confusion among the various documents that may include commitments.

Hector Abreu asked whether the palm tree pathology report would be included in the effects report.

Mary Nguyen stated that it would not be included in the report text but would be included with the overall finding of effect that FTA will issue.

Hector Abreu asked if the bus layover area is described in the effects report. Stephanie Foell stated that it was included when assessing effects on adjacent resources.

A discussion followed regarding how VA would indicate to FTA and Metro that it agrees with content of the Effects Report. Meeting minutes will be circulated and Hector Abreu will submit an email confirming that VA has reviewed the effects report; documentation relating to commitments; and the proposed

MOA amendment and that VA accepts the content and findings. VA supports forwarding the report to the SHPO at this time.

MEETING NOTES

Topic: Section 106/Effects Report

Date/Time: October 23, 2018, 1:00 p.m. to 2:00 p.m. Pacific Time

Location: Teleconference Call

In Attendance:

Mary Nguyen – FTA
Charlene Lee Lorenzo – FTA
Tom Payne – Concourse Federal Group
Andrew Strain – Concourse Federal Group
Hector Abreu – VA
Kelly Wittie – Row 10
Katy Coyle – Row 10
Roger Martin – Metro
Maressa Sah – Metro
Matthew Crow – Metro
Kristin Carlson – WSP
Stephanie Foell – WSP
Codie Davis – WSP

Purpose of Meeting

Mary Nguyen (FTA) and Roger Martin (Metro) stated the goal of the meeting is to discuss the following:

- Response to VA comments received on June 5, 2018
- VA's comments on the Effects Report
- Results of the tree pathology studies

Meeting Summary

Response to VA comments received on June 5, 2018:

Katy Coyle (Row 10) reported that the response to comments on the June 5 letter were still under review. Hector Abreu (VA) stated some items may need clarification.

Effects Report:

Katy asked if all Section 106 correspondence is included in the appendix of the Effects Report. She stated it is critical that the correspondence be included for transparency purposes. Kristin Carlson (WSP) responded that the appendix included all correspondence as of the date of the submittal of the report. Since the submittal, SHPO provided a letter concurring with the revised APE. Metro provided this letter to VA and Concourse Federal Group during the prior week. Andrew will provide the letter to VA Section 106 staff.

VA Archaeological Probability Model:

Hector stated that based on his review of the Effects Report, it seems that the VA probability model is showing higher probability for encountering resources than what Metro has determined. Hector requested that Metro comply with the VA probability model, including consideration of monitoring or testing prior to construction. Kristin clarified that the archaeological team did review and apply the VA probability model. They then added information gained during the work for the Westside Purple Line Extension Project (WPLE), including consultation with Native American tribes and ground penetrating radar (GPR) surveys, to refine the sensitivity. In one location, this resulted in a higher level of sensitivity than what was shown in the VA model. Regardless of the sensitivity, Metro will have monitors present during construction, consistent with the requirements of the model. Hector understood the reasoning behind the additional information, but he was assured by Metro that they would abide by the approved probability model and its procedures on the VA property. There will be no changes to the VA model. No testing prior to construction is proposed.

Katy mentioned that some areas associated with the WPLE Project only had pedestrian surveys completed. Kristin stated that GPR surveys were conducted in the adjacent areas. The GPR survey results and historic mapping were reviewed and qualified archaeologists determined that the areas that did not have GPR surveys would not have a different level of sensitivity than the adjacent areas where surveys were completed. VA requested a map showing: (1) where only pedestrian surveys were completed, (2) where only GPR surveys occurred, and (3) an overlay of WPLE construction activities. This map will be used by VA to determine if VA supports the use of construction monitoring only. VA also wants to know if there was interference or other factors that would degrade the results of those surveys for the areas where GPR surveys were completed. Kristin also clarified that GPR surveys were completed for areas that would be disturbed by project construction and the construction staging areas, which are within the Area of Potential Effects. A buffer was applied to that area for purposes of the survey. The buffer was smaller because more information is known about construction means and methods and project footprint, so there was a high level of certainty that the area surveyed was sufficient to capture potential project impacts. It was pointed out that Metro is complying with the VA probability model and providing construction monitoring regardless of the sensitivity. VA agreed to review the map and make a decision quickly.

VA requested that the MOA include archaeological monitoring protocol. VA stated in the past they have had challenges with tribal monitors; monitors will need to complete forms for access to the campus. Mary stated that a cultural resources monitoring plan will be developed; this plan will be shared with VA. The MOA will also include provisions for monitoring. VA stated that at least one monitor on site must have Secretary of the Interior qualifications. VA also stated that the plan will need to differentiate between protocol for compliance with NAGPRA and discovery of human remains or prehistoric artifacts compared to protocol if other historic-era artifacts are found during construction. Mary confirmed these items will be part of the monitoring plan and do not need to be included in the Effects Report.

Noise, Vibration, and Dust:

VA insisted that vibration monitoring be included in the project for sensitive resources. Codie Davis (WSP) responded that the contractor specifications require vibration monitoring, including for historic buildings. This monitoring is continuous. Metro will provide the contractor specifications that identify where monitoring is required. VA will notify Metro if other locations should be added. Stephanie stated that the Effects Report does reference the contractor requirements for vibration monitoring. Hector agreed further details do not need to be included in the Effects Report.

Katy requested that the MOA include specifics on vibration monitoring and reporting. Kristin stated that the MOA will include the stipulations required to minimize or avoid adverse effects. Vibration monitoring is covered in the specifications.

Bus Layover Area North of Wilshire Boulevard:

Katy stated that she did not see a description of the construction work required to construct the bus layover area located on the Wilshire Boulevard westbound on-ramp from Bonsall Avenue, which is on county right-of-way. Codie stated that the work would be minor and include cutting sidewalk, relocating the sidewalk a few feet into an existing embankment, and repaving the on-ramp. Katy requested some high-level further information on the construction process, including equipment.

Public Meetings:

Hector asked if FTA would have meetings following release of the 130(c) environmental technical memorandum to obtain public comments. Mary responded that the purpose of the 130(c) is to show that there are no new adverse impacts or an increase in severity of previously identified impacts. It is anticipated that there will not be new or more severe impacts. A formal public comment period is not required. Roger stated that the Metro public outreach team will be active during construction and will keep the community informed of construction activities. Katy stated that VA is invested in project transparency and public involvement. Mary responded that it was FTA and Metro's understanding that VA would make the 130(c) and previously completed Final EIS available for a public review period and that this action is solely part of the VA process to take action under NEPA; this is not part of FTA's process. Katy was not sure how this process was addressed and in what document (e.g., MOU). Katy stated that VA did not prepare the document but would have to defend it if public comments are received. Roger stated that Metro, FTA, and WSP will help VA respond to comments and that this has been offered to Glenn Elliot (VA) previously. Metro has also offered to help VA draft the Record of Decision. Hector stated that he will discuss this process with Glenn.

Ongoing Section 106 Process:

Katy stated that VA is doing what they can to give FTA and Metro advance notice of comments prior to transmitting formal comments. Katy reiterated the request for maps and information on the construction methods for the bus layover area. VA also wants to see what will be included in the MOA and the timeline. Stephanie responded that the team is working on the MOA stipulations but the priority is completing the Effects Report and obtaining SHPO concurrence on the Finding of Effect. Katy stated that VA has

concerns about the Effects Report but these would be alleviated if they are addressed in the MOA. For example, she stated that VA wants clear steps in the vibration monitoring requirements, including who reviews the monitoring reports, reporting requirements, and correction steps if thresholds are exceeded. The same is true for archaeological monitoring (SOI qualified monitors, construction crew training, steps if deposits are identified, methodology for screening, etc). She stated that know what commitments will be in the MOA are needed now since the report will be finalized before the MOA is complete. Mary proposed that FTA and Metro provide VA with a working outline of the amended MOA to show what it will cover. Katy agreed. Kristin reiterated that some items VA has mentioned will not be in the MOA because they are covered in other documents (e.g., construction specifications). Katy stated this is okay but VA would want to know how they would be considered, and how continued avoidance will be assured. Mary stated that a "crosswalk" is needed to show what commitments are covered in various documents. Katy stated that VA will need to know what will be in the MOA before VA finalizes its comment on the Effects Report. She stated that measures to continue to avoid adverse effects are a Section 106 issue. Hector stated that a "satellite view" of what is in the MOA is acceptable. Hector stated that VA will need the maps and the MOA outline before they can make a final review on the Effects Report.

Regarding schedule, Kristin stated that the Effects Report needs to go to SHPO within the next couple of weeks to maintain the current schedule. A working session is scheduled with VA in mid-November to review comments on the 130(c); the Effects Report needs to be with SHPO before that meeting occurs. Kristin stated that the 130(c) needs to be complete by the end of November. These timeframes were previously discussed with VA during a separate conference call and based on those timeframes the working session was proposed to maintain schedule. Preparation of the map should be complete relatively quickly but preparation of the outline will take more time because multiple parties will be involved. Katy stated that VA just needs to know what measures Metro intends to include in the MOA, not actual MOA language. Mary clarified that the Effects Report and SHPO concurrence is required to complete the 130(c); the execution of the amended MOA is not required to complete this process. Hector indicated that it was his understanding that the Section 106 process would not be completed until the MOA is executed. It is anticipated that execution of the amended MOA will go into early 2019. Hector stated that VA will not affect Metro's schedule.

Palm Tree Pathology:

Hector stated that the pathology report provided by Metro shows that four palms are infected but only one of those are slated to be moved by Metro. Hector stated that the infected tree should not be replanted. Hector asked if a new palm could be replanted in the same location as the infected palm. Matthew Crow (Metro) responded that soil conditions would be tested towards the end of construction prior to replanting trees as conditions could change in that timeframe. Soil will be tested before replanting.

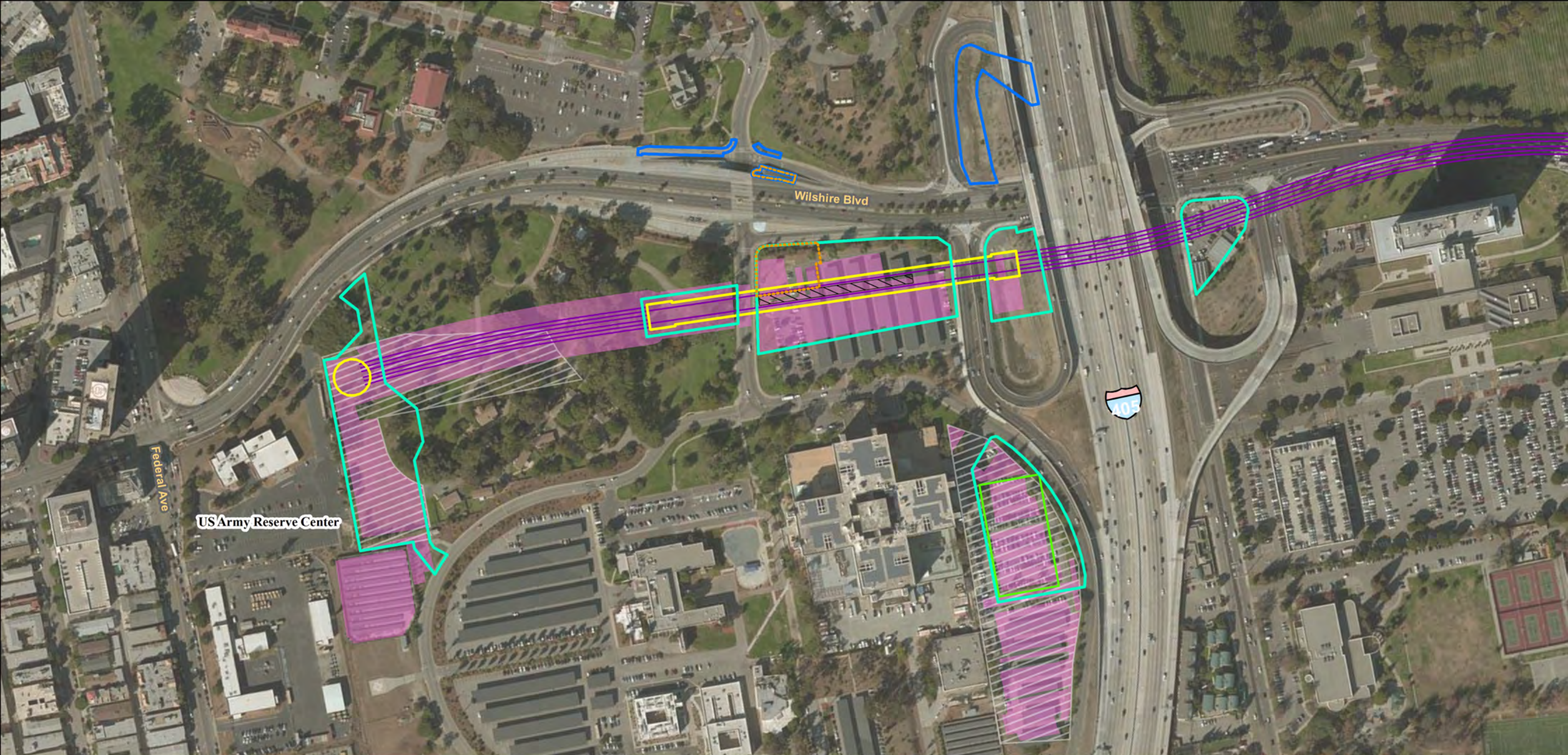
Katy stated that she did not see where the Effects Report assessed the temporary storage locations of the palms. Kristin responded that a map was shown during a prior Section 106 meeting that showed specific locations based on information known at that

time. The Effects Report provides a general description of where the palms would be stored – for the grid/grove, it would be within and adjacent to the grid/grove and for the palms along Bonsall Avenue, those would be stored south of the existing palms. The report was general to provide leeway in case the exact location needs to change based on conditions. Hector confirmed this information was included in the report.

Action Items:










1. Andrew Strain to provide the letter to VA Section 106 staff
2. Metro to prepare a map showing: (1) where only pedestrian surveys were completed, (2) where only GPR surveys occurred, and (3) an overlay of WPLE construction activities and provide this map to VA.
3. Metro to provide contractor specifications for vibration monitoring to VA. VA to clarify if other buildings require monitoring.
4. Metro to provide overview of construction methods for the bus layover area, including equipment.
5. Hector to discuss circulation of 130(c) and response to comments with Glenn.
6. FTA/Metro to prepare working outline of the amended MOA and provide to VA.
7. Metro to prepare “crosswalk” of commitments in documents.

The meeting concluded at 2:05 p.m. Pacific time.



Westside Purple Line Extension Project

City of Los Angeles,
Los Angeles County, CA

- | | | |
|---|---|--|
|  Station Box & Tail Track Exit Shaft |  Replacement Parking Structure |  Pedestrian Survey Area |
|  Station Platform |  Station Entrance |  GPR Survey Areas |
|  Construction Staging Area |  Work Area | |
|  Alignment | | |

0 50 100 Meters

0 100 200 Feet




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











Westside Purple Line Extension Project

City of Los Angeles,
Los Angeles County, CA





-  Station Box & Tail Track Exit Shaft
-  Station Platform
-  Construction Staging Area

-  Replacement Parking Structure
-  Station Entrance
-  Work Area
-  Alignment

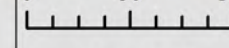
- GPR Anomaly**
-  Associated with Backfilled Former Excavation
 -  Associated with Former Structure

-  Pedestrian Survey Area
-  GPR Survey Areas

GPR Anomaly Depth in Feet

-  0.15 - 1.0 Feet
-  1.01 - 1.52 Feet
-  1.521 - 2.3 Feet
-  2.31 - 3.28 Feet

0 50 100 Meters



0 100 200 Feet

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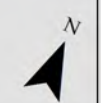


Table of Contents

SECTION NUMBER	SECTION TITLE
DIVISION 01	GENERAL REQUIREMENTS
01 11 01	PROJECT DESIGN-BUILD REQUIREMENTS
01 14 05	METRO - DIRECTED STOPPAGES
01 20 00	PRICE AND PAYMENT PROCEDURES
01 29 73	SCHEDULE OF VALUES
01 29 76	COST/SCHEDULE INTEGRATION SYSTEM
01 31 03	DESIGN MANAGEMENT REQUIREMENTS
01 31 19	PROJECT MEETINGS
01 31 28	BUILDING INFORMATION MODEL
01 31 30	INTERFACE WITH OTHER JURISDICTIONS
01 31 31	UTILITY COORDINATION
01 32 23	GRADES, LINES AND LEVELS
01 32 33	PHOTOGRAPHIC DOCUMENTATION
01 33 00	SUBMITTAL PROCEDURES
01 35 23	WORKSITE SAFETY REQUIREMENTS
01 35 29	HEALTH, SAFETY AND EMERGENCY RESPONSE FOR CONTAMINATED AND HAZARDOUS SITES
01 35 35	WATER POLLUTION CONTROL
01 35 43	ENVIRONMENTAL PROCEDURES FOR CONTAMINATED AND HAZARDOUS MATERIALS
01 35 44	ENVIRONMENTAL MITIGATION AND MONITORING
01 35 53	WORKSITE SECURITY REQUIREMENTS
01 35 63	SUSTAINABILITY PLAN
01 35 66	GREEN CONSTRUCTION POLICY
01 35 69	LEAD RELATED CONSTRUCTION WORK
01 35 70	ASBESTOS RELATED CONSTRUCTION WORK
01 35 80	ARCHAEOLOGICAL AND PALEONTOLOGICAL COORDINATION
01 35 95	PUBLIC INFORMATION AND COMMUNITY RELATIONS
01 43 10	PROJECT QUALITY PROGRAM REQUIREMENTS – DESIGN/BUILD
01 43 38	FIELD SAMPLES AND MOCK-UPS
01 45 20	GENERAL MATERIALS TESTING PROGRAM REQUIREMENTS
01 50 00	TEMPORARY FACILITIES AND CONTROLS
01 51 23	TEMPORARY CONSTRUCTION VENTILATION
01 52 13	CONSTRUCTION FACILITIES
01 53 05	TEMPORARY DECKING SYSTEMS

WESTSIDE PURPLE LINE EXTENSION PROJECT

Table of Contents

SECTION NUMBER	SECTION TITLE
01 55 13	TEMPORARY ACCESS ROADS AND PARKING AREAS
01 55 26	CONTROLLING TRAFFIC
01 56 18	OPERATIONAL TRAIN NOISE AND VIBRATION CONTROL
01 56 19	CONSTRUCTION NOISE AND VIBRATION CONTROL
01 56 23	TEMPORARY BARRIERS
01 56 26	CONSTRUCTION FENCING (WOOD)
01 56 28	CONSTRUCTION FENCING (CHAIN LINK)
01 56 39	SHRUB AND TREE PROTECTION
01 57 13	TEMPORARY EROSION AND SEDIMENTATION CONTROLS
01 57 19	TEMPORARY ENVIRONMENTAL CONTROLS
01 58 13A	TEMPORARY SIGNS AND BANNERS
01 66 00	PRODUCT STORAGE AND HANDLING REQUIREMENTS
01 71 13	MOBILIZATION
01 71 24	PRECONSTRUCTION SURVEYS
01 71 43	PERMITS, LICENSES, AND AGREEMENTS
01 74 00	CLEANING
01 74 19	WASTE MANAGEMENT AND DISPOSAL
01 78 23	OPERATION AND MAINTENANCE DATA
01 78 39	AS-BUILT DRAWINGS AND CURRENT STATUS DOCUMENTS
01 78 55	SAFETY AND SECURITY CERTIFICATION
01 79 00	DEMONSTRATION AND TRAINING
01 81 13	SUSTAINABILITY DESIGN AND CONSTRUCTION REQUIREMENTS

WESTSIDE PURPLE LINE EXTENSION PROJECT

SECTION 01 56 19

CONSTRUCTION NOISE AND VIBRATION CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Eliminating or minimizing noise and vibration generated by construction activities, and complying with applicable noise regulations, specification requirements, and noise and vibration limits specified within this Section.
- B. Metro has prepared a Final Environmental Impact Statement/Final Environmental Impact Report for the Westside Subway Extension, with supporting technical reports on noise and vibration, which describe impacts the Project will have on the environment and indicates measures Metro has agreed to implement. See 01 35 44 Environmental Mitigation and Monitoring and contract requirements.
- C. Metro has acquired a night time noise variance from The City of Los Angeles Board of Police Commissioners for nighttime and weekend construction related to the early construction activities including potholing at the UCLA Station. The Contractor will be responsible to acquire subsequent night time noise variances for the Design Build construction activities.
- D. Refer to 01 71 43 Permits, Licenses and Agreements. The variance would allow the Contractor to schedule Work at night and weekends subject to the provisions of the variance to Section 41.40 of the Los Angeles Municipal Code. The variance could be withdrawn if the LA Police Commission receives complaints and or if the construction noise levels exceed the ambient noise level on the premise of any occupied property by more than five decibels from 9:00 PM to 7:00 AM Monday through Friday, from 9:00 PM Friday to 8:00 AM Saturday, from 6:00PM Saturday to 8:00 AM Sunday and all day Sunday as well as from 6:00 PM Sunday to 7:00 AM Monday.
- E. Metro is pursuing a Master Cooperative Agreement (MCA) with Caltrans and is preparing a Project Study Report/Project Report (PSR/PR) to submit for Caltrans Approval. That will include a Traffic Management Plan that will include limitations and requirements for night-time and weekend construction and definition of haul routes. Contractor will be responsible for complying with these requirements.
- F. Use equipment with effective noise-suppression devices and employ other noise control measures such as enclosures and barriers necessary to protect the public. Schedule and conduct operations in a manner that will minimize, to the greatest extent feasible, the disturbance to the public in areas adjacent to the construction activities and to occupants of buildings in the vicinity of the construction activities.
- G. Submit a Noise Control Plan and a Noise Monitoring Plan, as specified in this Section. Both plans shall be prepared by an Acoustical Engineer meeting the qualifications specified in this Section. Do not operate noise generating construction equipment at the construction site prior to acceptance of the Noise Control and Monitoring Plans. Update Noise Control Plan every three months and prior to a change in construction activity involving noise emitting equipment.

- H. Compliance with the requirements of this Section may require the use of equipment with special exhaust silencers and/or noise attenuating enclosures, and construction of temporary enclosures or noise barriers around activities.
- I. Use haul routes and staging areas, as approved by Metro, the City of Los Angeles, the County of Los Angeles or Veterans Administration requirements to minimize noise at residential and other sensitive receptor sites.
- J. Metro will monitor Contractor's performance of tasks specified, and will inspect necessary records, reports and procedures.
- K. Contractor staff members shall be trained by and work with the Acoustical Engineer specified in this Section to conduct measurements and manage noise and vibration control.
- L. Contractor will coordinate with Metro on communicating with the noise sensitive locations listed in Table 5 and Table 6 and others that may arise during the life of the project regarding noise and vibration monitoring, schedule of construction activities where activities may affect these locations, and implementing mitigation measures to reduce noise and vibration.

1.02 RELATED SECTIONS

- A. Section 01 31 30 Interface with Other Jurisdictions
- B. Section 01 33 00 Submittal Procedures
- C. Section 01 35 23 Worksite Safety Requirements
- D. Section 01 35 44 Environmental Mitigation and Monitoring
- E. Section 01 35 53 Worksite Security Requirements
- F. Section 01 43 10 Project Quality Program Requirements - Design/Build
- G. Section 01 51 23 Temporary Construction Ventilation
- H. Section 01 56 26 Construction Fencing (Wood)
- I. Section 01 56 28 Construction Fencing (Chain Link)
- J. Section 01 58 13 A Temporary Signs and Banners

1.03 REFERENCES

- A. California Code of Regulations (CCR), Title 24
- B. California Health and Safety Code (CHSC)
- C. City of Los Angeles Building Code, Chapter XI, Los Angeles Noise Ordinance
- D. City of Los Angeles Municipal Code.

- E. County of Los Angeles Municipal Code.
- F. American National Standards Institute (ANSI):
 - 1. ANSI S1.4 - Specification for Sound Level Meters
 - 2. ANSI S1.10 - Methods for the calibration of microphones
 - 3. ANSI S2.4 - Method for Specifying the Characteristics of Auxiliary Analog Equipment for Shock and Vibration Measurements
- G. ASTM International (ASTM):
 - 1. ASTM C423 - Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
 - 2. ASTM E90 - Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
 - 3. ASTM E413 - Classification for Rating Sound Insulation
- H. International Electrotechnical Commission (IEC):
 - 1. IEC 61672 - Electroacoustics Sound Level Meters
 - 2. IEC 179 - Precision Sound Level Meters
- I. Occupational Safety and Health Act (OSHA) regulations (CCR Title 8)
- J. Society of Automotive Engineers (SAE):
 - 1. SAE J88 - Sound Measurement Off-Road Work Machines - Exterior
 - 2. SAE J366 - Exterior Sound Level for Heavy Trucks and Buses
 - 3. SAE J994 - Alarm- Backup- Electric Laboratory Performance Testing
- K. International Organization for Standardization (ISO):
 - 1. ISO 9533 - Earth-moving machinery. Machine-mounted audible travel alarms and forward horns – Test methods and performance criteria.
- L. U.S. Department of Transportation, Federal Highway Administration (FHWA):
 - 1. Special Report Highway Construction Notes: Measurement, Prediction, and Mitigation. (March, 1977)
- M. U.S. Department of Transportation, Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06, May 2006
- N. U.S. Environmental Protection Agency (EPA):
 - 1. EPA Report NTID 300.1 – Notice from Construction Equipment and Operations, Building Equipment, and Home Appliances. (1972)

1.04 QUALITY ASSURANCE

- A. Comply with requirements of Section 01 43 10, Project Quality Program Requirements – Design/Build.
- B. Licensed Professionals - Employ California registered professional engineer regularly engaged in design of temporary and permanent barrier's and noise mitigation systems of a similar nature to those specified.
- C. Acoustical Engineer Qualifications
 - 1. The minimum requirements for the Acoustical Engineer: Bachelor of Science Degree or higher degree, from a qualified program in engineering, physics, or architecture offered by an accredited university or college, and ten years' experience in noise and vibration control engineering and noise and vibration analysis, or current enrollment as a full Member or Board-certified Member in the Institute of Noise Control Engineering.
 - 2. Acoustical Engineer must demonstrate substantial and responsible experience in preparing and implementing construction noise and vibration control plans and monitoring plans on construction projects conducted in an urban setting and in calculating construction noise and vibration abatement measures.
 - 3. Acoustical Engineer
 - a. Station Design- - Demonstrate substantial and responsible experience in designing and overseeing the implementation of vibration abatement measures in station environment, public address system design, noise control of ancillary equipment and emergency ventilation systems, as well as demonstrate substantial and responsible experience in designing and testing rail vibration isolation systems.
 - b. Construction - Demonstrate substantial and responsible experience in preparing and implementing construction noise control and monitoring plans on construction projects conducted in an urban setting, and in calculating construction noise abatement measures.

1.05 SUBMITTALS

- A. Refer to Section 01 33 00, Submittal Procedures.
- B. Pre-Construction
 - 1. Qualifications and work experience of the Acoustical Engineer as specified in paragraph 1.04.C of this Section. This submittal is required prior to the submittal of the Noise Control and Noise Monitoring Plans.
 - 2. **Contractor's Noise Control Plan** 90 days prior to starting work.
 - 3. **Contractor's Noise Monitoring Plan** 60 days prior to starting work inclusive of:
 - a. Proposed locations for pre-construction ambient noise and vibration measurements at all work sites.

4. **Contractor's Vibration Control Plans** 90 days prior to starting work and **Vibration Monitoring Plan** 60 days prior to starting work.
 5. Pre-construction ambient noise level measurement report.
 6. Material Safety Data Sheets (MSDS): Manufacturer's Material Safety Data Sheets for each type of material used in Work.
 7. Noise measurement equipment makes and models, and calibration conformance certificates as specified in this Section.
 8. Equipment noise certification reports as specified in this Section.
 9. Shop and Working Drawings, computations, material data and other criteria, for noise abatement measures, identified in the Noise Control Plan and for moveable noise barriers, noise barrier walls and noise control curtains as specified in this Section. Have drawings and computations stamped by a License Professional Engineer registered in the State of California.
- C. **During Construction**
1. **Weekly Noise Measurement Reports.**
 2. **Weekly Vibration Measurement Reports.**

1.06 DEFINITIONS

- A. Construction Site: For purpose of noise and vibration control requirements, the Contract limits of construction. This includes Right-of-Way lines, property lines, construction Easement Boundary or property lines and Contractor staging areas outside the defined boundary lines, used expressly for construction.
- B. Noise Level Measurements: Unless otherwise indicated, the use of A-weighted and "slow" response settings of instrument complying with Type 2 requirements of latest revision of ANSI S1.4 and IEC 61672.
- C. Pre-construction ambient noise levels: Existing noise levels measured 3 feet from the building face of the noise sensitive receivers so named herein.
- D. A-Weighted Noise Levels: Decibels (referenced to 20 micro-Pascal) as measured with A-weighting network of standard sound level meter, abbreviated dBA.
- E. C-Weighted Noise Level: Decibels (referenced to 20 micro-Pascal) as measured using the C-weighting network on a sound level meter complying with the criteria for a Type 1 (Precision) or Type 2 (General Purpose Sound Level Meter), as defined in the current revision of ANSI S1.4. Use the FAST setting on the sound level meter to measure the C-weighted sound level.
- F. Vibration Measurements: The use of a vibration transducer, amplifier, peak detector, and frequency band filters complying with ANSI S2.4.
- G. Vibration: Velocity in microinches per second. Vibration levels are expressed as velocity levels in Decibels referenced to one microinch per second, abbreviated VdB.

- H. Daytime: As defined by the City of Los Angeles - 7:00 AM to 9:00 PM Monday through Friday local time, and Saturdays, 8:00 AM to 6:00 PM. As defined by the County of Los Angeles – 7:00 AM to 8:00 PM Monday through Friday and Saturdays.
- I. Nighttime: Periods other than daytime.
- J. Noise Sensitive Locations: Residential areas, institutions, hospitals, parks, and other locations so named herein.
- K. L_{max} : The maximum measured sound level.
- L. One-hour Leq A weighted Equivalent Sound Level (Leq): The continuous sound level that represents the same sound energy as the varying sound levels over one hour.
- M. Sound Transmission Class (STC): A single number rating calculated in accordance with ASTM E413, using values of sound transmission loss. It provides an estimate of the performance of a partition in certain common sound insulation problems.
- N. Stationary/Continuous Noise: Daytime noise from stationary sources, and parked mobile sources that produce repetitive or long-term noise lasting more than two hours.
- O. Mobile/Intermittent Noise: Daytime noise from non-stationary mobile equipment operated by a driver, or from source of intermittent, non-recurring on long-term basis, non-scheduled, non-repetitive, short-term noises (not lasting more than two hours).

1.07 RESPONSIBILITIES OF CONTRACTOR

- A. Perform Work within the permissible noise levels, work schedule limitations, and procedures provided for in this Section and applicable Federal, state, county and municipal codes, regulations, and standards.
- B. Other than those provided herein, be responsible for obtaining, at Contractor's own expense, permits, variances, equipment certifications, and other documents required by this Section and by applicable Federal, state, county and municipal codes, regulations and standards.
- C. With regard to noise monitoring, include the following:
 - 1. Furnish instrumentation for noise monitoring that complies with the standards specified in this Section and that is capable of measuring the sound levels defined in this Section.
 - 2. Collect and report noise monitoring data, report whether the noise monitoring data indicates compliance as specified in this Section, and submit a Noise Measurement Report to Metro on a weekly basis. Noise monitoring that is not conducted at the façade of the noise sensitive receiver should be adjusted accordingly.
 - 3. Metro shall be provided access to review measured data and coordinate the Contractor's schedule for noise monitoring.

4. Implement noise abatement measures as required by this Section, based on the Contractor's noise monitoring data and nuisance conditions reported by Metro.
- D. With regard to vibration monitoring, include the following:
1. Furnish instrumentation for vibration monitoring that complies with the standards specified in Paragraphs 1.03.E and 1.03 G of this Section and that are capable of measuring the vibration levels defined in Paragraph 3.07.B of this Section
 2. Collect and report vibration monitoring data, report whether the vibration monitoring data indicates compliance as specified in this Section, and submit a Vibration Measurement Report to Metro on a weekly basis.
- E. Metro shall be provided access to review measured data and coordinate with the Contractor's schedule for vibration monitoring schedules.
- F. Implement vibration abatement measures as required by this Section, based on the Contractor's vibration monitoring data and nuisance conditions reported by Metro.
- G. The adjacent noise and vibration sensitive locations include, but are not limited to, the following:
1. Properties listed in Table 5 and Table 6 of this Section
- H. Contractor is required, under the Article entitled "Assessments for Special Circumstance" in Contract Document SPECIAL PROVISIONS, to comply with the work activity noise and vibration levels and the daytime and nighttime noise emission limits, to measure noise and vibration levels, and to provide and certify that workers are adequately trained, all in accordance with the requirements of this Section, and the failure to comply with such requirements is a violation of such Article and will result in an assessment as provided therein.

PART 2 - PRODUCTS

2.01 NOISE CONTROL MATERIALS

- A. Noise control materials may be new or used. Used materials shall be sound and free of damage and defects and shall be of a quality and condition to perform their designed function.

2.02 NOISE BARRIER WALLS

- A. Install noise barrier walls around all construction staging areas.
- B. Use material that will last for the duration of construction of this Contract. Construct using AC Plywood or acceptable equal.
- C. Line the construction site side of noise barrier walls with glass fiber or mineral wool type noise-absorbing material at least two inches thick. Protect this material using wire mesh or perforated sheets that are corrosion resistant and that have at least 30 percent open area and provision for water drainage, or provide a wall assembly with

a STC-25 or greater, based on certified sound transmission loss data taken according to ASTM E90 and a Noise Reduction Coefficient (NRC) rating of NRC-0.70 or greater, based on certified sound absorption coefficient data taken according to ASTM C423.

- D. Construct gates and doors in noise barrier walls either hinged or rolling of the same or equally effective material as the noise barrier wall. Construct gates and doors in the wall to ensure that the edges overlap the wall to eliminate gaps. During nighttime hours maintain gates and doors in a closed position except for brief periods of time to allow access to the Construction Site.
- E. Attach lagging to support posts designed so that the wall will withstand 80 mph wind loads plus a 30 percent gust factor.
- F. Provide flush mating surfaces of wall sides when walls are joined together or at corners. Close gaps between wall sections and between bottom edge of walls and grade with material that will completely close the gaps and be dense enough to attenuate noise.
- G. Be responsible for the design, detailing and adequacy of the framework and supports, posts, attachment methods and other appurtenances required for the proper erection of the noise control barriers.
- H. Prepare the design details for the noise control wall footing, steel posts, supports and framework, signed and sealed by a Professional Engineer licensed in the State of California. Submit the design and detailed engineering to Metro.
- I. Design and install foundations or piers for walls that do not require excessive noise to construct.
- J. Height of Noise Barrier Walls: As required to meet Noise Control Plan requirements, but not less than 20 ft. at Construction Laydown Yards.
- K. Temporary Art and Displays: Refer to Sections 01 58 13 A, Temporary Signs and Banners, 01 56 26, Construction Fencing (Wood) and Section 01 56 28, Construction Fencing (Chain Link), for temporary artwork and displays.
- L. Post readily visible signs indicating "Noise Control Zone" on or near construction equipment operating close to noise sensitive sites

2.03 MOVEABLE NOISE BARRIERS

- A. Construct moveable barriers of AC Plywood sheeting, or other acceptable material. Line barriers on construction site side with glass fiber or mineral wool type sound absorbing material at least two inches thick to produce a noise barrier assembly with an STC25 rating or greater. Protect sound absorbing material by wire mesh or perforated sheets that are corrosion resistant and that have at least 30 percent open area, with provision for water drainage.
- B. Provide materials and details of construction sufficiently weather resistant to last through the duration of construction of this Contract.

C. Construction Details:

1. Attach barrier panels to support frames constructed in sections to provide a moveable barrier utilizing the standard temporary precast concrete median barrier or other supports.
2. When barrier units are joined together, overlap the mating surfaces of the barrier sides or make flush with each other. Close gaps between barrier units, and between the bottom edge of the barrier panels and the ground, with material that will completely close the gaps and be dense enough to attenuate noise.
3. Height of barriers: As required to meet Noise Control Plan requirements.

2.04 NOISE CONTROL CURTAINS

A. Noise Control Curtains: Durable, flexible composite material featuring a noise barrier layer bonded to a sound-absorptive material on one side.

1. STC rating of STC-25 or greater based on certified sound transmission loss data taken according to ASTM E90.
2. NRC rating of NRC 0.70 or greater based on certified sound absorption coefficient data taken according to ASTM C423.

B. Noise Barrier Layer: A rugged, impervious material with a surface weight of at least one pound per square foot.

C. Sound Absorptive Material: Include a protective facing, and securely attached to one side of the noise barrier layer over its entire surface.

1. Mildew resistant, vermin proof and non-hygroscopic.

D. The noise control curtain materials: Abuse resistant, exhibiting superior hanging and tear strength during construction. The curtain barrier material shall have a minimum breaking strength of 120 lb/in. and a minimum tear strength of 30 lb/in. Based on the same test procedures, the curtain absorptive material facing shall have a minimum breaking strength of 100 lb/in. and a minimum tear strength of seven lb/in.

1. Corrosion resistant to most acids, mild alkalis, road salts, oils and grease.
2. Fire retardant, and approved by the City of Los Angeles Fire Department prior to procurement.

E. Construct gates and doors of a material with a STC 25 or greater rating.

F. Construction Details:

1. Install the noise control curtains in vertical segments extending the full curtain height, and have seams and joints with a minimum overlap of two inches and be sealed using hook fasteners or double grommets. Use construction details according to the manufacturer's recommendations.

2. Secure the curtain at ground level and/or at intermediate points by framework and supports.
3. Be responsible for the design, detailing and adequacy of framework, supports, ties, attachment methods and other appurtenances required for the proper installation of the curtain.
4. Height of Curtains: As required to meet Noise Control Plan requirements.
5. Prepare and seal the design and details necessary for the noise control curtain framework and supports using a Professional Engineer licensed in the State of California. Submit the design and detailed engineering to Metro for review prior to procurement.

2.05 VIBRATION CONTROL FOR TUNNEL TRAIN

- A. If ground-borne noise limits or ground-borne vibration limits are exceeded, the contractor will be required to take action to reduce noise and/or vibrations to acceptable levels. Such action could include:
 1. A durable resilient system to support the tunnel train tracks. Such as system would include:
 - a. Resilient mat under the tracks
 - b. A resilient grommet or bushing under the heads of any track fasteners.
 2. The hardness of the resilient mat should be in the 40 to 50 durometer range and be about 1 to 2" thick, depending on how heavily loaded the cars would be.
 3. The Contractor shall select the mat thickness so that the rail doesn't bottom out during a train pass by.
 4. Reduce the speed of the tunnel trains.
 5. Maintain the tunnel train track and train wheels in good order to reduce potential vibration impacts, including keeping gaps between track sections to a minimum and frequent maintenance to avoid wheel flats.

PART 3 - EXECUTION

3.01 ACOUSTICAL ENGINEER

- A. Engage an Acoustical Engineer meeting requirements of Paragraph 1.04C of this Section to be responsible for preparing and overseeing the implementation of the Noise Control Plan and mitigation measures and Noise Monitoring Plan.

3.02 NOISE LEVEL LIMITS

- A. A summary of Allowable Construction Site Noise Levels in the City of Los Angeles and County of Los Angeles is provided on Table 2. Contractor to review and update to current City and County Codes and Ordinances.

- B. Metro has taken measurements of the ambient noise levels at noise sensitive receivers near the construction areas. The measured ambient noise levels are presented in Table 1. These measured ambient levels are for information only and not to be used as the basis for developing allowable noise levels.
- C. Contractor shall review and update the noise sensitive locations listed in Table 5 and Table 6, adding and deleting locations to reflect changes since the date of the RFP.
- D. The LAPD has not taken measurements of the ambient noise levels at construction locations.
 - 1. For locations within the City of Los Angeles Contractor shall take pre-construction 24-hour noise level measurements at each of the noise sensitive locations listed in Table 5. Where nighttime work is planned for any project sites, take pre-construction measurements at Table 5 locations during nighttime hours. Preconstruction noise level measurements shall be provided to Metro. The selection of the measurement sites shall be subject to Metro approval. Measure levels, continuously over a 14-day period, 30 days prior to the beginning of construction, under the supervision of the Acoustical Engineer. Report data to Metro as 1-hour Leq (A-weighted) levels or other selected measurement period as directed by Metro. The Contractor's Acoustical Engineer will establish the recommended day and night noise level limits for each of the locations listed in Table 5 based on the measured data for Metro's review and approval.
- E. After completion of Contractor's pre-construction ambient noise measurements, Contractor shall submit to Metro for approval a table of allowable noise levels which update the values included in Table 1, and indicate for each receiver site, the daytime, evening, and nighttime noise limits for construction. If any Local Jurisdictions have granted a nighttime noise variance, values used to update Table 1 may also include nighttime limits for selected sites, thus complementing the noise criteria herein. If Local Jurisdiction noise limits differ from the Metro project noise criteria, apply the strictest.
- F. The ground borne noise levels within building structures due to underground construction activities - Limited to the Lmax noise levels listed in Table 3.
- G. At the surface of the construction site during nighttime hours use only equipment that, operating under full load, meets the noise limits specified in Table 4 when measured according to the test procedures used for equipment noise certification as specified in this Section.
- H. Contractor is prohibited from operating equipment at night that does not meet nighttime noise emission limits in Table 4. If the Contractor's existing equipment on-site does not meet nighttime noise emission limits for surface construction activities specified in Table 4 or falls out of compliance, remove the non-compliant equipment promptly from nighttime service by immediately parking and turning off equipment when it is safe to do so.
- I. Trucks operating off-site between the hours of 12:00 midnight and 5:00 AM must have lower emission limits (80 dBA at 50 feet) than normally required by the California Vehicle Code. All trucks used for these nighttime hours must be certified

in accordance with these specifications. Take necessary steps to comply with this limit, which may include fitting the equipment with high grade engine exhaust silencers and engine casing sound insulation.

3.03 NOISE CONTROL MEASURES

A. Noise Barrier Walls

1. At the Army Reserve laydown and staging work areas, noise barrier walls shall be erected around the perimeter of each of the work areas as shown in the contract drawings in accordance with Article 2.02 of this Section.
2. At the Bonsall Avenue Shaft laydown and staging work area, noise barrier walls shall be erected around the perimeter of each of the work areas as shown in the Contract drawings in accordance with Article 2.02 of this Section.
3. Noise barrier walls will be erected around the perimeter of any other work area established by the Contractor but not in the Contract drawings in accordance with Article 2.02 of this Section.

B. Moveable Noise Barriers

1. For construction occurring within the Westwood/UCLA Station Box and Westwood/VA Station and Crossover Box, moveable noise barriers shall be used at the perimeter of these sites in accordance with Article 2.03 of this Section but not less than 14 feet in height.

C. These supplemental noise mitigation measures shall be provided at Army Reserve Work Area.

1. Compressor plant, ventilation plant, grout plant, foam plant, machine shop and electrical shop shall be fully enclosed.
2. Conveyor system shall be enclosed.
3. All diesel powered equipment, such as a boom crane or front end loader used during the night shift shall be retrofitted with a hospital grade muffler and additional damping and insulation added to the engine compartments.
4. Provide supplemental noise barrier walls as shown in the contract drawings and as necessary in accordance with Article 2.02 of this Section to further shield the noise from spoils handling operations and other noise sources. Supplemental noise barrier wall locations are to be adjusted to fit contractor's yard layout and to maximize shielding of noise from spoils handling and other noise sources within work area so that noise levels at Army Reserve Work Area are not exceeded.

3.04 NOISE CONTROL PLAN

A. Requirements:

1. The Acoustical Engineer is responsible for preparing and overseeing the implementation of the Noise Control Plan.

2. Submit the Noise Control Plan to Metro or its designee a minimum of 90 days prior to the start of work.
3. Include the following for daytime and nighttime construction activities that may occur at the surface of the construction site:
 - a. Site Drawing: Prepare a scaled drawing of the construction site(s) indicating the following:
 - 1) Contract name and number
 - 2) Contractor's name
 - 3) Date
 - 4) Scale
 - 5) Direction of North
 - 6) Noise sensitive locations near the construction site
 - 7) Construction equipment locations used during daytime and nighttime hours, designated by the code letter used in Column (a) in Part A of the Noise Control Plan Form, Figure 4.
 - 8) Locations of the noise levels calculated for residential, commercial, and industrial areas as specified in this Section.
 - 9) Locations and types of noise abatement measures that may be required to meet codes and regulations as indicated by the calculations as specified in this Section.
 - b. Equipment Inventory: Prepare an inventory of equipment used during daytime and nighttime hours by providing the following information in the indicated columns of Noise Control Plan Form, Figure 4.
 - 1) Column (a): Code letter in sketch to indicate position of equipment on site and to identify Certificates of Noise Compliance
 - 2) Column (b): Appropriate equipment category from Table 4
 - 3) Column (c): Equipment manufacturer and model, if known at the time of the Plan's preparation
 - 4) Column (d): Unique identifier (ID), such as registration number, if known at the time of the Plans preparation.
 - 5) Column (e): Equipment horsepower
 - 6) Column (f): Noise emission limit from Table 4.

- 7) Column (g): Estimated noise level at 50 feet; if greater than the value in Column (f), source noise control device (e.g. mufflers) must be used to comply with limit.
 - 8) Column (h): Estimated date of first use on site
 - 9) Column (i): Estimated date of last use on site.
- c. Noise Calculations: Prepare calculations of daytime and nighttime L_{max} and one-hour L_{eq} noise levels expected at the nearest residential, commercial and industrial building facade based on the equipment noise levels given in Part A of the Noise Control Plan Form. Determine the nearest property lines from the currently identified noise sensitive locations indicated in Table 5. Calculate preliminary one-hour L_{eq} construction noise projections for those sensitive locations and insert with locations into Table 6. Make the calculations for locations where noise emitted by applicable equipment will cause the greatest noise level for each type of land use, for daytime and nighttime periods if necessary. Provide the results on Part B of the Noise Control Plan Form with calculations included below the results, and with the locations for the calculations indicated on the site sketch. The noise calculation procedure shall be as follows:

- 1) Calculate L_{max} according to the method outlined below:

$$L_{max}(\text{equipment}) = EL - 20 \log_{10} (D/50) - BNR$$

where:

EL = Estimated equipment noise level at 50 feet, in dBA.

D = Distance from the equipment to property-line location, in feet.

BNR = Barrier noise reduction in dBA.

Then, combine the individual contributions of each piece of equipment to obtain the overall maximum construction noise level at each location as follows:

$$L_{max}(\text{overall}) = 10 \log_{10} (\text{SUM } 10 [L_{max}(\text{equipment})/10])$$

- 2) Calculate one-hour L_{eq} according to the methodology recommended by the US Department of Transportation, Federal Highway Administration Special Report Highway Construction Noise: Measurement, Prediction and Mitigation, as follows:

First, calculate the construction one-hour L_{eq} at each property-line location for each item of equipment using the following equation:

$$\text{One-hour } L_{eq}(\text{equipment}) = EL - 20 \log_{10}(D/50) + 10 \log_{10}(UF/100)$$

where:

EL = Estimated equipment noise level at 50 feet, in dBA.

D = Distance from the equipment to the property-line location, in feet.

UF = "Usage factor," expressed as the percent of time that the equipment is operated at full power while on site. This factor shall be estimated by the Contractor or the qualified acoustical engineer. Guidelines for the selection of usage factors are provided by the US Environmental Protection Agency (EPA) Report NTID 300.1, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.

Then, combine the individual contributions of each piece of equipment to obtain the overall construction one-hour L_{eq} at each location as follows:

One-hour L_{eq} (overall) = $10 \log_{10} (\text{SUM } 10^{[\text{one-hour } L_{eq} \text{ (equipment)} / 10]})$

- 3) Compare the calculated L_{max} and one-hour L_{eq} values with the Contract limits specified in this Section.
 - d. Description of Required Noise Abatement Measures as specified in Paragraph 3.2.B of this Section.
 4. Noise Control Plan for Construction Activities Near Schools – If any primary or secondary schools are identified within the noise impact area of construction, the Contractor shall prepare Noise Control Plans to maintain acceptable interior noise levels within the school classrooms and occupied spaced. Metro will develop these criteria in coordination with the Los Angeles Unified School District (LAUSD), the Beverly Hills Unified School District (BHUSD), and individual school administrators. The Contractor shall monitor the construction noise levels to ensure compliance.
 5. Update the Noise Control Plan at three month intervals (based on Metro's initial acceptance date) and re-submit the Plan within 10 days of the start of each quarterly period. Update and re-submit the Noise Control Plan upon any major change in work schedule, construction methods, or equipment operations not included in the most recent Plan.
- B. Noise Abatement Measures: If the results of the noise calculations prepared in accordance with this Section indicate that noise level limits listed in this Section will be exceeded, identify proposed noise abatement measures, their anticipated effects (dBA reductions), and a schedule for their implementation. Re-calculate the noise levels at the nearest sensitive receptor location property lines which include the anticipated noise reduction effects and submit the results on Part B of the Noise Control Plan Form. Include, as backup documentation to Part B of the Noise Control Plan, drawings, sketches, and suitable calculations which demonstrate anticipated noise reduction benefits and that proposed structures or facilities comply with applicable building code requirements.

- C. Noise Reduction Methods: The following noise mitigation techniques shall be employed at all times to reduce the impact of construction noise:
1. Scheduling truck loading, unloading, and hauling operations so as to minimize noise impact near noise sensitive locations and surrounding communities.
 2. Locate stationary equipment so as to minimize noise impact on the community and install noise muffling enclosures.
 3. Do not leave equipment pieces idling when not in use.
 4. Limiting the use of enunciators or public address systems, except for emergency notifications. Any public address or music system must not be audible at any adjacent sensitive receiver
 5. Maintaining equipment such that parts of vehicles and loads are secure against rattling and banging.
 6. Limit the time that steel decking or plates for street decking or covering excavated areas are in use. Recess steel street plates and ensure that plates are fully seated on the pavement and not able to rock under traffic.
 7. Grading of surfaced irregularities on construction sites to prevent the generation of impact noise and ground vibrations by passing vehicles.
 8. Schedule Work to avoid simultaneous activities that both generate high noise levels.
 9. Use of temporary noise barriers and sound control curtains or an equivalent form of solid object to either destroy part of the sound energy by absorption, or to redirect part of the energy by wave deflection.
 10. All jackhammers, pavement breakers and saw cutters used at the Construction site shall be enclosed with shields, acoustical barrier enclosures, or noise barriers.
 11. Enclose activities likely to create a noise disturbance and enclose stationary equipment.
 12. Employ sound blankets over a movable fence for all night work, including the use of state-of-the-art technology where necessary to achieve 5dBa above pre-existing ambient noise levels at the property line of the nearest residential building. If sound blankets are to remain in place for more than five (5) days, Metro must seek approval from the City.
 13. Employ targeted noise mitigation when Construction is proximate to historic structures and may exceed 5dBa (Leq 15 min) above pre-existing ambient noise levels during business hours at historic structures.

3.05 NOISE MONITORING PLAN

- A. Requirements:

1. 90 days prior to commencing work, submit the Noise Monitoring Plan to Metro, specifying the nighttime and daytime construction activities, monitoring locations, equipment, procedures, schedule of measurements and reporting methods to be used.
2. Submit noise monitoring data collected during the previous week to Metro on a weekly basis. Contractor's Acoustical Engineer shall review all data prior to submitting to Metro. Weekly reports shall indicate whether the noise monitoring data is in compliance with established and regulatory noise limits.
3. In the event that contractor-generated measured noise levels exceed allowable limits, immediately halt operation of the activity causing the exceedance and notify Metro within one hour of the exceedance. Work on that activity shall be suspended until such time as an alternative construction method can be used and additional Noise Abatement Measures can be implemented as specified in the Noise Control Plan.
4. If the measured nighttime levels exceed the noise limits specified in this Section or in the Nighttime Noise Variance, reduce the noise levels by appropriate abatement measures or terminate the nighttime construction activity responsible for exceeding the noise limits.

B. Measurement Locations:

1. Measure noise levels at the noise-sensitive locations identified in Table 5 and Table 6 of this Section. These locations may change during the Contract. Contractor shall submit changes to noise sensitive locations to Metro for Approval and maintain an up to date list of noise sensitive locations.
2. Prepare and submit a scaled plan indicating monitoring locations, including measurements to be taken at construction site boundaries and at nearby residential, commercial and industrial property lines.

C. Noise Monitoring - (Continuous Noise Monitoring Stations (CMS))

1. Maintain continuous noise monitoring stations (CMS) with internet access at minimum of **four** selected locations within the community affected by the nighttime construction activities, and with an additional continuous noise monitoring station at the station construction sites at Army Reserve Work Area and Bonsall Avenue Work Area.
2. CMS stations shall be programmed with an initial trigger that provides an alert when the construction noise levels are within 3 dB of the noise limit and a second trigger when the noise levels are at or above the noise limit.
3. CMS stations shall continuously measure the equivalent sound level (one-hour Leq) and the maximum sound level (Lmax) on the A-Scale (dBA) and report the measured levels on a real time basis and/or one-hour time period or other selected measurement period as directed by Metro. CMS shall produce audio recordings of all exceedances.

4. Provide noise monitor telemetry links and software and computer capable of continuously measuring noise and transmitting the measured data from each of the CMS by a web based application to a computer located at the contractor's office.
5. Contractor shall review and analyze CMS data each day. The Acoustical Engineer or his designee shall each day listen to the audio of the exceedance events and identify the cause whether it is from Contractors work and not from other sources such as emergency vehicle siren, helicopter etc. Submit noise data to Metro or its designee on a weekly basis using the Noise Measurements Report Form provided in Figure 2.
6. Monitoring locations for CMS will be selected by Metro in coordination with LAPD to ensure that the Nighttime Noise Variance requirements are met. As work progresses at each of the construction areas it may be necessary to periodically relocate the continuous noise monitors to the area most sensitive to on-going construction noise activities. Contractor shall be responsible for securing all necessary access permits.

D. Noise Monitoring – Hand Held Monitors

1. Provide Metro with two Type 1 precision sound level meters that meets the requirements outlined in this Section.
2. Measurement Equipment:
 - a. Perform noise measurements with an instrument that is in compliance with the criteria for a Type 1 (Precision) or Type 2 (General Purpose) Sound Level Meter as defined in the current revision of ANSI S1.4.
 - b. Provide sound level meters capable of measuring the L_{max} and one-hour L_{eq} on both the A-Weighted and C-Weighted scales required by regulatory criteria and Noise Level Limits.
 - c. Calibrate sound level meters, microphones, and calibrators for certified laboratory conformance at least once a year. Submit a current certificate of conformance to Metro prior to using the sound level meter and submit updated certificates following subsequent calibrations on a yearly basis for the duration of this Contract or upon the completion of repairs to the instrument.

E. Measurement Procedure – Hand Held Monitors

1. Field calibrate sound level meters using an acoustic calibrator, according to the manufacturer's specifications, prior to each measurement.
2. Except as otherwise indicated, perform measurements using the A weighting network and the SLOW response of the sound level meter.
3. Measure impulsive or impact noises using the C-Weighting network and the FAST response of the sound level meter.

4. Fit the measurement microphone with an appropriate windscreen at the location of the sensitive receptor at least four to six feet away from the nearest reflective surface.
5. Take noise measurements at 3 feet from the building face of noise sensitive locations within 150 feet of the construction site at least once each week and after a change in construction activity or construction location. Frequency and schedule of monitoring shall be determined by the Contractor's Acoustical Engineer and approved by Metro. Measurement Periods: Minimum of 15 minutes.
6. Construction noise measurements shall coincide with daytime and nighttime periods of maximum noise generating construction activity, and be taken during the construction phase or activity that has the greatest potential to create annoyance or to exceed applicable noise regulations and restrictions.
7. If, in the estimation of the person performing the measurements, outside noise sources contribute significantly to the measured noise level, repeat the measurements (with the same outside source contributions when construction is inactive to determine the background noise level
8. Submit noise data to Metro or its designee on a weekly basis using the Noise Measurements Report Form provided in Figure 2. Note the type of measurement (e.g. baseline, on-going construction) on the form.
9. Clearly identify monitoring locations and sketch on the back of the Noise Measurements Report Form, Figure 2, along with the locations of and distances from any noise sensitive location.
10. Identify construction equipment operating during the monitoring period and the locations sketched on the back of the Noise Measurements Report Form, along with the locations and distances to any noise sensitive location.

3.06 EQUIPMENT NOISE CERTIFICATION

A. Requirements for Construction Equipment:

1. Ensure that Contractor and Subcontractor equipment, of the categories listed in Table 4 to be used (during nighttime hours at the surface of the construction site) for a total duration greater than five days, shall be tested for compliance with the stated noise emission limits by the Acoustical Engineer during the first day of use on the construction site or at an alternative site acceptable to Metro. Additionally, the Acoustical Engineer shall certify that equipment used during daytime hours meets municipal regulatory requirements.
2. Retest equipment as described above at six month intervals while in use on-site, and certify new equipment before being placed into service at the site.
3. For each piece of equipment tested for both daytime and nighttime compliance, submit a noise report to Metro or its designee by completing the Application for Certificate of Equipment Noise Compliance provided in Figure 3. Ensure that

the equipment identification number used for the Certificates is consistent with the identification number used in the Noise Control Plan.

4. Do not use equipment of the categories listed in Table 4, as described above on-site without valid certificates of noise compliance submitted as required.

B. Test Procedures for Construction Equipment:

1. Operate engine powered equipment by the Contractor or Contractor's representative at maximum governed rpm under full load conditions during the tests under the supervision of the Acoustical Engineer.
2. Test portable and mounted impact hammers, such as hoe rams and jackhammers to be used for concrete breaking, by the Acoustical Engineer during the first day of actual operation at the construction site under maximum load conditions as rated by the equipment manufacturer.
3. Noise certification measurements: As specified in Paragraph 3.05 D.2. of this Section. Use an acoustic calibrator of the type recommended by the sound level meter manufacturer prior to measurements.
4. If possible, make measurements at two locations:
 - a. Two feet outside the right side of the equipment casing, at 50 feet and a height of five feet above ground level, and;
 - b. Two feet outside the left side of the equipment casing, at 50 feet and a height of five feet above ground level, with the equipment operating as indicated in items 3.04.B.1, or 2 above for a minimum period of one minute. Reduce measurements made at less than 50 feet, because of space limitations at the test site, by the values given in Table 8 to estimate the 50-foot sound level.

C. Compliance:

1. Submit a noise report to Metro for each item of equipment used on the surface of the construction site during nighttime hours of the categories listed in Table 4. Submit the report on the form shown in Figure 3 with certification by the Acoustical Engineer that equipment noise emissions do not exceed those prescribed in Table 4. Additionally, the Acoustical Engineer shall certify that equipment used during daytime hours meets municipal regulatory requirements.
2. If the noise levels obtained during the tests exceed those prescribed by municipal regulatory requirements, the Contractor's Acoustical Engineer shall ensure that proper mitigation measures are identified and implemented for all equipment that may cause noise level exceedances.
3. If the noise levels obtained during the tests exceed those specified in Table 4, or as prescribed in municipal regulatory requirements, remove such equipment from nighttime use until such equipment is modified and retested, or substitute other equipment to meet the noise level requirements.

4. Upon compliance Metro will mark the noise report indicating Metro's concurrence, including the certification date and equipment identification number, for verification by Metro. Keep the noise reports readily available on file in the construction field office for inspection by Metro upon request.
5. The Certificate of Noise Compliance will remain valid for a period of six months only. Delays caused by the certification refusal or by time lost in improving the rejected equipment or finding alternate acceptable equipment will not be a basis for monetary or time delay claims, or for avoidance of liquidated damages or withholding of payment.
6. Equipment shall be subject to spot noise level testing by Metro's discretion to determine that the equipment in use meets the requirements specified in Table 4. If such tests are requested by Metro, locate and operate the equipment as directed by Metro at the designated site so as to facilitate the measurements.
 - a. Provide Metro with a copy of the results of the measurements. If such tests demonstrate that any equipment does not comply with this part, Metro will revoke the certificate of Noise Compliance and the Contractor will take the equipment out of use according to requirements of this Section until compliance is achieved. A new Certificate of Noise Compliance will be issued upon proof of compliance.

3.07 VIBRATION LEVEL LIMITS

- A. Measures applied to limit noise levels may in some cases limit vibration levels also. Measures specified above for noise levels are applicable.
- B. All Areas: Conduct Construction activities so that vibration levels at 50 feet from construction limits or at nearest affected building (whichever is closer) do not exceed root-mean-square (rms) unweighted vibration velocity levels in vertical direction over a frequency range of 1 to 100 Hz as listed in Table 9. Limit ground-borne noise inside buildings due to construction vibration to below the limits in Table 3.
- C. The groundborne vibration levels at building structures due to any construction activities shall be no greater than the peak particle vibration levels shown in Table 10. The Contractor shall perform periodic vibration monitoring at the closest occupied building structure to any construction activities using approved seismographs. If at any time the construction activity results in vibration levels that exceed those specified herein, that activity shall be halted immediately and work on that activity shall be suspended until such time as an alternative construction method can be used that will result in lower vibration levels.
- D. Vibration levels at buildings affected by construction operations refer to vertical direction vibration on ground surface or building floor.
- E. Conduct daily measurements of vibration during peak vibration generating construction activities.

3.08 VIBRATION CONTROL AND MONITORING PLAN

- A. Requirements

1. Same as noted above for the Noise Control Plan (3.02.A) and Noise Monitoring Plan (3.03.A), applied to vibration, where applicable.
2. Vibration Calculations – In the absence of relevant vibration measurement data that can be applied to this Project, prepare calculations of maximum groundborne noise and vibration at representative buildings along the Project. Preliminary source vibration levels are indicated in Table 10. These source levels are preliminary in nature and it is up to the Contractor to verify and update information during construction (and, where possible, before construction). Provide the results on a form similar to Part B of the Noise Control Plan Form, with the calculations included below the results, and with the locations for the calculations indicated on the site sketch. The vibration calculation procedure shall be as follows:
 - a. Damage Assessment – Calculate the vibration according to the method outlined below:

$$PPV_{\text{equipment}} = PPV_{\text{ref}} \times (25/D)^{1.5}$$

where:

$PPV_{\text{equipment}}$ is the peak particle velocity in units of inches/second of the equipment adjusted for distance

PPV_{ref} is the reference vibration level in units of inches /second at 25 feet (see Table 10)

D is the distance from the equipment to the receiver, in feet.

- b. Annoyance Assessment – Calculate the vibration according to the method outlined below:

$$Lv(D) = Lv(25 \text{ ft}) - 30 \log_{10} (D/25) + \text{correction}$$

where:

$Lv(D)$ is the rms vibration velocity in logarithmic units of VdB re 10^{-6} in/sec of the equipment, adjusted for distance.

$Lv(25 \text{ ft})$ is the reference vibration level in logarithmic units of VdB re 10^{-6} in/sec at 25 ft (see Table 11).

D is the distance from the equipment to the receiver, in feet.

Correction is as noted in Table 12.

- B. Vibration Abatement Measures – if the results of the vibration calculations or representative field data indicate that the vibration level limits listed in this Section will be exceeded, identify proposed vibration abatement measures, their anticipated vibration effects, and schedule for their implementation. Provide calculations demonstrating the effectiveness of the proposed abatement measures, and, if applicable, provide applicable drawings and sketches to indicate where such abatement measures will be placed.

C. **Vibration Measurement Locations**

1. Measure vibration and groundborne noise at sensitive locations in the vicinity of the construction sites and during underground tunneling. Vibration measurements shall be conducted at the exterior of the building and groundborne noise measurements at the interior. These locations may change during the Contract and shall be updated as required by Metro.
2. Prepare and submit a scaled plan indicating monitoring locations.

D. **Vibration Monitor**

1. Maintain a vibration monitoring station with internet connection at the closest building to the vibration generating construction activities. See Section 3.05 for other requirements. Measure vibration and groundborne noise at a minimum of these locations where there are buildings that are currently listed or are eligible for listing on the National Register of Historic Properties:
 - a. Pending

E. **Measurement Equipment**

1. Use an InstanTel Blastmate III, Minimate Plus, Minimate Series IV pro or approved equal to monitor vibration. See 3.03.E for groundborne noise equipment requirements.
2. Calibrate vibration equipment at a certified laboratory at least once a year. Provide calibration documentation to Metro prior to placing equipment in service.

F. **Measurement Procedure** – See 3.03.F for general guidelines applicable to spot check for vibration and groundborne noise.

3.09 CONSTRUCTION SITE NOISE CONTROL

A. **Perimeter Noise Barrier Wall:**

1. Furnish and install perimeter noise barrier walls along streets as indicated. The noise barrier walls shall provide sufficient noise reduction to meet the daytime or nighttime noise limits specified in this Section. It is the Contractor's responsibility to meet these limits by other methods such as installing additional fixed barrier walls or movable barriers, raising the height of the noise barrier walls, and providing additional noise control measures specified in this Section. Perimeter fencing shall be a minimum height of 20 ft.
2. Construct gates and/or doors in the wall either hinged or rolling of the same or equally effective material as the noise barrier wall. Construct gates and doors in the wall to ensure that the edges overlap the wall to eliminate gaps. During nighttime hours maintain gates and doors in a closed position except for brief periods of time to allow access to the Construction Site.
3. Install noise barrier walls, gates, and doors in the wall before commencing any work.

- B. Noise Barrier Walls for Pile Installation and Grouting Stage Areas:
 - 1. Provide Noise Control walls on perimeter of pile installation closure and grouting staging areas.
 - 2. Provide noise absorptive material behind gawk screens on K-Rail which are adjacent to live traffic, and on construction chain link fencing, which is adjacent to the sidewalk.

3.10 CONSTRUCTION SITE VIBRATION CONTROL

- A. Provide an elastomer isolator installed between the floor of the tunnel and the rails and ties on which the excavated materials supply train operates. The elastomer isolator shall be provided for the full extent of the running tunnel between the Army Reserve Shaft and the connection to Century City Constellation Station.
- B. Submit the excavated materials train rail vibration elastomer isolator design for Metro acceptance before installation of the track.
- C. If the Metro ground-borne noise or ground-borne vibration limits (Table 3) are exceeded the Contractor will be required to take additional action to reduce vibration to acceptable levels.

3.11 CONSTRUCTION METHODS – EQUIPMENT

- A. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete deck removal and retaining wall demolition.
- B. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise ordinance limitations and Metro project criteria shown in this Section.
- C. Equip noise producing equipment i.e. jackhammers and pavement breakers with acoustically attenuating shields or shrouds recommended by the manufacturers thereof, to meet relevant noise ordinance limitations.
- D. Line or cover hoppers, conveyor transfer points, storage bins, chutes and truck beds with sound-deadening material.
- E. All noise producing equipment, including vehicles that use internal 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, ventilation fans) will be equipped with shrouds and similar noise control features, to meet noise ordinance limitations.
- F. Blasting and Impact Pile Driving is specifically prohibited from use. Use of vibrating and impact hammers shall also be limited due to close proximity of adjacent buildings
- G. As required to meet the noise limits specified in this Section, use alternative procedures of construction, and select proper combination of techniques that

generate least overall noise and vibration. Such alternative procedures include the following:

1. Use electric welders powered from utility main lines instead of riveting or electric generators/welders.
 2. Mix concrete off-site instead of on-site.
 3. Employ prefabricated structures instead of assembling on-site.
 4. Solar powered arrow boards
 5. VMS message signs
- H. Use only construction equipment, both fixed and mobile, that is equipped to operate within noise limits. At night, use only equipment when, when operating at the surface of the construction site under full load, is certified to meet the specified lower noise level limits set in the Noise Control Plan and specified in the noise variance application.
- I. Use construction equipment manufactured or modified to dampen noise and vibration emissions, such as:
1. Use electric electrically powered equipment to the extent possible instead of diesel powered equipment. Use solar battery powered or hybrid equipment whenever practical.
 2. Use hydraulic tools instead of pneumatic impact tools.
 3. Use electric instead of air or gasoline driven saws.
 4. Whisper Jet diesel powered generators.
- J. Readily visible signs indicating "Noise Control Zone" shall be used.
- K. Noise control devices that meet original specifications and performance shall be used.
- L. Mobile or fixed noise-producing equipment shall be equipped to mitigate noise to the extent practical would be used.
- M. Earth-moving equipment, fixed noise-generating equipment, stockpiles, staging areas, and other noise-producing operations would be located as far as practicable from noise-sensitive receivers.
- N. The use of air horn type devices, including but not limited to vehicle mounted or hand held, shall not be used to communicate signals from one area of the project site to another. Compliance with the requirements of the Tunnel Safety Orders for signaling systems shall be obtained through the use of other auditory or visual systems other than the use of air horn type devices.
- O. Use of horns, whistles, alarms, and bells would be limited.

- P. Any project-related public address or music system would not be audible at any adjacent receiver.
- Q. Enclosures for fixed equipment such as TBM slurry processing plants would be required in order to reduce noise.
- R. Used approved design of silencers for all ventilation fans.

3.12 CONSTRUCTION METHODS – OPERATIONS

- A. Operate equipment so as to minimize banging, clattering, buzzing, and other annoying types of noises, especially near residential areas during the nighttime hours.
- B. To the extent feasible, configure the construction site in a manner that keeps noisier equipment and activities as far as possible from noise sensitive locations and nearby buildings.
- C. In no case shall the above restrictions limit the Contractor's responsibility for compliance with applicable Federal, state and local safety ordinances and regulations and other Sections of these construction specifications.
- D. Maximize physical separation, as far as practicable, between noise generators and noise receptors. Separation includes following measures:
 - 1. Provide enclosures for stationary items of equipment and barriers around particularly noisy areas on site.
 - 2. Locate stationary equipment to minimize noise and vibration impact on community, subject to acceptance of Metro.
- E. Demolition methods to be selected to minimize noise and vibration impact where possible.
- F. Use of vibratory rollers and packers to be avoided near vibration sensitive areas.
- G. Temporary noise barriers and sound-control curtains to be erected where project activity is unavoidably close to noise-sensitive receivers.
- H. Minimize noise-intrusive impacts. Limit activities such as concrete saw cutting to daytime and early evenings.
 - 1. Plan noisier operations during times of highest ambient noise levels.
 - 2. Keep noise levels relatively uniform; avoid excessive and impulse noises.
 - 3. No idling of heavy equipment or vehicles when not in use.
 - 4. Phase in start-up and shut-down of site equipment.
 - 5. Operate equipment at lowest possible power levels.

6. No slamming tailgates. Use rubber gaskets, decrease speed of closure or similar prevention measures. Place plywood or dirt beds on all trucks.
- I. Select truck routes for muck disposal so that noise from heavy-duty trucks will have minimal impact on sensitive land uses (e.g., residential).
 1. Conduct truck loading, unloading and hauling operations so noise and vibration are kept to a minimum.
 2. Where possible, route heavily loaded trucks away from residential streets. Where no alternatives are available, haul route selection will take into consideration streets with the fewest noise-sensitive receivers.
 3. Submit haul routes and staging areas to the City of Los Angeles, Bureau of Engineering and LADOT, and Caltrans 30 days before required date.
- J. Minimize vibrations from operations and equipment where necessary.
 1. Maintain smooth surfaces for construction equipment and vehicles to travel on (e.g., truck routes, tunnel train rail) to minimize vibration.
 2. Conduct TBM operations and maintain equipment to minimize unnecessary vibration.
- K. Use non-noise sensitive, designated parking areas for project related traffic.
- L. Configure construction operations to minimize backing movements, and hence use of back-up alarms.

3.13 CONSTRUCTION METHODS – MOVEABLE NOISE BARRIERS

- A. At a minimum, provide movable noise barriers for work in public right-of-way during night time hours in accordance with requirements of this Section for Moveable Noise Barriers.
- B. Provide readily removable noise barriers so that they may be repositioned, as necessary, to provide noise abatement for non-stationary and stationary processes.
- C. Installation, Maintenance, and Removal:
 1. Install the barriers such that the sound-absorptive surfaces face the noise source.
 2. Maintain the moveable noise barriers and repair damage that occurs, including, but not limited to, keeping barriers clean and free from graffiti, and maintaining structural integrity. Promptly repair or replace gaps, holes, and weaknesses in the barriers, and openings between, or under the units with new material.
- D. The use of moveable noise barriers is a minimum noise control requirement that may not provide sufficient noise reduction to meet the daytime or nighttime noise limits specified in this Section. It is the Contractor's responsibility to meet these limits by other methods such as installing additional moveable noise barriers, installing noise barrier walls, and providing additional noise control measures specified in this Section as indicated.

3.14 CONSTRUCTION METHODS – NOISE CONTROL CURTAIN

- A. Install noise control curtains in accordance with requirements of this Section for Noise Control Curtains, as required to meet the noise limits specified in this Section, to shield public from construction noise during the course of the Contract.
- B. The noise control curtains shall be readily moveable so that they may be repositioned, as necessary, to provide noise abatement for non-stationary and stationary processes.
- C. Installation, Maintenance and Removal:
 - 1. The noise control curtains shall be installed without any gaps such that the sound-absorptive side faces the construction activity to be shielded.
 - 2. Maintain the noise control curtains and promptly repair any damage that may occur. Gaps, holes or weaknesses in the curtain, or openings between the curtain and the ground shall be promptly repaired by the Contractor.

3.15 NOISE AWARENESS TRAINING

All Contractor personnel on site shall participate in 15 minute Noise Awareness Training provided by Metro.

3.16 CONSTRUCTION SCHEDULE

When traffic restrictions allow, schedule saw cutting, jack hammering and other noisy activities during the day or early evening hours.

3.17 LOW IMPACT BACK-UP ALARMS

- A. Use low impact back-up alarms on all equipment during nighttime hours. The equipment shall include, but not limited to, cranes, low boys, backhoes, loaders, concrete pumps, excavators, haulers, dump trucks, work trucks, and concrete mix trucks.
- B. The low impact back-up alarms used by the Contractor shall comply with CCR Title 8, Section 1592, Warning Methods.
 - 1. For equipment that must comply with CCR Title 8, Section 1592(a), equip these vehicles with compliant white sound, broadband and multi-frequency type back-up alarm devices.
 - 2. For equipment subject to the requirements of CCR Title 8, Section 1592(b) and that the Contractor chooses to equip with automatic back-up audible alarms as the means for complying with this section; such alarms shall only be of a compliant white sound, broadband or multi-frequency back-up alarm type device.
 - 3. The compliant white sound, broadband and multi-frequency type back-up alarm device shall be a self-adjusting, “smart” reversing, alarm that continually adjusts to 5 dB above ambient. Acceptable manufacturers are Brigade, ECCO or approved equal.

4. The compliant white sound, broadband and multi-frequency type back-up alarm device shall be rated as medium duty or heavy duty, as the field conditions and/or usage would dictate.

**TABLE 1 – ALLOWABLE NOISE LEVELS OF TOTAL CONSTRUCTION SITE NOISE
 BASED ON METRO’S AMBIENT NOISE MEASUREMENTS**

Westwood/UCLA Station

Site ID	Measurement Location	Nighttime Ambient Noise Level - Leq (dBA)	Nighttime ⁽¹⁾ Noise Limit (dBA)
A	1122 Gayley Avenue Apartments	68	73
B	Apartments east of Midvale Avenue	56	61
C	Apartments between Veteran and Midvale Avenues	58	63
Notes: ⁽¹⁾ Nighttime is from 9:00 P.M. to 7:00 A.M as defined by the City of Los Angeles Municipal Code.			

Westwood/VA Hospital Station

Measurement Location	Nighttime Ambient Noise Level - Leq (dBA)	Nighttime Noise Limit (dBA)
VA West Los Angeles Medical Center	61	60 ^{1,2}
VA Support and Logistics buildings 90, 91 and 517	60	60 ³
VA Support and Logistics buildings 307 thru 312, 14, 23, 522 and 318	55	55 ³
VA medical buildings 304 and 507	53	60 ²
VA medical buildings 400 and 401	55	60 ²
Notes: ¹ Assuming 'long term' operation. 'Short term' operation would have limits of 60 dBA and 70 dBA respectively. ² Hospital buildings have been classified as 'semi-residential' but could be considered Multi Family Residences. ³ The nighttime construction noise limit for single family residential receivers in Los Angeles County is 50 dBA. The measured ambient is higher than 50 dBA, therefore the ambient will be used as the nighttime noise limit for this location.		

ARMY RESERVE SHAFT SITE

Measurement Location	Nighttime Ambient Noise Level - Leq (dBA)	Nighttime Noise Limit (dBA)
Apartments on the west side of Federal Ave	59	64

3rd row apartments on the west side of Barry Ave	56	61
2nd row apartments on the east side of Barry Ave	54	59
2nd row apartments on the east side of Barry Ave, north of Wilshire Blvd	59	64
3rd row apartments on Kiowa Ave, within line of site of the construction zone down San Vicente Blvd,	62	67

TABLE 2 – SUMMARY OF ALLOWABLE CONSTRUCTION SITE NOISE LEVELS (CITY OF LOS ANGELES AND COUNTY OF LOS ANGELES)

Construction Activity	Noise Limit, dBA
City of Los Angeles Daytime (7:00 A.M.-9:00 P.M.), general activities	75 dBA ¹
City of Los Angeles Daytime (7:00 A.M.-9:00 P.M.), steady high-pitch noise or repeated impulsive noises	70 dBA ¹
City of Los Angeles Daytime (7:00 A.M.-9:00 P.M.), less than 15 minute duration in a period of 60 consecutive minutes	80 dBA ¹
City of Los Angeles Nighttime (9:00 P.M.-7:00 A.M.), all activities	Nighttime Ambient + 5dB
County of Los Angeles Daytime (7:00 A.M. – 8:00 P.M. weekdays and Saturdays)	60 dBA for SFR 65 dBA for MFR 70 dBA for semi-residential and commercial receivers
County of Los Angeles Nighttime (7:00 P.M. – 7:00 A.M. weekdays and Saturdays or any time on Sundays or holidays)	Variance Required
Notes: ¹ Noise limit applies to the facade of the closest property. SFR – Single-family residence MFR – Multi-family residence	

TABLE 3 – ALLOWABLE MAXIMUM INTERIOR GROUND-BORNE NOISE FROM UNDERGROUND CONSTRUCTION ACTIVITIES

Land Use Activity	Groundborne Noise Level Limits – L _{max} (dBA)
Single-Family Dwellings	40
Multi-Family Dwellings	45
Hotel/Motel	50
Offices	50
Commercial Buildings	55
Concert Halls, Recording and TV Studios	30
Auditoriums and Music Rooms	35
Churches and Theaters	40
Hospital Sleeping Rooms	45
Schools and Libraries	45

TABLE 4 – NOISE EMISSION LIMITS FOR CONSTRUCTION EQUIPMENT USED DURING NIGHTTIME HOURS; MEASURED AT 50 FEET FROM CONSTRUCTION EQUIPMENT (1)

Equipment Description	L _{max} Noise Limit at 50 ft, dB Slow
Auger Drill Rig	85
Backhoe	80
Boom Truck	88
Chain Saw	85
Clam Shovel	93
Compactor (ground)	80
Compressor (air)	80
Concrete Mixer Truck	85
Concrete Pump Truck	82
Concrete Saw	90
Crane (mobile or stationary)	85
Dozer	85
Dump Truck	84
Excavator	85
Flat Bed Truck	84

Fork Lift	80
Front End Loader	80
Generator (25 KVA or less)	70
Generator (more than 25 KVA)	82
Gradall	85
Horizontal Boring Hydraulic Jack	80
Jackhammer	85
Mounted Impact Hammer	90
Paver	85
Pickup Truck	55
Pneumatic Tools	85
Pumps	77
Scraper	85
Tie Back Drill Rig	85
Vacuum Excavator (Vac Truck)	85
Vacuum Street Sweeper	80
Vibratory Roller	74
Welder	73

TABLE 5 – NOISE SENSITIVE LOCATIONS

Construction Site	Site ID	Noise Sensitive Location
Westwood/UCLA Station	A	1122 Gayley Avenue Apartments
	B	Apartments east of Midvale Avenue
	C	Apartments between Veteran and Midvale Avenues
Westwood/ VA Hospital	D	VA West Los Angeles Medical Center
	F	VA Support and Logistics buildings 90, 91 and 517 (single-family residences)
	G	VA Support and Logistics buildings 307 thru 312, 14, 23, 522 and 318 (single family residences)
	H	VA medical buildings 304 and 507
	I	VA medical buildings 400 and 401
Army Reserve Site	J	Apartments on the west side of Federal Ave
	K	3rd row apartments on the west side of Barry Ave
	L	2nd row apartments on the east side of Barry Ave
	M	2nd row apartments on the east side of Barry Ave, north of Wilshire Blvd
	N	3rd row apartments on Kiowa Ave, within line of site of the construction zone down San Vincente Blvd,

TABLE 6 – NOISE SENSITIVE LOCATIONS ABOVE UNDERGROUND TUNNELING

1833 to 1900 Fox Hill Dr.	SFR
1825 and 1830 Fox Hills Dr.	MFR
10307 to 10317 Missouri Ave.	MFR
10330 Santa Monica Blvd.	MFR
10360 to 10379 Eastborne Ave.	SFR
1617 Beverly Glen Blvd.	MFR
1608 and 1616 Pandora Ave.	SFR
1622 and 1636 Beverly Glen	MFR
1604 Pandora Ave.	SFR
10442 to 10451 Kinnard Ave.	SFR
10458 to 10479 Wilkins Ave.	SFR
1440 to 1441 Warner Ave.	SFR
1418 to 1500 Thayer Ave.	SFR
10511 to 10521 Rochester Ave.	SFR
10538 to 10551 Wellworth Ave.	SFR
1251 Fairburn Ave.	SFR
10584 to 10601 Ashton Ave.	SFR
1230 Westholme Ave.	MFR
10600 to 10800 Wilshire Blvd.	MFR
10801 Wilshire Blvd	Church
10833 Wilshire Blvd	MFR
10822 Wilshire Blvd	Church
Various Hadley Ct	SFR
11301 Wilshire Blvd	HOS
SFR – Single-family residence MFR – Multi-family residence HOS - Hospital	

**TABLE 7 – PRELIMINARY NOISE PROJECTIONS
 (REFER TO DRAWING PREPARED ACCORDING TO REQUIREMENTS OF THIS SECTION.)**

Activity	Typical Expected Leq Levels at 50 ft from Construction Equipment, with No Noise Control Measures (dBA)

TABLE 8 – ADJUSTMENTS FOR CLOSE-IN EQUIPMENT NOISE MEASUREMENTS

Measurement Values to be Subtracted from Measured Sound	
Distance (Feet)	Level to Estimate Sound Level at 50 Feet (dBA)
19-21	8
22-23	7
24-26	6
27-29	5
30-33	4
34-37	3
38-42	2
43-47	1
48-50	0

TABLE 9 – CONSTRUCTION VIBRATION LIMITS FOR ANNOYANCE

Vibration Type	Permissible Aggregate Duration	Vibration Limit (peak particle velocity (PPV))	Vibration Limit (VdB re 10 ⁻⁶ in/sec)
Sustained	>1 hour/day	0.01 in/sec	80
Transient	<1 hour/day	0.03	90
Transient	<10 minutes/day	0.10	100

TABLE 10 – CONSTRUCTION VIBRATION LIMITS FOR DAMAGE RISK TO BUILDINGS

Building Category	Allowable Peak Vibration (peak particle velocity (PPV) in/sec)	
I. Reinforced-concrete, steel or timber (no plaster)	0.50	
II. Engineered concrete and masonry (no plaster)	0.30	
III. Non-engineered timber and masonry buildings	0.20	
IV. Buildings extremely susceptible to vibration damage	0.12	

TABLE 11 – VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT(1)

Equipment	Peak Vibration at 25 ft (peak particle velocity (PPV) in/sec)	Approximate RMS Vibration at 25 ft (VdB re 10 ⁻⁶ in/sec)
Pile Driver (impact)	0.644 – 1.518	104 - 112
Pile Driver (sonic/vibratory)	0.170 – 0.734	93 - 105
Clam Shovel Drop (slurry wall)	0.202	94
Hydromill (slurry wall)	Soil 0.008 Rock 0.017	66 75
Vibratory Roller Compactor	0.210	94
Hoe Ram	0.089 – 0.19	87 - 94
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58
Tunnel Boring Machine (2)	0.055 AT 33 ft	83 AT 33 ft
Tunnel Train (2)	0.050 AT 50 ft	82 AT 50 ft
Notes: (1) This source data is preliminary in nature and it is up to the Contractor to verify and update information during construction (and, where possible, before construction). (2) For underground sources, use the slant distance determined by calculating the hypotenuse of the triangle formed by the depth between the building and top-of-rail and the horizontal (plan) distance between the building and top-of-rail.		

TABLE 12 – CORRECTION FACTORS FOR VIBRATION CALCULATIONS

Vibration	Correction Factors (dB)
Vibration (VdB) to groundborne noise (dBA)	-20dBA
Building coupling and path to sensitive space	4-stories or greater: -7 dB

FIGURE 1
QUARTERLY NOISE CONTROL PLAN FORM - PART B

QUARTERLY NOISE CONTROL PLAN (DUPLICATE AS NEEDED)

Contract No.: _____ Contract Name: _____

Contractor: _____ Site: _____

Date: _____ Land Use: _____

Resubmit every 3 months.

PART B: RESIDENTIAL, COMMERCIAL AND INDUSTRIAL PROPERTY NOISE LEVELS

	Calculated Noise Levels (dBA)*	
	Calculated one hour Leq (dBA)	Calculated Lmax (dBA)
Nighttime		

NOISE ABATEMENT MEASURES

ANTICIPATED EFFECTS

CALCULATIONS: Attach additional sheet(s) as needed.

Contract No(s): _____

FIGURE 2. NOISE MEASUREMENTS REPORT FORM

Date: _____

Time: _____

NOISE MEASUREMENTS REPORT FORM

Measured By: _____ Of: _____
(Company)

Monitoring Address: _____
(Provide Sketch on Back)

Location No: _____ Wind Speed: _____ Km/Hr Direction: _____
(MPH x 1.6)

Location of Sound Level Meter: (No closer than 15 meters from equipment and 3 meters from building)

Monitoring was Conducted: _____ Meters from Equipment (_____)
(Type(s): Leave Blank for Baseline)

Land Use: Residential/Institutional Business/Recreational Industrial

Sound Level Meter: Make and Model: _____ A - Weighted Sound Level (Slow)
 C - Weighted Sound Level (Fast)

Duration of Measurement: _____
(15 minutes to 1 hour)

Calibration		Field Notes (example: 2200-2205 H, Airplane 90 dB)
one-hour Leq		
L ₅₀		
L ₁₀		
L _{1.0}		
MAX _L		
Allowable Noise Limit		

Check one of the following:

Ongoing Construction Post-Construction: _____ Baseline Conditions
(Contract)

(Complete all that apply below)

Active Contract(s): _____
(List all contracts that contribute to measured noise)

Complaint Response: _____
(Describe: Include Log-In Number)

Abatement Follow-up: _____
(Describe)

FIGURE 3

EQUIPMENT NOISE LEVEL DATA REPORTING FORM

APPLICATION FOR CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: _____

Contract Name & Number: _____

Equipment Type: _____

Manufacturer & Model Number: _____

Identification Number: _____

Rated Power & Capacity: _____

Operating Condition During Test: _____

Measured Sound Levels at 20 to 50 feet:

Measured Values and Distance:

Right Side: _____ dBA (SLOW), at _____ feet

Left Side: _____ dBA (SLOW), at _____ feet

Estimated Values at 50-Foot Distance:

Right Side: _____ dBA (SLOW).

Left Side: _____ dBA (SLOW).

Maximum Values Allowed for this Equipment: _____ dBA (SLOW) at 50 feet.

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

Name, Address & Phone No. _____
of Acoustical Engineer _____

Authorized Signature: _____ Date: _____

CONTRACTOR'S APPROVAL: _____ Date: _____

Authorized Signature: _____ Date: _____

ENGINEER'S CONCURRENCE: _____ Date: _____

Authorized Signature: _____ Date: _____

SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Eliminating or minimizing air, soil and water pollution generated by construction activities.
- B. Complying with legal requirements applicable to Contractor Generated Hazardous Wastes, including preparation and implementation of Contractor Generated Hazardous Waste Management Plan.
- C. Designating a qualified staff member as Pollution Control Representative.

1.02 RELATED SECTIONS

- A. Section 01 33 00 Submittal Procedures
- B. Section 01 35 35 Water Pollution Control (Construction SWPPP)
- C. Section 01 43 10 Project Quality Program Requirements - Design/Build
- D. Section 01 50 00 Temporary Facilities and Controls
- E. Section 01 51 23 Temporary Construction Ventilation

1.03 REFERENCES

- A. Standard Specifications for Public Works Construction (SSPWC)
 - 1. Green Book Standard Specifications for Public Works Construction, Latest Edition adopted by City of Los Angeles Board of Public Works (LABPW).
- B. City of Los Angeles, Department of Public Works
 - 1. Brown Book Latest Additions and Amendments to the Green Book.
- C. County of Los Angeles, Department of Public Works
 - 1. Gray Book Latest Additions and Amendments to the Green Book.
- D. Metro has prepared an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Mitigation measures from these documents are incorporated into these specifications where applicable.
- E. South Coast Air Quality Management District (SCAQMD) rules and regulations.

1.04 QUALITY ASSURANCE

- A. Comply with requirements of Section 01 43 10, Project Quality Program Requirements – Design/Build.

1.05 SUBMITTALS

- A. Refer to Section 01 33 00, Submittal Procedures.
- B. Pre-Construction
 - 1. Contractor-Generated Hazardous Waste (CGHW) Management Plan: Required to be submitted within 90 days after the Notice to Proceed (NTP) with required documents or 30 days prior to commencement of field activities.
 - 2. Fugitive Dust Emissions Control Plan: Required within 90 days after the NTP or 30 days prior to commencement of field activities. Submittal of the Fugitive Dust Emissions Control Plan for Metro is independent of any SCAQMD requirement for a Fugitive Dust Emissions Control Plan under SCAQMD Rule 403 or other applicable Rule.
 - 3. Rule 1166 Plan for VOC impacted soils to be submitted and approved by SCAQMD prior to earth moving activities in known impacted areas.
 - 4. Air Scrubber product and operational data.
- C. During Construction
 - 1. Fugitive dust emissions and control measures monthly reports.

1.06 DEFINITIONS

- A. Contractor-Generated Hazardous Waste: Hazardous Waste and Solid Waste generated, released or discharged by the Contractor or the Contractor's agents, Subcontractors, or Suppliers, or by their respective employees not related to Hazardous Waste and Hazardous Materials scope that is defined as part of the Project.
- B. Contractor-Generated Hazardous Waste (CGHW) Management Plan: A written waste management plan properly governing CGHW prepared and implemented in accordance with Title 22, Division 4.5, California Code of Regulations, and other applicable laws and regulations.

1.07 WORKSITE CONDITIONS

- A. Contractor shall delegate environmental control, pollution monitoring and record keeping requirements to Contractor's Safety Engineer, Contractor's Environmental Manager, or most appropriate personnel.

PART 2 - PRODUCTS

2.01 POLLUTION CONTROL

- A. Provide products required for Work in accordance with Standard Specifications for Public Works Construction (SSPWC) latest edition and as specified herein.
- B. Scrubbers: Comply with Section 01 51 23, Temporary Construction Ventilation.

PART 3 - EXECUTION

3.01 AIR POLLUTION CONTROLS

- A. Comply with the SSPWC Greenbook, Section 7-8.2, Air Pollution Control.
- B. Criteria for Fugitive Dust: Detailed descriptions and explanations of specific fugitive dust control measures are contained in South Coast Air Quality Management District (SCAQMD) Rules and Regulations (Rule 403, Fugitive Dust; Rule 1186, PM₁₀ Emissions from Paved and Unpaved Roads). Key features of Rule 403 are described below. The language of the most current version of Rule 403 and its Implementation Handbook governs unless indicated. Obtain permits or plans as required by the SCAQMD for air pollution controls. Prepare a Dust Control Monitoring Plan that includes the following:
 - 1. Designate a staff member knowledgeable in environmental matters as the Air Pollution Control representative. The representative shall be responsible for ensuring compliance with the Fugitive Dust Emissions Control Plan, its preparation, submittal, implementation, monitoring, and record keeping.
 - 2. Do not cause or allow emissions of fugitive dust from transport, handling, construction or storage activity to remain visible in atmosphere beyond the construction staging area of the emission source.
 - 3. Take precautions to minimize fugitive dust emissions from operations involving demolition, excavation, grading, and clearing of land and disposal of solid waste. Utilize one or more of the applicable Best Available Control Measures (BACM) for each potential source of fugitive dust listed in Table 1 of Rule 403.
 - 4. Do not cause or allow particulate matter to exceed 50 µg/m³ when determined as the difference between simultaneous upwind and downwind samples, collected on high volume particulate matter samplers or other EPA approved equivalent method, for PM-10 monitoring at the property line for a five hour period during the time of active operations. The decision to conduct sampling will be made and performed by the SCAQMD. Contractor is responsible for payment of the Ambient Air Analysis fees, at no additional cost to Metro, imposed by SCAQMD under Rule 304.1.
 - 5. Prevent, or remove within one hour, the track-out of bulk material onto public paved roadways, as a result of Contractor's operation, or utilize at least one of the control measures listed in Table 3 of Rule 403 and prevent the track-out of bulk material onto public paved roadways, and remove such material at any time track-out extends for more than 50 feet onto any paved public road, and

remove all visible roadway dust tracked-out upon public paved roadways at the end of each Work day when active operations cease.

- C. Use the following procedures and techniques at a minimum:
1. Trucks transporting soil, sand, other excavated, or backfill materials to or from the sites shall be covered with a tarpaulin from the point of origin to the point of unloading. Secure firmly or remove loose tarpaulin material from such loads before leaving Worksite.
 - a. For trucks hauling wet materials, use only dump bodies that do not allow wet material to leak out during travel (e.g. no bottom dump haulers). Use end dump bodies with tail gates that seal.
 2. Remove visible roadway dust tracked-out upon public sidewalks at the conclusion of each shift. If necessary, water down and sweep streets around and near to the site that have heavy volumes of construction vehicles carrying debris and excavated materials, and adjacent sidewalks.
 3. If conveyors are used, enclose conveyors and cover transfer points along conveyor system. Minimize drop height to the stockpile. Provide a sprinkler system at stockpiles and apply water to soils to retard dust development as required. This process does not include the slurry separation system (if used).
 4. Install wheel/undercarriage-washing equipment, or a functional equivalent, at tunnel excavations as the first method by which to ensure that haul trucks have clean wheels and undercarriages before entering public roadways.
 5. Incorporate adapted measures developed by SCAQMD on Best Available Control Measures (BACM) for Fugitive Dust and Rule 403 into the site operations for Fugitive Dust Control.
 6. Water down construction sites according to SCAQMD Rule 403, as required to suppress dust, during grading, handling of excavation soil or debris, or during demolition.
 7. Establish regular cycles and locations for cleaning trucks that haul soil from site.
- D. Burning of wastes is prohibited. Remove scrap and waste material and dispose of in accordance with laws, codes, regulations, ordinances and permits.
- E. Use construction equipment designed and equipped to prevent or control air pollution in conformance with most restrictive regulations of EPA, State and local authorities. Maintain evidence of such design and equipment and make available for inspection by Metro.
- F. Establish and maintain records of a routine maintenance program for internal combustion engine powered vehicles and equipment used on Project. Keep records available for inspection by Metro.

- G. Implement Fugitive Dust Measures listed in tables 1 and 2 of SCAQMD Rule 403 and perform record keeping in accordance with Sections (e)(1) of said rule. Make records available to Metro for inspection.
- H. Apply Best Available Control Technology (BACT) method or use alternative forms of bentonite such as pellets, granules, or biodegradable gel. If bentonite is used in a powder form, implement measures to ensure that PM10 emissions do not exceed permissible levels. Additional measures may include:
 - 1. Bulk Transport: transport bentonite by pneumatic means or enclosed trucks;
 - 2. Enclosed Handling and Storage: unload bentonite pneumatically or by enclosed conveyors and chutes. Store bentonite in enclosed containers or silos with fabric filters.
 - 3. Enclosed Slurry Batch Mixing: Use a mixer that is equipped with a pneumatic loader and a fabric filter or a mixer in an enclosed structure equipped with fabric filters at ventilation openings.
- I. Criteria for VOC Contaminated Excavated Soils: Detailed descriptions and explanations of control measures are contained in SCAQMD Rule 1166. Contractor shall follow procedures outlined in Rule 1166, for Project specific permit application.
- J. Perform Odor Control. Use odor suppressants on stockpiles or other approved methods.

3.02 WATER POLLUTION CONTROLS

- A. Refer to Section 01 35 35, Water Pollution Control.

3.03 STORMWATER POLLUTION PREVENTION PLAN

- A. Refer to Section 01 35 35, Water Pollution Control.

3.04 HAZARDOUS WASTE CONTROLS

- A. This Section applies to Contractor-Generated Hazardous Waste (CGHW).
- B. Contractor-Generated Hazardous Waste Management Plan: Prepare and implement a CGHW Plan in accordance with Title 22, Division 4.5, CCR, and applicable laws and regulations. Metro has the right to enforce Quality Assurance/Quality Control monitoring on Contractor's implementation of CGHW Plan.
- C. Waste Classification: In the event that Contractor or Metro reasonably suspects that Contractor has generated, released or discharged Contractor-Generated Hazardous Waste, bear costs of sampling and monitoring tests and other investigations to determine whether said waste is Solid Waste or Hazardous Waste in accordance with federal, state and local requirements, including without limitation, RCRA and Title 22, CCR Chapter 30, Article II (as amended, modified or replaced from time to time). Metro reserves the right (but not the obligation) to perform its own physical and chemical analyses and tests on suspected CGHW. Furnish samples and test results, at Contractor's cost, as directed by Metro.

- D. Disposal Regulations: Be responsible for the management, abatement, removal, remediation, clean up, loading, transport, unloading, reuse, recycling, storage and disposal of CGHW in accordance with laws, rules, regulations and orders, including without limitation, Title 22, Chapter 30 et seq California Code of Regulations, California Health and Safety Code Section 25100 et. seq, Titles 23 and 26, California Code of Regulations, and regulations of the waste disposal facility to be used.
- E. Haul Routes: Haul routes for transporting solid or Hazardous Wastes are subject to the approval of County of Los Angeles, City of Los Angeles, Caltrans, or other agency having jurisdiction over the transportation of such materials. Post copy of haul route permit at Worksite. Sweep access points and surrounding areas as needed, no less than 3 times daily.
- F. Street Sweeping: Have available, on site, at all times an operable standard size street sweeper capable of operating efficiently within the traffic conditions, and that complies with all applicable environmental standards. All public streets, including but not limited to private driveways and parking areas, impacted by construction vehicle traffic and construction activities, shall be kept clean of all track-out debris and dust build up at all times. Contractor shall monitor all areas, on a continuous basis, that are affected by the work or haul activities and take immediate action to correct any deficiencies. This shall include but not be limited to monitoring and cleaning, as required by Metro, County of Los Angeles, City of Los Angeles, Caltrans, and any other agencies having jurisdiction, in and around all staging sites, work areas, and haul routes.

END OF SECTION 01 57 19

Table of Contents

SECTION NUMBER	SECTION TITLE	Amendment 6	Amendment 7	Amendment 10	Amendment 12
DIVISION 01	GENERAL REQUIREMENTS				
01 11 00	SUMMARY OF WORK	REVISED	REVISED	REVISED	REVISED
01 11 01	PROJECT DESIGN-BUILD REQUIREMENTS	REVISED	REVISED	REVISED	REVISED
01 12 19	METRO (OWNER) – FURNISHED MATERIAL AND EQUIPMENT INTERFACE	REVISED	REVISED		
01 14 05	METRO - DIRECTED STOPPAGES				
01 20 00	PRICE AND PAYMENT PROCEDURES				
01 29 73	SCHEDULE OF VALUES				
01 29 76	COST/SCHEDULE INTEGRATION SYSTEM	REVISED	REVISED	REVISED	
01 31 03	DESIGN MANAGEMENT REQUIREMENTS	REVISED	REVISED		REVISED
01 31 19	PROJECT MEETINGS				
01 31 28	BUILDING INFORMATION MODEL				
01 31 30	INTERFACE WITH OTHER JURISDICTIONS	REVISED	REVISED		REVISED
01 31 31	UTILITY COORDINATION		REVISED	REVISED	
01 32 23	GRADES, LINES AND LEVELS				REVISED
01 32 33	PHOTOGRAPHIC DOCUMENTATION				
01 33 00	SUBMITTAL PROCEDURES	REVISED	REVISED		
01 35 14	OPERATING SYSTEM INTERFACE				
01 35 23	WORKSITE SAFETY REQUIREMENTS				
01 35 29	HEALTH, SAFETY AND EMERGENCY RESPONSE FOR CONTAMINATED AND HAZARDOUS SITES				
01 35 35	WATER POLLUTION CONTROL	REVISED			REVISED
01 35 43	ENVIRONMENTAL PROCEDURES FOR CONTAMINATED AND HAZARDOUS MATERIALS				
01 35 44	ENVIRONMENTAL MITIGATION AND MONITORING				
01 35 53	WORKSITE SECURITY REQUIREMENTS				
01 35 63	SUSTAINABILITY PLAN	REPLACED			
01 35 66	GREEN CONSTRUCTION POLICY SPECIFICATIONS	REPLACED			
01 35 69	LEAD RELATED CONSTRUCTION WORK				REVISED
01 35 70	ASBESTOS RELATED CONSTRUCTION WORK				REVISED
01 35 80	ARCHAEOLOGICAL AND PALEONTOLOGICAL COORDINATION				
01 35 95	PUBLIC INFORMATION AND COMMUNITY RELATIONS				

WESTSIDE PURPLE LINE EXTENSION PROJECT

Amendment 12: 05.25.2018

Amendment 10: 04.20.2018

Amendment 7: 03.02.2018

Amendment 6: 01.26.2018

Issued for Solicitation: 09.15.2017

Table of Contents

SECTION NUMBER	SECTION TITLE	Amendment 6	Amendment 7	Amendment 10	Amendment 12
01 43 10	PROJECT QUALITY PROGRAM REQUIREMENTS – DESIGN/BUILD				
01 43 38	FIELD SAMPLES AND MOCK-UPS				
01 45 20	GENERAL MATERIALS TESTING PROGRAM REQUIREMENTS				REVISED
01 50 00	TEMPORARY FACILITIES AND CONTROLS	REVISED			REVISED
01 51 23	TEMPORARY CONSTRUCTION VENTILATION	REVISED			
01 52 13	CONSTRUCTION FACILITIES				REVISED
01 53 05	TEMPORARY DECKING SYSTEMS				
01 55 13	TEMPORARY ACCESS ROADS AND PARKING AREAS				
01 55 26	CONTROLLING TRAFFIC				
01 56 18	OPERATIONAL TRAIN NOISE AND VIBRATION CONTROL				
01 56 19	CONSTRUCTION NOISE AND VIBRATION CONTROL		REVISED		REVISED
01 56 20	ACOUSTICS, NOISE AND VIBRATION CONTROL FOR STATION ENVIRONMENT		REVISED		
01 56 23	TEMPORARY BARRIERS	REVISED			
01 56 26	CONSTRUCTION FENCING (WOOD)	REVISED			
01 56 28	CONSTRUCTION FENCING (CHAIN LINK)	REVISED			
01 56 39	SHRUB AND TREE PROTECTION	REVISED	REVISED		REVISED
01 57 13	TEMPORARY EROSION AND SEDIMENTATION CONTROLS				
01 57 19	TEMPORARY ENVIRONMENTAL CONTROLS	REVISED			
01 58 13A	TEMPORARY SIGNS AND BANNERS				REVISED
01 66 00	PRODUCT STORAGE AND HANDLING REQUIREMENTS				
01 71 13	MOBILIZATION				
01 71 24	PRECONSTRUCTION SURVEYS	REVISED	REVISED		REVISED
01 71 43	PERMITS, LICENSES, AND AGREEMENTS	REVISED	REVISED		REVISED
01 71 45	NEW UTILITY SERVICES				
01 74 00	CLEANING				
01 74 19	WASTE MANAGEMENT AND DISPOSAL				
01 78 23	OPERATION AND MAINTENANCE DATA				
01 78 39	AS-BUILT DRAWINGS AND CURRENT STATUS DOCUMENTS				
01 78 43	SPARE PARTS, ILLUSTRATED PARTS CATALOG, AND REPLACEMENT MATERIALS				
01 78 55	SAFETY AND SECURITY CERTIFICATION				

WESTSIDE PURPLE LINE EXTENSION PROJECT

Amendment 12: 05.25.2018

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Amendment 7: 03.02.2018

Amendment 6: 01.26.2018

Issued for Solicitation: 09.15.2017

Table of Contents

SECTION NUMBER	SECTION TITLE	Amendment 6	Amendment 7	Amendment 10	Amendment 12
01 79 00	DEMONSTRATION AND TRAINING			REVISED	
01 81 14	SUSTAINABLE DESIGN AND CONSTRUCTION REQUIREMENTS	REPLACED and RENUMBERED			
01 91 13	PROJECT INTEGRATION/COMMISSIONING				

WESTSIDE PURPLE LINE EXTENSION PROJECT

Amendment 12: 05.25.2018
 Amendment 10: 04.20.2018
 Amendment 7: 03.02.2018
 Amendment 6: 01.26.2018
 Issued for Solicitation: 09.15.2017

SECTION 01 56 19

CONSTRUCTION NOISE AND VIBRATION CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Eliminating or minimizing noise and vibration generated by construction activities, and complying with applicable noise regulations, specification requirements, and noise and vibration limits specified within this Section.
- B. Metro has prepared a Final Environmental Impact Statement/Final Environmental Impact Report for the Westside Subway Extension, with supporting technical reports on noise and vibration, which describe impacts the Project will have on the environment and indicates measures Metro has agreed to implement. See 01 35 44 Environmental Mitigation and Monitoring.
- C. Metro is pursuing an initial variance from The City of Los Angeles Board of Police Commissioners for nighttime and weekend construction for this Contract. See 01 71 43 Permits, Licenses and Agreements. The variance would allow the Contractor to schedule Work at night and weekends subject to the provisions of the variance to Section 41.40 of the Los Angeles Municipal Code. The variance could be withdrawn if the LA Police Commission receives complaints and or if the construction noise levels exceed the ambient noise level on the premise of any occupied property by more than five decibels from 9:00 PM to 7:00 AM Monday through Friday, from 9:00 PM Friday to 8:00 AM Saturday, from 6:00PM Saturday to 8:00 AM Sunday and all day Sunday as well as from 6:00 PM Sunday to 7:00 AM Monday.
- D. Use equipment with effective noise-suppression devices and employ other noise control measures such as enclosures and barriers necessary to protect the public. Schedule and conduct operations in a manner that will minimize, to the greatest extent feasible, the disturbance to the public in areas adjacent to the construction activities and to occupants of buildings in the vicinity of the construction activities.
- E. Submit a Noise Control Plan and a Noise Monitoring Plan, as specified in this Section. Both plans shall be prepared by an Acoustical Engineer meeting the qualifications specified in this Section. Do not operate noise generating construction equipment at the construction site prior to acceptance of the Noise Control and Monitoring Plans. Update Noise Control Plan every three months and prior to a change in construction activity involving noise emitting equipment.
- F. Compliance with the requirements of this Section may require the use of equipment with special exhaust silencers and/or noise attenuating enclosures, and construction of temporary enclosures or noise barriers around activities.
- G. Use haul routes and staging areas, as approved by Metro and the City of Los Angeles or the County of Los Angles to minimize noise at residential and other sensitive receiver sites.
- H. Do not operate trucks on residentially zoned streets except for access to laydown yards.

- I. Metro will monitor Contractor's performance of tasks specified, and will inspect necessary records, reports and procedures.
- J. Contractor staff members shall be trained by and work with the Acoustical Engineer specified in this Section to conduct measurements and manage noise and vibration control.
- K. Contractor will coordinate with Metro on communicating with the noise sensitive locations listed in Table 1, Table 2, Table 3 and others that may arise during the life of the project regarding noise and vibration monitoring, schedule of construction activities where activities may affect these locations, and implementing mitigation measures to reduce noise and vibration.

1.02 RELATED SECTIONS

- A. Section 01 31 30 Interface with Other Jurisdictions
- B. Section 01 33 00 Submittal Procedures
- C. Section 01 35 23 Worksite Safety Requirements
- D. Section 01 35 44 Environmental Mitigation and Monitoring
- E. Section 01 35 53 Worksite Security Requirements
- F. Section 01 43 10 Project Quality Program Requirements - Design/Build
- G. Section 01 51 23 Temporary Construction Ventilation
- H. Section 01 56 26 Construction Fencing (Wood)
- I. Section 01 56 28 Construction Fencing (Chain Link)
- J. Section 01 58 13 A Temporary Signs and Banners

1.03 REFERENCES

- A. California Code of Regulations (CCR), Title 24
- B. California Health and Safety Code (CHSC)
- C. City of Los Angeles Building Code, Chapter XI, Los Angeles Noise Ordinance
- D. County of Los Angeles Municipal Code
- E. American National Standards Institute (ANSI):
 - 1. ANSI S1.4 - Specification for Sound Level Meters
 - 2. ANSI S1.10 - Methods for the calibration of microphones
 - 3. ANSI S2.4 - Method for Specifying the Characteristics of Auxiliary Analog Equipment for Shock and Vibration Measurements

- F. ASTM International (ASTM):
 - 1. ASTM C423 - Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
 - 2. ASTM E90 - Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
 - 3. ASTM E413 - Classification for Rating Sound Insulation
- G. International Electrotechnical Commission (IEC):
 - 1. IEC 61672 - Electroacoustics Sound Level Meters
 - 2. IEC 179 - Precision Sound Level Meters
- H. Occupational Safety and Health Act (OSHA) regulations (CCR Title 8)
- I. Society of Automotive Engineers (SAE):
 - 1. SAE J88 - Sound Measurement Off-Road Work Machines - Exterior
 - 2. SAE J366 - Exterior Sound Level for Heavy Trucks and Buses
 - 3. SAE J994 - Alarm- Backup- Electric Laboratory Performance Testing
- J. International Organization for Standardization (ISO):
 - 1. ISO 9533 - Earth-moving machinery. Machine-mounted audible travel alarms and forward horns – Test methods and performance criteria.
- K. U.S. Department of Transportation, Federal Highway Administration (FHWA):
 - 1. Special Report Highway Construction Notes: Measurement, Prediction, and Mitigation. (March, 1977)
- L. U.S. Department of Transportation, Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06, May 2006
- M. U.S. Environmental Protection Agency (EPA):
 - 1. EPA Report NTID 300.1 – Notice from Construction Equipment and Operations, Building Equipment, and Home Appliances. (1972)

1.04 QUALITY ASSURANCE

- A. Comply with requirements of Section 01 43 10, Project Quality Program Requirements – Design/Build.
- B. Licensed Professionals - Employ California registered professional engineer regularly engaged in design of temporary and permanent barrier's and noise mitigation systems of a similar nature to those specified.
- C. Acoustical Engineer Qualifications

1. The minimum requirements for the Acoustical Engineer: Bachelor of Science Degree or higher degree, from a qualified program in engineering, physics, or architecture offered by an accredited university or college, and ten years' experience in noise and vibration control engineering and noise and vibration analysis, or current enrollment as a full Member or Board-certified Member in the Institute of Noise Control Engineering.
2. Acoustical Engineer must demonstrate substantial and responsible experience in preparing and implementing construction noise and vibration control plans and monitoring plans on construction projects conducted in an urban setting and in calculating construction noise and vibration abatement measures.
3. Acoustical Engineer
 - a. Station Design- - Demonstrate substantial and responsible experience in designing and overseeing the implementation of vibration abatement measures in station environment, public address system design, noise control of ancillary and emergency fan ventilation systems, as well as demonstrate substantial and responsible experience in designing and testing rail vibration isolation systems.
 - b. Construction - Demonstrate substantial and responsible experience in preparing and implementing construction noise control and monitoring plans on construction projects conducted in an urban setting, and in calculating construction noise abatement measures.

1.05 SUBMITTALS

- A. Refer to Section 01 33 00, Submittal Procedures.
- B. Pre-Construction
 1. Qualifications and work experience of the Acoustical Engineer as specified in Paragraph 1.04.C of this Section. This submittal is required prior to the submittal of the Noise Control and Noise Monitoring Plans.
 2. Contractor's Noise Control Plan 90 days prior to starting work.
 3. Contractor's Noise Monitoring Plan 60 days prior to starting work inclusive of:
 - a. Proposed locations for pre-construction ambient noise and vibration measurements at all work sites.
 4. Contractor's Vibration Control Plans 90 days prior to starting work and Vibration Monitoring Plan 60 days prior to starting work.
 5. Pre-construction ambient noise level measurement report.
6. Pre-construction vibration measurement report.
7. Material Safety Data Sheets (MSDS): Manufacturer's Material Safety Data Sheets for each type of material used in Work.

8. Noise measurement equipment makes and models, and calibration conformance certificates as specified in this Section.
 9. Equipment noise certification reports as specified in this Section.
 10. Shop and Working Drawings, computations, material data and other criteria, for noise abatement measures, identified in the Noise Control Plan and for moveable noise barriers, noise barrier walls and noise control curtains as specified in this Section. Have drawings and computations stamped by a License Professional Engineer registered in the State of California.
- C. **During Construction**
1. **Weekly Noise Measurement Reports.**
 2. **Weekly Vibration Measurement Reports.**

1.06 DEFINITIONS

- A. Construction Site: For purpose of noise and vibration control requirements, the Contract limits of construction. This includes Right-of-Way lines, property lines, construction Easement Boundary or property lines and Contractor staging areas outside the defined boundary lines, used expressly for construction.
- B. Noise Level Measurements: Unless otherwise indicated, the use of A-weighted and "slow" response settings of instrument complying with Type 2 requirements of latest revision of ANSI S1.4 and IEC 61672.
- C. Pre-construction ambient noise levels: Existing noise levels measured 3 feet from the building face of the noise sensitive receivers so named herein.
- D. A-Weighted Noise Levels: Decibels (referenced to 20 micro-Pascal) as measured with A-weighting network of standard sound level meter, abbreviated dBA.
- E. C-Weighted Noise Level: Decibels (referenced to 20 micro-Pascal) as measured using the C-weighting network on a sound level meter complying with the criteria for a Type 1 (Precision) or Type 2 (General Purpose Sound Level Meter), as defined in the current revision of ANSI S1.4. Use the FAST setting on the sound level meter to measure the C-weighted sound level.
- F. Vibration Measurements: The use of a vibration transducer, amplifier, peak detector, and frequency band filters complying with ANSI S2.4.
- G. Vibration: Velocity in microinches per second. Vibration levels are expressed as velocity levels in Decibels referenced to one microinch per second, abbreviated VdB.
- H. Daytime: As defined by the City of Los Angeles - 7:00 AM to 9:00 PM Monday through Friday local time, and Saturdays, 8:00 AM to 6:00 PM. As defined by the County of Los Angeles - 7:00 AM to 8:00 PM Monday through Friday and Saturdays.
- I. Nighttime: Periods other than daytime.

- J. Noise Sensitive Locations: Residential areas, institutions, hospitals, parks, and other locations so named herein.
- K. L_{max} : The maximum measured sound level.
- L. One-hour L_{eq} A weighted Equivalent Sound Level (L_{eq}): The continuous sound level that represents the same sound energy as the varying sound levels over one hour.
- M. Sound Transmission Class (STC): A single number rating calculated in accordance with ASTM E413, using values of sound transmission loss. It provides an estimate of the performance of a partition in certain common sound insulation problems.
- N. Stationary/Continuous Noise: Daytime noise from stationary sources, and parked mobile sources that produce repetitive or long-term noise lasting more than two hours.
- O. Mobile/Intermittent Noise: Daytime noise from non-stationary mobile equipment operated by a driver, or from source of intermittent, non-recurring on long-term basis, non-scheduled, non-repetitive, short-term noises (not lasting more than two hours).

1.07 RESPONSIBILITIES OF CONTRACTOR

- A. Perform Work within the permissible noise levels, work schedule limitations, and procedures provided for in this Section and applicable Federal, state, county and municipal codes, regulations, and standards.
- B. Other than those provided herein, be responsible for obtaining, at Contractor's own expense, permits, variances, equipment certifications, and other documents required by this Section and by applicable Federal, state, county and municipal codes, regulations and standards.
- C. With regard to noise monitoring, include the following:
 - 1. Furnish instrumentation for noise monitoring that complies with the standards specified in this Section and that is capable of measuring the sound levels defined in this Section.
 - 2. Collect and report noise monitoring data, report whether the noise monitoring data indicates compliance as specified in this Section, and submit a Noise Measurement Report to Metro on a weekly basis. Noise monitoring that is not conducted at the façade of the noise sensitive receiver should be adjusted accordingly.
 - 3. Metro shall be provided access to review measured data and coordinate the Contractor's schedule for noise monitoring.
 - 4. Implement noise abatement measures as required by this Section, based on the Contractor's noise monitoring data and nuisance conditions reported by Metro.
- D. With regard to vibration monitoring, include the following:

1. Furnish instrumentation for vibration monitoring that complies with the standards specified in Paragraph 1.03.E and 1.03.G of this Section and that is capable of measuring the vibration levels defined in Paragraph 3.07.B of this Section
 2. Collect and report vibration monitoring data, report whether the vibration monitoring data indicates compliance as specified in this Section, and submit a Vibration Measurement Report to Metro on a weekly basis.
- E. Metro shall be provided access to review measured data and coordinate with the Contractor's schedule for vibration monitoring schedules.
- F. Implement vibration abatement measures as required by this Section, based on the Contractor's vibration monitoring data and nuisance conditions reported by Metro.
- G. The adjacent noise and vibration sensitive locations include, but are not limited to, the following:
1. Properties listed in Table 1, Table 2, and Table 3 of this Section
- H. Contractor is required, under the Article entitled "Assessments for Special Circumstance" in Contract Document SPECIAL PROVISIONS, to comply with the work activity noise and vibration levels and the daytime and nighttime noise emission limits, to measure noise and vibration levels, and to provide and certify that workers are adequately trained, all in accordance with the requirements of this Section, and the failure to comply with such requirements is a violation of such Article and will result in an assessment as provided therein.

PART 2 - PRODUCTS

2.01 NOISE CONTROL MATERIALS

- A. Noise control materials may be new or used. Used materials shall be sound and free of damage and defects and shall be of a quality and condition to perform their designed function.

2.02 NOISE BARRIER WALLS

- A. Install noise barrier walls around all construction staging areas.
- B. Use material that will last for the duration of construction of this Contract. Construct using AC Plywood or acceptable equal.
- C. Line the construction site side of noise barrier walls with glass fiber or mineral wool type noise-absorbing material at least two inches thick. Protect this material using wire mesh or perforated sheets that are corrosion resistant and that have at least 30 percent open area and provision for water drainage, or provide a wall assembly with a STC-25 or greater, based on certified sound transmission loss data taken according to ASTM E90 and a Noise Reduction Coefficient (NRC) rating of NRC-0.70 or greater, based on certified sound absorption coefficient data taken according to ASTM C423.

- D. Construct gates and doors in noise barrier walls either hinged or rolling of the same or equally effective material as the noise barrier wall. Construct gates and doors in the wall to ensure that the edges overlap the wall to eliminate gaps. During nighttime hours maintain gates and doors in a closed position except for brief periods of time to allow access to the Construction Site.
- E. Attach lagging to support posts designed so that the wall will withstand 80 mph wind loads plus a 30 percent gust factor.
- F. Provide flush mating surfaces of wall sides when walls are joined together or at corners. Close gaps between wall sections and between bottom edge of walls and grade with material that will completely close the gaps and be dense enough to attenuate noise.
- G. Be responsible for the design, detailing and adequacy of the framework and supports, posts, attachment methods and other appurtenances required for the proper erection of the noise control barriers.
- H. Prepare the design details for the noise control wall footing, steel posts, supports and framework, signed and sealed by a Professional Engineer licensed in the State of California. Submit the design and detailed engineering to Metro.
- I. Design and install foundations or piers for walls that do not require excessive noise to construct.
- J. Height of Noise Barrier Walls: As required to meet Noise Control Plan requirements, but not less than 20 ft. at construction staging and work areas.
- K. Temporary Art and Displays: Refer to Sections 01 58 13 A, Temporary Signs and Banners, 01 56 26, Construction Fencing (Wood) and Section 01 56 28, Construction Fencing (Chain Link), for temporary artwork and displays.
- L. Post readily visible signs indicating "Noise Control Zone" on or near construction equipment operating close to noise sensitive sites

2.03 MOVEABLE NOISE BARRIERS

- A. Construct moveable barriers of AC Plywood sheeting, or other acceptable material. Line barriers on construction site side with glass fiber or mineral wool type sound absorbing material at least two inches thick to produce a noise barrier assembly with an STC25 rating or greater. Protect sound absorbing material by wire mesh or perforated sheets that are corrosion resistant and that have at least 30 percent open area, with provision for water drainage.
- B. Provide materials and details of construction sufficiently weather resistant to last through the duration of construction of this Contract.
- C. Construction Details:
 - 1. Attach barrier panels to support frames constructed in sections to provide a moveable barrier utilizing the standard temporary precast concrete median barrier or other supports.

2. When barrier units are joined together, overlap the mating surfaces of the barrier sides or make flush with each other. Close gaps between barrier units, and between the bottom edge of the barrier panels and the ground, with material that will completely close the gaps and be dense enough to attenuate noise.
3. Height of barriers: As required to meet Noise Control Plan requirements.

2.04 NOISE CONTROL CURTAINS

- A. Noise Control Curtains: Durable, flexible composite material featuring a noise barrier layer bonded to a sound-absorptive material on one side.
 1. STC rating of STC-25 or greater based on certified sound transmission loss data taken according to ASTM E90.
 2. NRC rating of NRC 0.70 or greater based on certified sound absorption coefficient data taken according to ASTM C423.
- B. Noise Barrier Layer: A rugged, impervious material with a surface weight of at least one pound per square foot.
- C. Sound Absorptive Material: Include a protective facing, and securely attached to one side of the noise barrier layer over its entire surface.
 1. Mildew resistant, vermin proof and non-hygroscopic.
- D. The noise control curtain materials: Abuse resistant, exhibiting superior hanging and tear strength during construction. The curtain barrier material shall have a minimum breaking strength of 120 lb/in. and a minimum tear strength of 30 lb/in. Based on the same test procedures, the curtain absorptive material facing shall have a minimum breaking strength of 100 lb/in. and a minimum tear strength of seven lb/in.
 1. Corrosion resistant to most acids, mild alkalis, road salts, oils and grease.
 2. Fire retardant, and approved by the City of Los Angeles Fire Department prior to procurement.
- E. Construct gates and doors of a material with a STC 25 or greater rating.
- F. Construction Details:
 1. Install the noise control curtains in vertical segments extending the full curtain height, and have seams and joints with a minimum overlap of two inches and be sealed using hook fasteners or double grommets. Use construction details according to the manufacturer's recommendations.
 2. Secure the curtain at ground level and/or at intermediate points by framework and supports.
 3. Be responsible for the design, detailing and adequacy of framework, supports, ties, attachment methods and other appurtenances required for the proper installation of the curtain.

4. Height of Curtains: As required to meet Noise Control Plan requirements.
5. Prepare and seal the design and details necessary for the noise control curtain framework and supports using a Professional Engineer licensed in the State of California. Submit the design and detailed engineering to Metro for review prior to procurement.

2.05 VIBRATION CONTROL FOR TUNNEL TRAIN

- A. If ground-borne noise limits or ground-borne vibration limits are exceeded, the contractor will be required to take action to reduce noise and/or vibrations to acceptable levels. Such action could include:
 1. A durable resilient system to support the tunnel train tracks. Such as system would include:
 - a. Resilient mat under the tracks
 - b. A resilient grommet or bushing under the heads of any track fasteners.
 2. The hardness of the resilient mat should be in the 40 to 50 durometer range and be about 1 to 2" thick, depending on how heavily loaded the cars would be.
 3. The Contractor shall select the mat thickness so that the rail doesn't bottom out during a train pass by.
 4. Reduce the speed of the tunnel trains.
 5. Maintain the tunnel train track and train wheels in good order to reduce potential vibration impacts, including keeping gaps between track sections to a minimum and frequent maintenance to avoid wheel flats.

PART 3 - EXECUTION

3.01 ACOUSTICAL ENGINEER

- A. Engage an Acoustical Engineer meeting requirements of Paragraph 1.04C of this Section to be responsible for preparing and overseeing the implementation of the Noise Control Plan and mitigation measures and Noise Monitoring Plan.

3.02 NOISE LEVEL LIMITS

- A. A summary of Allowable Construction Site Noise Levels in the city of Los Angeles and County of Los Angeles is provided on Table 4. Contractor to review and update to current City and County Codes and Ordinances.
- B. Metro has taken measurements of the ambient noise levels at noise sensitive receivers near the construction areas. The measured ambient noise levels are presented in Table 5. These measured ambient levels are for information only and not to be used as the basis for developing allowable noise levels.

- C. Contractor shall review and update the noise sensitive locations listed in Table 1, Table 2, and Table 3, adding and deleting locations to reflect changes since the date of the RFP.
- D. The LAPD has not taken measurements of the ambient noise levels at construction locations.
 - 1. For locations within the City of Los Angeles Contractor shall take pre-construction 24-hour noise level measurements at each of the noise sensitive locations listed in Table 5. Where nighttime work is planned for any project sites, take pre-construction measurements at Table 5 locations during nighttime hours. Preconstruction noise level measurements shall be provided to Metro. The selection of the measurement sites shall be subject to Metro approval. Measure levels, continuously over a 14-day period, 30 days prior to the beginning of construction, under the supervision of the Acoustical Engineer. Report data to Metro as 1-hour Leq (A-weighted) levels or other selected measurement period as directed by Metro. The Contractor's Acoustical Engineer will establish the recommended day and night noise level limits for each of the locations listed in Table 5 based on the measured data for Metro's review and approval.
- E. After completion of Contractor's pre-construction ambient noise measurements, Table 5 will be updated to indicate for each receiver site, the daytime, evening, and nighttime noise limits for construction. If the LAPD has granted the nighttime noise variance, it may include nighttime limits for selected sites, thus complementing the noise criteria herein. If LAPD noise limits differ from the Metro project noise criteria, apply the strictest.
- F. The ground borne noise levels within building structures due to underground construction activities - Limited to the Lmax noise levels listed in Table 6 and Table 7.
- G. At the surface of the construction site during nighttime hours use only equipment that, operating under full load, meets the noise limits specified in Table 8 when measured according to the test procedures used for equipment noise certification as specified in this Section.
- H. Contractor is prohibited from operating equipment at night that does not meet nighttime noise emission limits in Table 8. If the Contractor's existing equipment on-site does not meet nighttime noise emission limits for surface construction activities specified in Table 8 or falls out of compliance, remove the non-compliant equipment promptly from nighttime service by immediately parking and turning off equipment when it is safe to do so.
- I. Trucks operating off-site between the hours of 12:00 midnight and 5:00 AM must have lower emission limits (80 dBA at 50 feet) than normally required by the California Vehicle Code. All trucks used for these nighttime hours must be certified in accordance with these specifications. Take necessary steps to comply with this limit, which may include fitting the equipment with high grade engine exhaust silencers and engine casing sound insulation.

3.03 NOISE CONTROL MEASURES

A. Noise Barrier Walls

1. At the Westwood/UCLA Station and UCLA Lot 36 laydown and staging work areas, noise barrier walls shall be erected around the perimeter of each of the work areas as shown in the contract drawings in accordance with Article 2.02 of this Section.
2. At the Westwood/VA Hospital Station **and Western VA Construction Staging areas** ~~laydown and staging work area~~, noise barrier walls shall be erected around the perimeter of each of the work areas as shown in the Contract drawings in accordance with Article 2.02 of this Section.
- ~~3. At the Army Reserve laydown and staging work area, noise barrier walls shall be erected around the perimeter of each of the work areas as shown in the Contract drawings in accordance with Article 2.02 of this Section.~~
4. At the VA Parking Lot 42, noise barrier walls shall be erected around the perimeter of the construction site as shown in the Contract drawings in accordance with Article 2.02 of this Section.
5. Noise barrier walls will be erected around the perimeter of any other work area established by the Contractor but not in the Contract drawings in accordance with Article 2.02 of this Section.

B. Supplemental Noise Abatement Measures

1. For construction laydown and staging area where additional noise abatement is required moveable noise barriers or noise control curtains shall be used in accordance with Article 2.03 and Article 2.04 of this Section.
2. Use of boom cranes with electric motors at the ~~U.S. Army Reserve~~ **Western VA Construction Staging Area and VA Lot 42 Construction Staging area** ~~site~~.
3. Provide moveable noise barriers or noise control curtains as necessary to maximize shielding of noise from construction activities at the VA West Los Angeles Main Hospital (Building 500) and VA Buildings 90, 91, 307 through 312, 14, 23, 522 and 318. Moveable noise barriers and/or noise control curtain locations are to be adjusted to fit contractor's construction site layout.

3.04 NOISE CONTROL PLAN

A. Requirements:

1. The Acoustical Engineer is responsible for preparing and overseeing the implementation of the Noise Control Plan.
2. Submit the Noise Control Plan to Metro or its designee a minimum of 90 days prior to the start of work.
3. Include the following for daytime and nighttime construction activities that may occur at the surface of the construction site:

- a. Site Drawing: Prepare a scaled drawing of the construction site(s) indicating the following:
 - 1) Contract name and number
 - 2) Contractor's name
 - 3) Date
 - 4) Scale
 - 5) Direction of North
 - 6) Noise sensitive locations near the construction site
 - 7) Construction equipment locations used during daytime and nighttime hours, designated by the code letter used in Column (a) in Part A of the Noise Control Plan Form, Figure 4.
 - 8) Locations of the noise levels calculated for residential, commercial, and industrial areas as specified in this Section.
 - 9) Locations and types of noise abatement measures that may be required to meet codes and regulations as indicated by the calculations as specified in this Section.

- b. Equipment Inventory: Prepare an inventory of equipment used during daytime and nighttime hours by providing the following information in the indicated columns of Noise Control Plan Form, Figure 4.
 - 1) Column (a): Code letter in sketch to indicate position of equipment on site and to identify Certificates of Noise Compliance
 - 2) Column (b): Appropriate equipment category from Table 8
 - 3) Column (c): Equipment manufacturer and model, if known at the time of the Plan's preparation
 - 4) Column (d): Unique identifier (ID), such as registration number, if known at the time of the Plans preparation.
 - 5) Column (e): Equipment horsepower
 - 6) Column (f): Noise emission limit from Table 8.
 - 7) Column (g): Estimated noise level at 50 feet; if greater than the value in Column (f), source noise control device (e.g. mufflers) must be used to comply with limit.
 - 8) Column (h): Estimated date of first use on site
 - 9) Column (i): Estimated date of last use on site.

- c. Noise Calculations: Prepare calculations of daytime and nighttime L_{max} and one-hour L_{eq} noise levels expected at the façade of the nearest residential, commercial and industrial building based on the equipment noise levels given in Part A of the Noise Control Plan Form. Determine the nearest property lines from the currently identified noise sensitive locations indicated in Table 1 and Table 2. Calculate preliminary one-hour L_{eq} construction noise projections for those sensitive locations and insert with locations into Table 9. Make the calculations for locations where noise emitted by applicable equipment will cause the greatest noise level for each type of land use, for daytime and nighttime periods if necessary. Provide the results on Part B of the Noise Control Plan Form with calculations included below the results, and with the locations for the calculations indicated on the site sketch. The noise calculation procedure shall be as follows:

- 1) Calculate L_{max} according to the method outlined below:

$$L_{max}(\text{equipment}) = EL - 20 \log_{10} (D/50) - BNR$$

where:

EL = Estimated equipment noise level at 50 feet, in dBA.

D = Distance from the equipment to property-line location, in feet.

BNR = Barrier noise reduction, in dBA.

Then, combine the individual contributions of each piece of equipment to obtain the overall maximum construction noise level at each location as follows:

$$L_{max}(\text{overall}) = 10 \log_{10} (\text{SUM } 10 [L_{max}(\text{equipment})/10])$$

- 2) Calculate one-hour L_{eq} according to the methodology recommended by the US Department of Transportation, Federal Highway Administration Special Report Highway Construction Noise: Measurement, Prediction and Mitigation, as follows:

First, calculate the construction one-hour L_{eq} at each property-line location for each item of equipment using the following equation:

$$\text{One-hour } L_{eq}(\text{equipment}) = EL - 20 \log_{10}(D/50) + 10 \log_{10}(UF/100)$$

where:

EL = Estimated equipment noise level at 50 feet, in dBA.

D = Distance from the equipment to the property-line location, in feet.

UF = "Usage factor," expressed as the percent of time that the equipment is operated at full power while on site. This factor shall be

estimated by the Contractor or the qualified acoustical engineer. Guidelines for the selection of usage factors are provided by the US Environmental Protection Agency (EPA) Report NTID 300.1, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.

Then, combine the individual contributions of each piece of equipment to obtain the overall construction one-hour L_{eq} at each location as follows:

$$\text{One-hour } L_{eq}(\text{overall}) = 10 \log_{10} (\text{SUM } 10^{[\text{one-hour } L_{eq}(\text{equipment})/10]})$$

- 3) Compare the calculated L_{max} and one-hour L_{eq} values with the Contract limits specified in this Section.
 - d. Description of required noise control measures as specified in Paragraph 3.03.B of this Section.
 4. Noise Control Plan for Construction Activities Near Schools – If any primary or secondary schools are identified within the noise impact area of construction, the Contractor shall prepare Noise Control Plans to maintain acceptable interior noise levels within the school classrooms and occupied spaced. Metro will develop these criteria in coordination with the Los Angeles Unified School District (LAUSD) and individual school administrators. The Contractor shall monitor the construction noise levels to ensure compliance.
 5. Update the Noise Control Plan at three month intervals (based on Metro's initial acceptance date) and re-submit the Plan within 10 days of the start of each quarterly period. Update and re-submit the Noise Control Plan upon any major change in work schedule, construction methods, or equipment operations not included in the most recent Plan.
- B. Noise Abatement Measures: If the results of the noise calculations prepared in accordance with this Section indicate that noise level limits listed in this Section will be exceeded, identify proposed noise abatement measures, their anticipated effects (dBA reductions), and a schedule for their implementation. Re-calculate the noise levels at the nearest sensitive receptor location property lines which include the anticipated noise reduction effects and submit the results on Part B of the Noise Control Plan Form. Include, as backup documentation to Part B of the Noise Control Plan, drawings, sketches, and suitable calculations which demonstrate anticipated noise reduction benefits and that proposed structures or facilities comply with applicable building code requirements.
- C. Noise Reduction Methods: The following noise mitigation techniques shall be employed at all times to reduce the impact of construction noise:
1. Scheduling truck loading, unloading, and hauling operations so as to minimize noise impact near noise sensitive locations and surrounding communities.

2. Locate stationary equipment so as to minimize noise impact on the community and install noise muffling enclosures.
3. Do not leave equipment pieces idling when not in use.
4. Limiting the use of enunciators or public address systems, except for emergency notifications. Any public address or music system must not be audible at any adjacent sensitive receiver
5. Maintaining equipment such that parts of vehicles and loads are secure against rattling and banging.
6. Limit the time that steel decking or plates for street decking or covering excavated areas are in use. Recess steel street plates and ensure that plates are fully seated on the pavement and not able to rock under traffic.
7. Grading of surfaced irregularities on construction sites to prevent the generation of impact noise and ground vibrations by passing vehicles.
8. Schedule Work to avoid simultaneous activities that both generate high noise levels.
9. Use of temporary noise barriers and sound control curtains or an equivalent form of solid object to either destroy part of the sound energy by absorption, or to redirect part of the energy by wave deflection.
10. All jackhammers, pavement breakers and saw cutters used at the Construction site shall be enclosed with shields, acoustical barrier enclosures, or noise barriers.
11. Enclose activities likely to create a noise disturbance and enclose stationary equipment.
12. Employ sound blankets over a movable chain link fence for all night work, including the use of state-of-the-art technology where necessary to achieve 5 dBA above pre-existing ambient noise levels at the property line of the nearest residential building. If sound blankets are to remain in place for more than five (5) days, Metro must seek approval from the City.
13. Employ targeted noise mitigation when Construction is proximate to historic structures and may exceed 5 dBA (Leq 15 min) above pre-existing ambient noise levels during business hours at historic structures.

3.05 **NOISE MONITORING PLAN**

A. Requirements:

1. 90 days prior to commencing work, submit the Noise Monitoring Plan to Metro, specifying the nighttime and daytime construction activities, monitoring locations, equipment, procedures, schedule of measurements and reporting methods to be used.

2. Submit noise monitoring data collected during the previous week to Metro on a weekly basis. Contractor's Acoustical Engineer shall review all data prior to submitting to Metro. Weekly reports shall indicate whether the noise monitoring data is in compliance with established and regulatory noise limits.
3. In the event that contractor-generated measured noise levels exceed allowable limits, halt operation of the activity causing the exceedance and immediately notify Metro within one hour of the exceedance. Work on that activity shall be suspended until such time as an alternative construction method can be used and additional Noise Abatement Measures can be implemented as specified in the Noise Control Plan.
4. If the measured nighttime levels exceed the noise limits specified in this Section or in the Nighttime Noise Variance, reduce the noise levels by appropriate abatement measures or terminate the nighttime construction activity responsible for exceeding the noise limits.

B. Measurement Locations:

1. Measure noise levels at the noise-sensitive locations identified in Table 1, and Table 2 of this Section. These locations may change during the Contract and will be updated as required by Metro.
2. Prepare and submit a scaled plan indicating monitoring locations, including measurements to be taken at construction site boundaries and at nearby residential, commercial and industrial property lines.

C. Noise Monitoring - (Continuous Noise Monitoring Stations (CNMS))

1. Maintain continuous noise monitoring stations (CNMS) with internet access at minimum of four selected locations affected by daytime construction activities at the VA Main Hospital (Building 500) and nighttime construction activities VA Buildings 90, 91, 307 through 312, 14, 23, 522, and 318.
2. CNMS stations shall be programmed with an initial trigger that provides an alert when the construction noise levels are within 3 dB of the noise limit and a second trigger when the noise levels are at or above the noise limit.
3. CNMS stations shall continuously measure the equivalent sound level (one-hour Leq) and the maximum sound level (Lmax) on the A-Scale (dBA) and report the measured levels on a real-time basis and/or one-hour period or other selected measurement period as directed by Metro. CNMS shall produce audio recordings of all exceedances.
4. Provide noise monitor telemetry links and software and computer capable of continuously measuring noise and transmitting the measured data from each of the CNMS by a web based application to a computer located at the contractor's office.
5. Contractor shall review and analyze CNMS data each day. The Acoustical Engineer or his designee shall each day listen to the audio of the exceedance events and identify the cause whether it is from Contractors work and not from

other sources such as emergency vehicle siren, helicopter etc. Submit noise data to Metro or its designee on a weekly basis using the Noise Measurements Report Form provided in Figure 2.

6. Monitoring locations for CNMS will be selected by Metro in coordination with LAPD to ensure that the Nighttime Noise Variance requirements are met. As work progresses at each of the construction areas it may be necessary to periodically relocate the continuous noise monitors to the area most sensitive to on-going construction noise activities. Contractor shall be responsible for securing all necessary access permits.

D. Noise Monitoring – Hand Held Monitors

1. Provide Metro with two Type 1 precision sound level meters that meets the requirements outlined in this Section.
2. Measurement Equipment:
 - a. Perform noise measurements with an instrument that is in compliance with the criteria for a Type 1 (Precision) Sound Level Meter as defined in the current revision of ANSI S1.4.
 - b. Provide sound level meters capable of measuring the L_{max} and one-hour L_{eq} on both the A-Weighted and C-Weighted scales required by regulatory criteria and Noise Level Limits.
 - c. Calibrate sound level meters, microphones, and calibrators for certified laboratory conformance at least once a year. Submit a current certificate of conformance to Metro prior to using the sound level meter and submit updated certificates following subsequent calibrations on a yearly basis for the duration of this Contract or upon the completion of repairs to the instrument.

E. Measurement Procedure – Hand Held Monitors

1. Field calibrate sound level meters using an acoustic calibrator, according to the manufacturer's specifications, prior to each measurement.
2. Except as otherwise indicated, perform measurements using the A weighting network and the SLOW response of the sound level meter.
3. Measure impulsive or impact noises using the C-Weighting network and the FAST response of the sound level meter.
4. Fit the measurement microphone with an appropriate windscreen at the location of the sensitive receptor at least four to six feet away from the nearest reflective surface.
5. Take noise measurements at 3 feet from the building face of noise sensitive locations within 150 feet of the construction site at least once each week and after a change in construction activity or construction location. Frequency and schedule of monitoring shall be determined by the Contractor's Acoustical

Engineer and approved by Metro. Measurement Periods: Minimum of 15 minutes.

6. Construction noise measurements shall coincide with daytime and nighttime periods of maximum noise generating construction activity, and be taken during the construction phase or activity that has the greatest potential to create annoyance or to exceed applicable noise regulations and restrictions.
7. If, in the estimation of the person performing the measurements, outside noise sources contribute significantly to the measured noise level, repeat the measurements (with the same outside source contributions when construction is inactive to determine the background noise level
8. Submit noise data to Metro or its designee on a weekly basis using the Noise Measurements Report Form provided in Figure 2. Note the type of measurement (e.g. baseline, on-going construction) on the form.
9. Clearly identify monitoring locations and sketch on the back of the Noise Measurements Report Form, Figure 2, along with the locations of and distances from any noise sensitive location.
10. Identify construction equipment operating during the monitoring period and the locations sketched on the back of the Noise Measurements Report Form, along with the locations and distances to any noise sensitive location.

3.06 EQUIPMENT NOISE CERTIFICATION

A. Requirements for Construction Equipment:

1. Ensure that Contractor and Subcontractor equipment, of the categories listed in Table 8 to be used (during nighttime hours at the surface of the construction site) for a total duration greater than five days, shall be tested for compliance with the stated noise emission limits by the Acoustical Engineer during the first day of use on the construction site or at an alternative site acceptable to Metro. Additionally, the Acoustical Engineer shall certify that equipment used during daytime hours meets municipal regulatory requirements.
2. Retest equipment as described above at six month intervals while in use on-site, and certify new equipment before being placed into service at the site.
3. For each piece of equipment tested for both daytime and nighttime compliance, submit a noise report to Metro or its designee by completing the Application for Certificate of Equipment Noise Compliance provided in Figure 3. Ensure that the equipment identification number used for the Certificates is consistent with the identification number used in the Noise Control Plan.
4. Do not use equipment of the categories listed in Table 8, as described above on-site without valid certificates of noise compliance submitted as required.

B. Test Procedures for Construction Equipment:

1. Operate engine powered equipment by the Contractor or Contractor's representative at maximum governed rpm under full load conditions during the tests under the supervision of the Acoustical Engineer.
2. Test portable and mounted impact hammers, such as hoe rams and jackhammers to be used for concrete breaking, by the Acoustical Engineer during the first day of actual operation at the construction site under maximum load conditions as rated by the equipment manufacturer.
3. Noise certification measurements: As specified in Paragraph 3.05 D.2. of this Section use an acoustic calibrator of the type recommended by the sound level meter manufacturer prior to measurements.
4. If possible, make measurements at two locations:
 - a. Two feet outside the right side of the equipment casing, at 50 feet and height of five feet above ground level, and;
 - b. Two feet outside the left side of the equipment casing, at 50 feet and a height of five feet above ground level, with the equipment operating as indicated in Paragraphs 3.06.B.1 and 3.06.B.2 of this Section, above for a minimum period of one minute. Reduce measurements made at less than 50 feet, because of space limitations at the test site, by the values given in Table 10 to estimate the 50-foot sound level.

C. Compliance:

1. Submit a noise report to Metro for each item of equipment used on the surface of the construction site during nighttime hours of the categories listed in Table 8. Submit the report on the form shown in Figure 3 with certification by the Acoustical Engineer that equipment noise emissions do not exceed those prescribed in Table 8. Additionally, the Acoustical Engineer shall certify that equipment used during daytime hours meets municipal regulatory requirements.
2. If the noise levels obtained during the tests exceed those prescribed by municipal regulatory requirements, the Contractor's Acoustical Engineer shall ensure that proper mitigation measures are identified and implemented for all equipment that may cause noise level exceedances.
3. If the noise levels obtained during the tests exceed those specified in Table 8, or as prescribed in municipal regulatory requirements, remove such equipment from nighttime use until such equipment is modified and retested, or substitute other equipment to meet the noise level requirements.
4. Upon compliance Metro, will mark the noise report indicating Metro's concurrence, including the certification date and equipment identification number, for verification by Metro. Keep the noise reports readily available on file in the construction field office for inspection by Metro upon request.
5. The Certificate of Noise Compliance will remain valid for a period of six months only. Delays caused by the certification refusal or by time lost in improving the

rejected equipment or finding alternate acceptable equipment will not be a basis for monetary or time delay claims, or for avoidance of liquidated damages or withholding of payment.

6. Equipment shall be subject to spot noise level testing by Metro's discretion to determine that the equipment in use meets the requirements specified in Table 8. If such tests are requested by Metro, locate and operate the equipment as directed by Metro at the designated site so as to facilitate the measurements.
 - a. Provide Metro with a copy of the results of the measurements. If such tests demonstrate that any equipment does not comply with this part, Metro will revoke the certificate of Noise Compliance and the Contractor will take the equipment out of use according to requirements of this Section until compliance is achieved. A new Certificate of Noise Compliance will be issued upon proof of compliance.

3.07 VIBRATION LEVEL LIMITS

- A. Measures applied to limit noise levels may in some cases also limit vibration levels. Measures specified above for noise levels are applicable.
- B. All Areas: Conduct Construction activities so that vibration levels at 50 feet from construction limits or at nearest affected occupied building (whichever is closer) do not exceed root-mean-square (rms) unweighted vibration velocity levels in vertical direction over a frequency range of 1 to 100 Hz as listed in Table 11. Limit ground-borne noise inside buildings due to construction vibration to below the limits in Table 6.
- C. Historic and Cultural Resources Structures – The Contractor will be responsible for the protection of vibration sensitive historic buildings or cultural resource structures that are within 200 feet of any construction activity. These structures have been identified in the Draft 130(c) Environmental Technical Memorandum. Vibration from construction activities shall not exceed the peak particle velocity levels as indicated in Table 12 for any length of time. The Contractor shall perform periodic vibration monitoring at the closest structure to any construction activities using approved seismographs. If at any time the construction activity results in vibration levels that exceed those specified herein, that activity shall be halted immediately and work on that activity shall be suspended until such time as an alternative construction method can be used that will result in lower vibration levels. Limit ground-borne noise inside historic buildings due to construction vibration to below the limits in Table 7.
- D. The groundborne vibration levels at building structures due to any construction activities shall be no greater than the peak particle vibration levels shown in Table 12 and for historic resources in Table 13. The Contractor shall perform periodic vibration monitoring at the closest occupied building structure to any construction activities using approved seismographs. If at any time the construction activity results in vibration levels that exceed those specified herein, that activity shall be halted immediately and work on that activity shall be suspended until such time as an alternative construction method can be used that will result in lower vibration levels.

- E. Vibration levels at buildings affected by construction operations refer to vertical direction vibration on ground surface or building floor.
- F. Conduct daily measurements of vibration at the closest building or historic resource to the construction during peak vibration generating activities.

3.08 **VIBRATION CONTROL AND MONITORING PLAN**

A. Requirements

- 1. Same as noted above for the Noise Control Plan, Article 3.04 of this Section, and Noise Monitoring Plan, Article 3.05 of this Section, applied to vibration, where applicable.
- 2. Vibration Calculations – In the absence of relevant vibration measurement data that can be applied to this Project, prepare calculations of maximum groundborne noise and vibration at representative buildings along the Project. Preliminary source vibration levels are indicated in Table 14. These source levels are preliminary in nature and it is up to the Contractor to verify and update information during construction (and, where possible, before construction). Provide the results on a form similar to Part B of the Noise Control Plan Form, with the calculations included below the results, and with the locations for the calculations indicated on the site sketch. The vibration calculation procedure shall be as follows:

- a. Damage Assessment – Calculate the vibration according to the method outlined below:

$$PPV_{\text{equipment}} = PPV_{\text{ref}} \times (25/D)^{1.5}$$

where:

$PPV_{\text{equipment}}$ is the peak particle velocity in units of inches/second of the equipment adjusted for distance

PPV_{ref} is the reference vibration level in units of inches /second at 25 feet (see Table 14)

D is the distance from the equipment to the receiver, in feet.

- b. Annoyance Assessment – Calculate the vibration according to the method outlined below:

$$Lv(D) = Lv(25 \text{ ft}) - 30 \log_{10} (D/25) + \text{correction}$$

where:

$Lv(D)$ is the rms vibration velocity in logarithmic units of VdB re 10^{-6} in/sec of the equipment, adjusted for distance.

$Lv(25 \text{ ft})$ is the reference vibration level in logarithmic units of VdB re 10^{-6} in/sec at 25 ft (see Table 14).

D is the distance from the equipment to the receiver, in feet.

Correction is as noted in Table 15.

- B. Vibration Abatement Measures – if the results of the vibration calculations or representative field data indicate that the vibration level limits listed in this Section will be exceeded, identify proposed vibration abatement measures, their anticipated vibration effects, and schedule for their implementation. Provide calculations demonstrating the effectiveness of the proposed abatement measures, and, if applicable, provide applicable drawings and sketches to indicate where such abatement measures will be placed.
- C. **Vibration Measurement Locations**
1. Measure vibration and groundborne noise at sensitive locations near the construction sites and during underground tunneling. Vibration measurements shall be conducted at the exterior of the building and groundborne noise measurements at the interior. These locations may change during the Contract and shall be updated as required by Metro.
 2. Prepare and submit a scaled plan indicating monitoring locations.
- D. **Vibration Monitoring - (Continuous Vibration Monitoring Stations (CVMS))**
1. Maintain continuous vibration monitoring stations (CVMS) with internet access at the murals along the Bonsall Avenue underpass and at the closest buildings to the vibration generating activities.
 2. CVMS stations shall be programmed with an initial trigger that provides an alert when the construction vibration levels are approaching the vibration threshold and a second trigger when the vibration levels are at or above the vibration limit.
 3. CVMS stations shall continuously measure the peak particle vibration levels (in/sec) and report the measured levels on a real-time basis and/or one-hour period or other selected measurement period as directed by Metro.
 4. Provide vibration monitor telemetry links and software and computer capable of continuously measuring noise and transmitting the measured data from each of the CVMS by a web based application to a computer located at the contractor's office.
 5. Contractor shall review and analyze CVMS data each day. The Acoustical Engineer or his designee shall each day review the exceedance events and identify the cause whether it is from Contractors work and not from other sources. Submit vibration data to Metro or its designee on a weekly basis.
 6. Monitoring locations for CVMS will be selected by Metro. As work progresses at each of the construction areas it may be necessary to periodically relocate the monitors to the area most sensitive to on-going construction vibration activities. Contractor shall be responsible for securing all necessary access permits.

E. Measurement Equipment

1. Use an InstanTel Blastmate III, Minimate Plus, Minimate Series IV pro or approved equal to monitor vibration. See 3.03.E for groundborne noise equipment requirements.
2. Calibrate vibration equipment at a certified laboratory at least once a year. Provide calibration documentation to Metro prior to placing equipment in service.

- F. At other locations where a CVMS is not used, conduct daily measurements of vibration during peak vibration generating construction activities at the closest building or historic resource to the construction.

3.09 CONSTRUCTION SITE NOISE CONTROL

A. Perimeter Noise Barrier Wall:

1. Furnish and install perimeter noise barrier walls along streets as indicated. The noise barrier walls shall provide sufficient noise reduction to meet the daytime or nighttime noise limits specified in this Section. It is the Contractor's responsibility to meet these limits by other methods such as installing additional fixed barrier walls or movable barriers, raising the height of the noise barrier walls, and providing additional noise control measures specified in this Section. Perimeter noise barrier walls shall be a minimum height of 20 ft.
2. Construct gates and/or doors in the wall either hinged or rolling of the same or equally effective material as the noise barrier wall. Construct gates and doors in the wall to ensure that the edges overlap the wall to eliminate gaps. During nighttime hours maintain gates and doors in a closed position except for brief periods of time to allow access to the Construction Site.
3. Install noise barrier walls, gates, and doors in the wall before commencing any work.

B. Noise Barrier Walls for Pile Installation and Grouting Stage Areas:

1. Provide Noise Control walls on perimeter of pile installation closure and grouting staging areas.
2. Provide noise absorptive material behind gawk screens on K-Rail which are adjacent to live traffic, and on construction chain link fencing, which is adjacent to the sidewalk.

3.10 VIBRATION CONTROL FOR TUNNEL TRAIN

- A. In accordance with Article 2.05 of this Section provide an elastomer isolator installed between the floor of the tunnel and the rails and ties on which the tunnel train operates. The elastomer isolator shall be provided for the full extent of the running tunnel between the connection to Section 2 at the Century City Constellation Station and the terminus at the Westwood/VA Station.

- B. Submit the tunnel train rail vibration elastomer isolator design for Metro acceptance before installation of the track.
- C. If the Metro ground-borne noise limits (Tables 6 and 7) or ground-borne vibration limits (Tables 11 and 12) are exceeded the Contractor will be required to take additional action to reduce vibration to acceptable levels.

3.11 CONSTRUCTION METHODS – EQUIPMENT

- A. Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete deck removal and retaining wall demolition.
- B. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers thereof, to meet relevant noise ordinance limitations and Metro project criteria shown in this Section.
- C. Equip noise producing equipment i.e. jackhammers and pavement breakers with acoustically attenuating shields or shrouds recommended by the manufacturers thereof, to meet relevant noise ordinance limitations.
- D. Line or cover hoppers, conveyor transfer points, storage bins, chutes and truck beds with sound-deadening material.
- E. All noise producing equipment, including vehicles that use internal 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, ventilation fans) will be equipped with shrouds and similar noise control features, to meet noise ordinance limitations.
- F. Blasting and Impact Pile Driving is specifically prohibited from use. Use of vibrating and impact hammers shall also be limited due to close proximity of adjacent buildings
- G. As required to meet the noise limits specified in this Section, use alternative procedures of construction, and select proper combination of techniques that generate least overall noise and vibration. Such alternative procedures include the following:
 - 1. Use electric welders powered from utility main lines instead of riveting or electric generators/welders.
 - 2. Mix concrete off-site instead of on-site.
 - 3. Employ prefabricated structures instead of assembling on-site.
 - 4. Solar powered arrow boards
 - 5. VMS message signs
- H. Use only construction equipment, both fixed and mobile, that is equipped to operate within noise limits. At night, use only equipment when, when operating at the surface of the construction site under full load, is certified to meet the specified lower noise

level limits set in the Noise Control Plan and specified in the noise variance application.

- I. Use construction equipment manufactured or modified to dampen noise and vibration emissions, such as:
 1. Use electric electrically powered equipment to the extent possible instead of diesel powered equipment. Use solar battery powered or hybrid equipment whenever practical.
 2. Use hydraulic tools instead of pneumatic impact tools.
 3. Use electric instead of air or gasoline driven saws.
 4. Whisper Jet diesel powered generators.
- J. Readily visible signs indicating “Noise Control Zone” shall be used.
- K. Noise control devices that meet original specifications and performance shall be used.
- L. Mobile or fixed noise-producing equipment shall be equipped to mitigate noise to the extent practical would be used.
- M. Earth-moving equipment, fixed noise-generating equipment, stockpiles, staging areas, and other noise-producing operations would be located as far as practicable from noise-sensitive receivers.
- N. The use of air horn type devices, including but not limited to vehicle mounted or hand held, shall not be used to communicate signals from one area of the project site to another. Compliance with the requirements of the Tunnel Safety Orders for signaling systems shall be obtained through the use of other auditory or visual systems other than the use of air horn type devices.
- O. Use of horns, whistles, alarms, and bells would be limited.
- P. Any project-related public address or music system would not be audible at any adjacent receiver.
- Q. Enclosures for fixed equipment such as TBM slurry processing plants would be required in order to reduce noise.
- R. Used approved design of silencers for all ventilation fans.

3.12 CONSTRUCTION METHODS – OPERATIONS

- A. Operate equipment so as to minimize banging, clattering, buzzing, and other annoying types of noises, especially near residential areas during the nighttime hours.
- B. To the extent feasible, configure the construction site in a manner that keeps noisier equipment and activities as far as possible from noise sensitive locations and nearby buildings.

- C. In no case shall the above restrictions limit the Contractor's responsibility for compliance with applicable Federal, state and local safety ordinances and regulations and other Sections of these construction specifications.
- D. Maximize physical separation, as far as practicable, between noise generators and noise receptors. Separation includes following measures:
 - 1. Provide enclosures for stationary items of equipment and barriers around particularly noisy areas on site.
 - 2. Locate stationary equipment to minimize noise and vibration impact on community, subject to acceptance of Metro.
- E. Demolition methods to be selected to minimize noise and vibration impact where possible.
- F. Use of vibratory rollers and packers to be avoided near vibration sensitive areas.
- G. Temporary noise barriers and sound-control curtains to be erected where project activity is unavoidably close to noise-sensitive receivers.
- H. Minimize noise-intrusive impacts. Limit activities such as concrete saw cutting to daytime and early evenings.
 - 1. Plan noisier operations during times of highest ambient noise levels.
 - 2. Keep noise levels relatively uniform; avoid excessive and impulse noises.
 - 3. No idling of heavy equipment or vehicles when not in use.
 - 4. Phase in start-up and shut-down of site equipment.
 - 5. Operate equipment at lowest possible power levels.
 - 6. No slamming tailgates. Use rubber gaskets, decrease speed of closure or similar prevention measures. Place plywood or dirt beds on all trucks.
- I. Select truck routes for muck disposal so that noise from heavy-duty trucks will have minimal impact on sensitive land uses (e.g., residential).
 - 1. Conduct truck loading, unloading and hauling operations so noise and vibration are kept to a minimum.
 - 2. Where possible, route heavily loaded trucks away from historic resources and residential streets. Where no alternatives are available, haul route selection will take into consideration streets with the fewest noise-sensitive receivers.
 - 3. Submit haul routes and staging areas to the City of Los Angeles, Bureau of Engineering and LADOT 30 days before required date.
- J. Minimize vibrations from operations and equipment where necessary.

1. Maintain smooth surfaces for construction equipment and vehicles to travel on (e.g., truck routes, tunnel train rail) to minimize vibration.
 2. Conduct TBM operations and maintain equipment to minimize unnecessary vibration.
- K. Use non-noise sensitive, designated parking areas for project related traffic.
- L. Configure construction operations to minimize backing movements, and hence use of back-up alarms.

3.13 CONSTRUCTION METHODS – MOVEABLE NOISE BARRIERS

- A. At a minimum, provide movable noise barriers for work in public right-of-way during night time hours in accordance with requirements of this Section for Moveable Noise Barriers.
- B. Provide readily removable noise barriers so that they may be repositioned, as necessary, to provide noise abatement for non-stationary and stationary processes.
- C. Installation, Maintenance, and Removal:
1. Install the barriers such that the sound-absorptive surfaces face the noise source.
 2. Maintain the moveable noise barriers and repair damage that occurs, including, but not limited to, keeping barriers clean and free from graffiti, and maintaining structural integrity. Promptly repair or replace gaps, holes, and weaknesses in the barriers, and openings between, or under the units with new material.
- D. The use of moveable noise barriers is a minimum noise control requirement that may not provide sufficient noise reduction to meet the daytime or nighttime noise limits specified in this Section. It is the Contractor's responsibility to meet these limits by other methods such as installing additional moveable noise barriers, installing noise barrier walls, and providing additional noise control measures specified in this Section as indicated.

3.14 CONSTRUCTION METHODS – NOISE CONTROL CURTAIN

- A. Install noise control curtains in accordance with requirements of this Section for Noise Control Curtains, as required to meet the noise limits specified in this Section, to shield public from construction noise during the course of the Contract.
- B. The noise control curtains shall be readily moveable so that they may be repositioned, as necessary, to provide noise abatement for non-stationary and stationary processes.
- C. Installation, Maintenance and Removal:
1. The noise control curtains shall be installed without any gaps such that the sound-absorptive side faces the construction activity to be shielded.

2. Maintain the noise control curtains and promptly repair any damage that may occur. Gaps, holes or weaknesses in the curtain, or openings between the curtain and the ground shall be promptly repaired by the Contractor.

3.15 NOISE AWARENESS TRAINING

All Contractor personnel on site shall participate in 15-minute Noise Awareness Training provided by Metro.

3.16 CONSTRUCTION SCHEDULE

When traffic restrictions allow, schedule saw cutting, jack hammering and other noisy activities during the day or early evening hours.

3.17 LOW IMPACT BACK-UP ALARMS

- A. Use low impact back-up alarms on all equipment during nighttime hours. The equipment shall include, but not limited to, cranes, low boys, backhoes, loaders, concrete pumps, excavators, haulers, dump trucks, work trucks, and concrete mix trucks.
- B. The low impact back-up alarms used by the Contractor shall comply with CCR Title 8, Section 1592, Warning Methods.
 1. For equipment that must comply with CCR Title 8, Section 1592(a), equip these vehicles with compliant white sound, broadband and multi-frequency type back-up alarm devices.
 2. For equipment subject to the requirements of CCR Title 8, Section 1592(b) and that the Contractor chooses to equip with automatic back-up audible alarms as the means for complying with this section; such alarms shall only be of a compliant white sound, broadband or multi-frequency back-up alarm type device.
 3. The compliant white sound, broadband and multi-frequency type back-up alarm device shall be a self-adjusting, "smart" reversing, alarm that continually adjusts to 5 dB. above ambient. Acceptable manufacturers are Brigade, ECCO or approved equal.
 4. The compliant white sound, broadband and multi-frequency type back-up alarm device shall be rated as medium duty or heavy duty, as the field conditions and/or usage would dictate.

TABLE 1 – NOISE AND VIBRATION SENSITIVE LOCATIONS NEAR AT-GRADE CONSTRUCTION SITES

Construction Site	Site ID	Noise Sensitive Location
Westwood/UCLA Station	11	1122 Gayley Avenue Apartments
	12	Apartments east of Midvale Avenue
	13	Apartments between Veteran and Midvale Avenues
	15	Linde (Westwood) Medical Plaza
	16	GSA Federal Building 11000 Wilshire Boulevard
Westwood/ VA Hospital	1	VA Main Hospital (Building 500)
	2	VA Buildings 90 and 91, multi-family residences
	3	VA Buildings 307 through 312, 14, 23, 522, and 318, including single-family residences
	4	VA Medical Buildings 304 and 507
	5	VA Medical Buildings 400 and 401
Army Reserve Site Western VA Construction Staging Area	6	1223 Federal Way
	7	Rear of 1242 Barry Ave
	8	Front of 1215 Barry Ave
	9	1175 Barry Ave
	10	11641 Kiowa Ave
	14	U.S. Army Reserve Center, Sadao Munemori Hall

TABLE 2 – HISTORIC RESOURCES NEAR AT-GRADE CONSTRUCTION SITES

Site ID	Historic Resource
A	Building 226: Wadsworth Theater
B	Building 20: Wadsworth Chapel
C	Bonsall Avenue underpass murals ¹
D	Bonsall Avenue palm rows
E	Building 90: Duplex – Staff residence
F	Building 91: Duplex – Staff residence
G	Building 23 Landscape
H	Fence with stone piers
I	Building 23: Quarters and outbuilding – unoccupied
J	Fireplace structure
K	Palm-tree grid
L	Spanish-American War Monument
M	Wilshire Boulevard gatehouses (2)
N	Burial section with markers
O	Cemetery entrance plaza
P	Roads/curbs/walkways

Q	Cemetery perimeter trees
15	Linde (Westwood) Medical Plaza
16	GSA Federal Building 11000 Wilshire Blvd

TABLE 3 – NOISE SENSITIVE LOCATIONS ABOVE UNDERGROUND TUNNELING

1833 to 1900 Fox Hill Dr.	SFR
1825 and 1830 Fox Hills Dr.	MFR
10307 to 10317 Missouri Ave.	MFR
10330 Santa Monica Blvd.	MFR
10360 to 10379 Eastborne Ave.	SFR
1617 Beverly Glen Blvd.	MFR
1608 and 1616 Pandora Ave.	SFR
1622 and 1636 Beverly Glen	MFR
1604 Pandora Ave.	SFR
10442 to 10451 Kinnard Ave.	SFR
10458 to 10479 Wilkins Ave.	SFR
1440 to 1441 Warner Ave.	SFR
1418 to 1500 Thayer Ave.	SFR
10511 to 10521 Rochester Ave.	SFR
10538 to 10551 Wellworth Ave.	SFR
1251 Fairburn Ave.	SFR
10584 to 10601 Ashton Ave.	SFR
1230 Westholme Ave.	MFR
10600 to 10800 Wilshire Blvd.	MFR
10801 Wilshire Blvd	Church
10833 Wilshire Blvd	MFR
10822 Wilshire Blvd	Church
Various Hadley Ct	SFR
Hammer Museum 10899 Wilshire Blvd	Museum
Linde (Westwood) Medical Plaza	Historic Building
GSA Federal Building 11000 Wilshire Blvd	Historic Building
11301 Wilshire Blvd	HOS
SFR – Single-family residence MFR – Multi-family residence HOS - Hospital	

TABLE 4 – SUMMARY OF ALLOWABLE CONSTRUCTION SITE NOISE LEVELS (CITY OF LOS ANGELES AND COUNTY OF LOS ANGELES)

Construction Activity	Noise Limit, dBA
City of Los Angeles Daytime (7:00 A.M.-9:00 P.M.), general activities	75 dBA ¹
City of Los Angeles Daytime (7:00 A.M.-9:00 P.M.), steady high-pitch noise or repeated impulsive noises	70 dBA ¹
City of Los Angeles Daytime (7:00 A.M.-9:00 P.M.), less than 15 minute duration in a period of 60 consecutive minutes	80 dBA ¹
City of Los Angeles Nighttime (9:00 P.M.-7:00 A.M.), all activities	Nighttime Ambient + 5dB
County of Los Angeles Daytime (7:00 A.M. – 8:00 P.M. weekdays and Saturdays)	60 dBA for SFR 65 dBA for MFR 70 dBA for semi-residential and commercial receivers
County of Los Angeles Nighttime (7:00 P.M. – 7:00 A.M. weekdays and Saturdays or any time on Sundays or holidays)	Variance Required
Notes: ¹ Noise limit applies to the facade of the closest property. SFR – Single-family residence MFR – Multi-family residence	

TABLE 5 – ALLOWABLE CONSTRUCTION SITE NIGHTTIME NOISE LEVELS BASED ON METRO’S AMBIENT NOISE MEASUREMENTS

Westwood/UCLA Station Site

Site ID	Measurement Location	Nighttime Ambient Noise Level - Leq (dBA)	City of Los Angeles Nighttime ⁽¹⁾ Noise Limit (dBA)
11	1122 Gayley Avenue Apartments	68	73
12	Apartments east of Midvale Avenue	56	61
13	Apartments between Veteran and Midvale Avenues	58	63

Notes:

(1) Nighttime is from 9:00 P.M. to 7:00 A.M as defined by the City of Los Angeles Municipal Code.

Westwood/VA Hospital Station Site

Site ID	Measurement Location	Nighttime Ambient Noise Level - Leq (dBA)	LA County Nighttime Noise Limit (dBA)
1	VA Main Hospital (Building 500)	61	60 ¹
2	VA Buildings 90 and 91, multi-family residences	60	60 (50) ²
3	VA Buildings 307 through 312, 14, 23, 522, and 318, including single-family residences	55	55 (50) ²
4	VA Medical Buildings 304 and 507	53	60 ¹
5	VA Medical Buildings 400 and 401	55	60 ¹

Notes:

¹ This receiver is subject to the Los Angeles County semi-residential/commercial area nighttime noise limit.

² The measured ambient noise is higher than the Los Angeles County single-family nighttime limit of 50 dBA. Therefore, the measured ambient noise would be the nighttime noise limit.

Receivers 1 through 5, and 14 are in Los Angeles County.

dBA = A-weighted decibels; Leq = equivalent sound level; VA = Veterans Affairs

U.S. Army Reserve Site Western VA Construction Staging Area

Site ID	Measurement Location	Nighttime Ambient Noise Level - Leq (dBA)	City of Los Angeles Nighttime Noise Limit (dBA)
6	1223 Federal Avenue	59	64
7	Rear of 1242 Barry Avenue	54	59
8	Front of 1215 Barry Avenue	56	61
9	1175 Barry Avenue	59	64
10	11641 Kiowa Avenue	62	67
			LA County Nighttime Noise Limit (dBA)
14	U.S. Army Reserve Center, Sadao Munemori Hall	60 ¹	N/A

Notes:

¹ The average nighttime noise levels at Receiver 14 are assumed to be the same as Receiver 2 due primarily to the traffic on Wilshire Boulevard.

N/A not applicable because there is no nighttime use.

Receivers 6 through 10 are in the City of Los Angeles and Receiver 14 is in Los Angeles County.

dBA = A-weighted decibels; Leq = equivalent sound level; VA = Veterans Affairs

TABLE 6 – ALLOWABLE MAXIMUM INTERIOR GROUND-BORNE NOISE FROM UNDERGROUND CONSTRUCTION ACTIVITIES

Land Use Activity	Groundborne Noise Level Limits ¹ – L _{max} (dBA)
Single-Family Dwellings	40
Multi-Family Dwellings	45
Hotel/Motel	50
Offices	50
Commercial Buildings	55
Concert Halls, Recording and TV Studios	30
Auditoriums and Music Rooms	35
Churches and Theaters	40
Hospital Sleeping Rooms	45
Schools and Libraries	45

Notes: ¹ The groundborne noise limits are the maximum sound level as measured using the “SLOW” setting on a standard sound level meter, which is equivalent to the maximum 1-second RMS sound level. The limits are applicable to all indoor spaces that are commonly used by the occupants.
 dBA = A-weighted decibels; L_{max} = maximum sound level

TABLE 7 – GROUNDBORNE VIBRATION AND GROUNDBORNE NOISE THRESHOLDS FOR HISTORIC BUILDINGS WITH NOISE SENSITIVE USES

Site ID	Receiver	Damage Risk GBV Threshold – PPV (in/sec)	Annoyance GBV Threshold – VdB	GBN Threshold – dBA
A	Wadsworth Theater	0.12	80 VdB	40 dBA
B	Wadsworth Chapel	0.12	80 VdB	40 dBA
E	Building 90	0.20	80 VdB	40 dBA
F	Building 91	0.20	80 VdB	40 dBA
I	Building 23	0.12	80 VdB	40 dBA

Notes: dBA = A-weighted decibels; GBN = groundborne noise; GBV = groundborne vibration; in/sec = inches per second; PPV = peak particle velocity; VdB = vibration decibels

TABLE 8 – NOISE EMISSION LIMITS FOR CONSTRUCTION EQUIPMENT USED DURING NIGHTTIME HOURS; MEASURED AT 50 FEET(1)

Equipment Category	Lmax Level (dBA)
All other equipment > 5HP	81
Auger Drill Rig	81
Backhoe	75
Bar Bender	75
Boring Jack Power Unit	80
Chain Saw	81
Compactor	75
Compressor (2)	65
Compressor (other)	75
Concrete Mixer	71
Concrete Pump	77
Concrete Saw	81
Crane	81
Dozer	81
Dump Truck	81
Excavator	81
Flat Bed Truck	81
Front End Loader	75
Generator	77
Gradall	81
Grader	81
Horizontal Boring Hydraulic Jack	80
Jackhammer	81
Paver	81
Pickup Truck	55
Pneumatic Tools	81
Pumps	77
Rock Drill	81
Scraper	81
Soil Mix Drill Rig	80
Tractor	79
Vacuum Excavator (Vac Truck)	81
Vacuum Street Sweeper	80
Welder	73
Notes: (1) Noise emission limits apply to equipment used at surface of construction site during nighttime hours of 9 pm to 7 am. (2) Portable Air Compressor that is rated at 75 cfm or greater and that operates at greater than 50 psi.	

**TABLE 9 – PRELIMINARY NOISE PROJECTIONS
 (REFER TO DRAWING PREPARED ACCORDING TO REQUIREMENTS OF THIS SECTION.)**

Activity	Typical Expected Leq Levels at 50 ft from Construction Equipment, with No Noise Control Measures (dBA)

TABLE 10 – ADJUSTMENTS FOR CLOSE-IN EQUIPMENT NOISE MEASUREMENTS

Measurement Values to be Subtracted from Measured Sound	
Distance (Feet)	Level to Estimate Sound Level at 50 Feet (dBA)
19-21	8
22-23	7
24-26	6
27-29	5
30-33	4
34-37	3
38-42	2
43-47	1
48-50	0

TABLE 11 – CONSTRUCTION VIBRATION LIMITS FOR ANNOYANCE

Vibration Type	Permissible Aggregate Duration	Vibration Limit (peak particle velocity (PPV))	Vibration Limit (rms Velocity) VdB re 10 ⁻⁶ in/sec))
Sustained	>1 hour/day	0.01 in/sec	80
Transient	<1 hour/day	0.03	90
Transient	<10 minutes/day	0.10	100

TABLE 12 – CONSTRUCTION VIBRATION LIMITS FOR DAMAGE RISK TO BUILDINGS

Building Category	Allowable Peak Vibration (peak particle velocity (PPV) in/sec)	Allowable Peak Vibration (VdB re 10 ⁻⁶ in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.50	114
II. Engineered concrete and masonry (no plaster)	0.30	110
III. Non-engineered timber and masonry buildings	0.20	106
IV. Buildings extremely susceptible to vibration damage	0.12	101

TABLE 13 – CONSTRUCTION VIBRATION LIMITS FOR DAMAGE RISK TO HISTORIC RESOURCES

Site ID	Historic Resource	Peak Particle Velocity (in/sec)
A	Building 226: Wadsworth Theater	0.12
B	Building 20: Wadsworth Chapel	0.12
C	Bonsall Avenue underpass murals ¹	0.5
D	Bonsall Avenue palm rows	1.0
E	Building 90: Duplex – Staff residence	0.2
F	Building 91: Duplex – Staff residence	0.2
G	Building 23 Landscape	1.0
H	Fence with stone piers	1.0
I	Building 23: Quarters and outbuilding – unoccupied	0.12
J	Fireplace structure	0.2
K	Palm-tree grid	1.0
L	Spanish-American War Monument	0.5
M	Wilshire Boulevard gatehouses (2)	0.5
N	Burial section with markers	0.5
O	Cemetery entrance plaza	0.5
P	Roads/curbs/walkways	0.5
Q	Cemetery perimeter trees	1.0
15	Linde (Westwood) Medical Plaza	0.2

TABLE 14 – VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT(1)

Equipment	Peak Vibration at 25 ft (peak particle velocity (PPV) in/sec)	Approximate RMS Vibration at 25 ft (VdB re 10 ⁻⁶ in/sec)
Pile Driver (impact)	0.644 – 1.518	104 - 112
Pile Driver (sonic/vibratory)	0.170 – 0.734	93 - 105
Clam Shovel Drop (slurry wall)	0.202	94
Hydromill (slurry wall)	Soil 0.008 Rock 0.017	66 75
Vibratory Roller Compactor	0.210	94
Hoe Ram	0.089 – 0.19	87 - 94
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58
Tunnel Boring Machine (2)	0.055 AT 33 ft	83 AT 33 ft
Tunnel Train (2)	0.050 AT 50 ft	82 AT 50 ft
Notes: (1) This source data is preliminary in nature and it is up to the Contractor to verify and update information during construction (and, where possible, before construction). (2) For underground sources, use the slant distance determined by calculating the hypotenuse of the triangle formed by the depth between the building and top-of-rail and the horizontal (plan) distance between the building and top-of-rail.		

TABLE 15 – CORRECTION FACTORS FOR VIBRATION CALCULATIONS

Vibration	Correction Factors (dB)
Vibration (VdB) to groundborne noise (dBA)	-20dBA
Building coupling and path to sensitive space	4-stories or greater: -7 dB

FIGURE 1
QUARTERLY NOISE CONTROL PLAN FORM - PART B

QUARTERLY NOISE CONTROL PLAN (DUPLICATE AS NEEDED)

Contract No.: _____ Contract Name: _____

Contractor: _____ Site: _____

Date: _____ Land Use: _____

Resubmit every 3 months.

PART B: RESIDENTIAL, COMMERCIAL AND INDUSTRIAL PROPERTY NOISE LEVELS

	Calculated Noise Levels (dBA)*	
	Calculated one hour Leq (dBA)	Calculated Lmax (dBA)
Nighttime		

NOISE ABATEMENT MEASURES

ANTICIPATED EFFECTS

CALCULATIONS: Attach additional sheet(s) as needed.

Contract No(s): _____

FIGURE 2. NOISE MEASUREMENTS REPORT FORM

Date: _____

Time: _____

NOISE MEASUREMENTS REPORT FORM

Measured By: _____ Of: _____ (Company)

Monitoring Address: _____ (Provide Sketch on Back)

Location No: _____ Wind Speed: _____ Km/Hr Direction: _____
 (MPH x 1.6)

Location of Sound Level Meter: (No closer than 15 meters from equipment and 3 meters from building)

Monitoring was Conducted: _____ Meters from Equipment (_____)
 (Type(s): Leave Blank for Baseline)

Land Use: Residential/Institutional Business/Recreational Industrial

Sound Level Meter: Make and Model: _____ A - Weighted Sound Level (Slow)
 C - Weighted Sound Level (Fast)

Duration of Measurement: _____
 (15 minutes to 1 hour)

Calibration		Field Notes (example: 2200-2205 H, Airplane 90 dB)
one-hour Leq		
L ₅₀		
L ₁₀		
L _{1.0}		
MAX _L		
Allowable Noise Limit		

Check one of the following:

Ongoing Construction Post-Construction: _____ Baseline Conditions
 (Contract)

(Complete all that apply below)

Active Contract(s): _____
 (List all contracts that contribute to measured noise)

Complaint Response: _____
 (Describe: Include Log-In Number)

Abatement Follow-up: _____
 (Describe)

FIGURE 3

EQUIPMENT NOISE LEVEL DATA REPORTING FORM

APPLICATION FOR CERTIFICATE OF EQUIPMENT NOISE COMPLIANCE

Contractor Name: _____

Contract Name & Number: _____

Equipment Type: _____

Manufacturer & Model Number: _____

Identification Number: _____

Rated Power & Capacity: _____

Operating Condition During Test: _____

Measured Sound Levels at 20 to 50 feet:

Measured Values and Distance:

Right Side: _____ dBA (SLOW), at _____ feet

Left Side: _____ dBA (SLOW), at _____ feet

Estimated Values at 50-Foot Distance:

Right Side: _____ dBA (SLOW).

Left Side: _____ dBA (SLOW).

Maximum Values Allowed for this Equipment: _____ dBA (SLOW) at 50 feet.

If equipment sound level exceeds maximum value allowed, indicate action taken to achieve compliance:

Name, Address & Phone No. _____
of Acoustical Engineer _____

Authorized Signature: _____ Date: _____

CONTRACTOR'S APPROVAL:

Authorized Signature: _____ Date: _____

ENGINEER'S CONCURRENCE:

Authorized Signature: _____ Date: _____

SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Eliminating or minimizing air, soil and water pollution generated by construction activities.
- B. Complying with legal requirements applicable to Contractor Generated Hazardous Wastes, including preparation and implementation of Contractor Generated Hazardous Waste Management Plan.
- C. Designating a qualified staff member as Pollution Control Representative.

1.02 RELATED SECTIONS

- A. Section 01 33 00 Submittal Procedures
- B. Section 01 35 35 Water Pollution Control (Construction SWPPP)
- C. Section 01 43 10 Project Quality Program Requirements - Design/Build
- D. Section 01 50 00 Temporary Facilities and Controls
- E. Section 01 51 23 Temporary Construction Ventilation

1.03 REFERENCES

- A. Standard Specifications for Public Works Construction (SSPWC)
 - 1. Green Book Standard Specifications for Public Works Construction, Latest Edition adopted by City of Los Angeles Board of Public Works (LABPW).
- B. City of Los Angeles, Department of Public Works
 - 1. Brown Book Latest Additions and Amendments to the Green Book.
- C. County of Los Angeles, Department of Public Works
 - 1. ~~Gray Green Book~~ ~~Latest Additions and Amendments to the Green Book.~~
- D. Metro has prepared an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Mitigation measures from these documents are incorporated into these specifications where applicable.
- E. South Coast Air Quality Management District (SCAQMD) rules and regulations.

1.04 QUALITY ASSURANCE

- A. Comply with requirements of Section 01 43 10, Project Quality Program Requirements – Design/Build.

1.05 SUBMITTALS

- A. Refer to Section 01 33 00, Submittal Procedures.
- B. Pre-Construction
 - 1. Contractor-Generated Hazardous Waste (CGHW) Management Plan: Required 30 days prior to commencement of field activities.
 - 2. Fugitive Dust Emissions Control Plan: Required 30 days prior to commencement of field activities. Submittal of the Fugitive Dust Emissions Control Plan for Metro is independent of any SCAQMD requirement for a Fugitive Dust Emissions Control Plan under SCAQMD Rule 403 or other applicable Rule.
 - 3. Rule 1166 Plan for VOC impacted soils to be submitted and approved by SCAQMD prior to earth moving activities in known impacted areas.
 - 4. Air Scrubber product and operational data.
- C. Construction
 - 1. Fugitive dust emissions and control measures monthly reports.

1.06 DEFINITIONS

- A. Contractor-Generated Hazardous Waste: Hazardous Waste and Solid Waste generated, released or discharged by the Contractor or the Contractor's agents, Subcontractors, or Suppliers, or by their respective employees not related to Hazardous Waste and Hazardous Materials scope that is defined as part of the Project.
- B. Contractor-Generated Hazardous Waste (CGHW) Management Plan: A written waste management plan properly governing CGHW prepared and implemented in accordance with Title 22, Division 4.5, California Code of Regulations, and other applicable laws and regulations.

1.07 WORKSITE CONDITIONS

- A. Contractor shall delegate environmental control, pollution monitoring and record keeping requirements to Contractor's Safety Engineer, Contractor's Environmental Manager, or most appropriate personnel.

PART 2 - PRODUCTS

2.01 POLLUTION CONTROL

- A. Provide products required for Work in accordance with Standard Specifications for Public Works Construction (SSPWC) and as specified herein.
- B. Scrubbers: Comply with Section 01 51 23, Temporary Construction Ventilation.

PART 3 - EXECUTION

3.01 AIR POLLUTION CONTROLS

- A. Comply with the SSPWC Greenbook, Section 7-8.2, Air Pollution Control.
- B. Criteria for Fugitive Dust: Detailed descriptions and explanations of specific fugitive dust control measures are contained in South Coast Air Quality Management District (SCAQMD) Rules and Regulations (Rule 403, Fugitive Dust; Rule 1186, PM₁₀ Emissions from Paved and Unpaved Roads). Key features of Rule 403 are described below. The language of the most current version of Rule 403 and its Implementation Handbook governs unless indicated. Obtain permits or plans as required by the SCAQMD for air pollution controls. Prepare a Dust Control Monitoring Plan that includes the following:
 - 1. Designate a staff member knowledgeable in environmental matters as the Air Pollution Control representative.. The representative shall be responsible for ensuring compliance with the Fugitive Dust Emissions Control Plan, its preparation, submittal, implementation, monitoring, and record keeping.
 - 2. Do not cause or allow emissions of fugitive dust from transport, handling, construction or storage activity to remain visible in atmosphere beyond property line of the emission source.
 - 3. Take precautions to minimize fugitive dust emissions from operations involving demolition, excavation, grading, and clearing of land and disposal of solid waste. Utilize one or more of the applicable Best Available Control Measures (BACM) for each potential source of fugitive dust listed in Table 1 of Rule 403.
 - 4. Do not cause or allow particulate matter to exceed 50 µg/m³ when determined as the difference between simultaneous upwind and downwind samples, collected on high volume particulate matter samplers or other EPA approved equivalent method, for PM-10 monitoring at the property line for a five hour period during the time of active operations. The decision to conduct sampling will be made and performed by the SCAQMD. Contractor is responsible for payment of the Ambient Air Analysis fees, at no additional cost to Metro, imposed by SCAQMD under Rule 304.1.
 - 5. Prevent, or remove within one hour, the track-out of bulk material onto public paved roadways, as a result of Contractor's operation, or utilize at least one of the control measures listed in Table 3 of Rule 403 and prevent the track-out of bulk material onto public paved roadways, and remove such material at any time track-out extends for more than 50 feet onto any paved public road, and

remove all visible roadway dust tracked-out upon public paved roadways at the end of each Work day when active operations cease.

- C. Use the following procedures and techniques at a minimum:
1. Trucks transporting soil, sand, other excavated, or backfill materials to or from the sites shall be covered with a tarpaulin from the point of origin to the point of unloading. Secure firmly or remove loose tarpaulin material from such loads before leaving Worksite.
 - a. For trucks hauling wet materials, use only dump bodies that do not allow wet material to leak out during travel (e.g. no bottom dump haulers). Use end dump bodies with tail gates that seal.
 2. Remove visible roadway dust tracked-out upon public sidewalks at the conclusion of each shift. If necessary, water down and sweep streets around and near to the site that have heavy volumes of construction vehicles carrying debris and excavated materials, and adjacent sidewalks.
 3. If conveyors are used, enclose conveyors and cover transfer points along conveyor system. Minimize drop height to the stockpile. Provide a sprinkler system at stockpiles and apply water to soils to retard dust development as required. This process does not include the slurry separation system (if used).
 4. Install wheel/undercarriage-washing equipment, or a functional equivalent, at tunnel excavations as the first method by which to ensure that haul trucks have clean wheels and undercarriages before entering public roadways.
 5. Incorporate adapted measures developed by SCAQMD on Best Available Control Measures (BACM) for Fugitive Dust and Rule 403 into the site operations for Fugitive Dust Control.
 6. Water down construction sites according to SCAQMD Rule 403, as required to suppress dust, during grading, handling of excavation soil or debris, or during demolition.
 7. Establish regular cycles and locations for cleaning trucks that haul soil from site.
- D. Burning of wastes is prohibited. Remove scrap and waste material and dispose of in accordance with laws, codes, regulations, ordinances and permits.
- E. Use construction equipment designed and equipped to prevent or control air pollution in conformance with most restrictive regulations of EPA, State and local authorities. Maintain evidence of such design and equipment and make available for inspection by Metro.
- F. Establish and maintain records of a routine maintenance program for internal combustion engine powered vehicles and equipment used on Project. Keep records available for inspection by Metro.

- G. Implement Fugitive Dust Measures listed in tables 1 and 2 of SCAQMD Rule 403 and perform record keeping in accordance with Sections (e)(1) of said rule. Make records available to Metro for inspection.
- H. Apply Best Available Control Technology (BACT) method or use alternative forms of bentonite such as pellets, granules, or biodegradable gel. If bentonite is used in a powder form, implement measures to ensure that PM10 emissions do not exceed permissible levels. Additional measures may include:
 - 1. Bulk Transport: transport bentonite by pneumatic means or enclosed trucks;
 - 2. Enclosed Handling and Storage: unload bentonite pneumatically or by enclosed conveyors and chutes. Store bentonite in enclosed containers or silos with fabric filters.
 - 3. Enclosed Slurry Batch Mixing: Use a mixer that is equipped with a pneumatic loader and a fabric filter or a mixer in an enclosed structure equipped with fabric filters at ventilation openings.
- I. Criteria for VOC Contaminated Excavated Soils: Detailed descriptions and explanations of control measures are contained in SCAQMD Rule 1166. Contractor shall follow procedures outlined in Rule 1166, for Project specific permit application.
- J. Perform Odor Control. Use odor suppressants on stockpiles or other approved methods.

3.02 WATER POLLUTION CONTROLS

- A. Refer to Section 01 35 35, Water Pollution Control.

3.03 STORMWATER POLLUTION PREVENTION PLAN

- A. Refer to Section 01 35 35, Water Pollution Control.

3.04 HAZARDOUS WASTE CONTROLS

- A. This Section applies to Contractor-Generated Hazardous Waste (CGHW).
- B. Contractor-Generated Hazardous Waste Management Plan: Prepare and implement a CGHW Plan in accordance with Title 22, Division 4.5, CCR, and applicable laws and regulations. Metro has the right to enforce Quality Assurance/Quality Control monitoring on Contractor's implementation of CGHW Plan.
- C. Waste Classification: In the event that Contractor or Metro reasonably suspects that Contractor has generated, released or discharged Contractor-Generated Hazardous Waste, bear costs of sampling and monitoring tests and other investigations to determine whether said waste is Solid Waste or Hazardous Waste in accordance with federal, state and local requirements, including without limitation, RCRA and Title 22, CCR Chapter 30, Article II (as amended, modified or replaced from time to time). Metro reserves the right (but not the obligation) to perform its own physical and chemical analyses and tests on suspected CGHW. Furnish samples and test results, at Contractor's cost, as directed by Metro.

- D. Disposal Regulations: Be responsible for the management, abatement, removal, remediation, clean up, loading, transport, unloading, reuse, recycling, storage and disposal of CGHW in accordance with laws, rules, regulations and orders, including without limitation, Title 22, Chapter 30 et seq California Code of Regulations, California Health and Safety Code Section 25100 et. seq, Titles 23 and 26, California Code of Regulations, and regulations of the waste disposal facility to be used.
- E. Haul Routes: Haul routes for transporting solid or Hazardous Wastes are subject to the approval of County of Los Angeles, City of Los Angeles, Caltrans, or other agency having jurisdiction over the transportation of such materials. Post copy of haul route permit at Worksite. Sweep access points and surrounding areas as needed, no less than 3 times daily.
- F. Street Sweeping: Have available, on site, at all times an operable standard size street sweeper capable of operating efficiently within the traffic conditions, and that complies with all applicable environmental standards. All public streets, including but not limited to private driveways and parking areas, impacted by construction vehicle traffic and construction activities, shall be kept clean of all track-out debris and dust build up at all times. Contractor shall monitor all areas, on a continuous basis, that are affected by the work or haul activities and take immediate action to correct any deficiencies. This shall include but not be limited to monitoring and cleaning, as required by Metro, County of Los Angeles, City of Los Angeles, Caltrans, and any other agencies having jurisdiction, in and around all staging sites, work areas, and haul routes.

END OF SECTION 01 57 19

the Work until satisfactory action has been taken. Contractor shall not base any claim or request for equitable adjustment for additional time or money on any Stop Order issued under these circumstances;

24.4.4 Maintain an accurate record of exposure data on all occurrence(s) incident to Work performed under the Contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall report this data in the manner prescribed by LACMTA; and

24.4.5 Be responsible for compliance with this Article by its Subcontractors of any tier.

GC-25 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT & VEGETATION *

25.1 Protection

Contractor shall protect existing structures, equipment and vegetation within and adjacent to the Worksite and shall exercise due caution to avoid damage to such.

25.2 Repair and Replacement

Unless otherwise provided, Contractor shall repair or replace all existing structures, equipment, and vegetation damaged or removed by Contractor. Repairs and replacements shall be at least equal to the existing structures, equipment, or vegetation, and shall match them in finish and dimension.

25.3 Costs

All costs for protecting, removing and restoring existing structures, equipment, and vegetation shall be the sole expense of Contractor. If Contractor fails or refuses to make timely repairs, restoration or replacement LACMTA may make the repairs, restoration or replacement. All costs incurred by LACMTA, as determined by LACMTA, for such repairs, restoration or replacement shall be repaid by Contractor without limitation of any of LACMTA's rights and remedies provided by Law or under this Contract, LACMTA may deduct the cost from any amount due under this Contract.

GC-26 DAMAGE TO WORK AND RESPONSIBILITY FOR GOODS *

26.1 Responsibility for Work

Except as otherwise specified in this Article, Contractor shall be solely responsible for Goods delivered and Work performed until the

Carlson, Kristin

From: Martin, Roger <MartinR@metro.net>
Sent: Friday, October 26, 2018 11:18 AM
To: Andrew Strain (astrain@concoursefederal.com); Abreu, Hector M. (CFM) (Hector.Abreu@va.gov)
Cc: Carlson, Kristin; Sah, Maressa; Nguyen, Mary (FTA); Charlene.LeeLorenzo@dot.gov
Subject: FW: Construction methods for bus layover area

Hello Andrew and Hector,

Per Tuesday's request, WSP provided an overview of the construction methods for the bus layover area. Please see below; and of course, please let us know if you have any questions.

Thanks,

Roger

Subject: Construction methods for bus layover area

Here's an overview of what is required to construct the bus layover area:

The Bus Layover will be constructed as part of the civil improvements associated with the Westwood/VA Hospital Station and is located at the northwest corner of the eastbound Wilshire ramps and Bonsall Ave intersection. The existing sidewalk will be demolished using a saw-cutter and jack hammer. A small excavator will load the debris into a dump truck for hauling offsite. The soil and subbase for the replacement bus pad and sidewalk will be compacted using a hand held tamper. Material will be delivered via flat bed, dump truck, and concrete truck for the PCC bus pad, curb, gutter, and sidewalk. Hand trowels and bull floats will be used to finish the concrete surface. The work would take up to one month to complete. There will be 57 trucks TOTAL for the work over the course of the month or about 4 trucks a day. In terms of vibration, this work would not have an effect on Wadsworth Chapel. There would be limited vibration associated with jack hammers.

An important note to add is that the County was to perform work in the exact bus layover location for their Wilshire Blvd et al improvements and would have required the same equipment without noise and vibration monitoring which Metro is providing.

-LAEmHhHzdJzBITWfa4Hgs7pbKl

Westside Purple Line Extension
Overview of Preliminary Section 106 Memorandum of Agreement Amendments
(October 30, 2018)

The following is an overview of the first amendment to the Section 106 Memorandum of Agreement (MOA) between the Federal Transit Administration (FTA) and the California State Historic Preservation Officer (SHPO) regarding the Westside Purple Line Extension Project (WPLE, Project), formerly known as the Los Angeles Westside Subway Extension Project, in Los Angeles County, California. The overview includes and summarizes requests and comments made by consulting parties, signatories, and proposed new signatories during report reviews and consulting parties' meetings. These preliminary concepts will be discussed with all signatories and consulting parties as the amendment is formally developed. This information is not intended to be exhaustive. Some details of the information provided below will change as a result of Section 106 consultation and the text below does not constitute a final commitment from any party or agency. Signatories, in consultation with consulting parties, will determine details regarding review periods, processes, and dispute resolution during consultation on the MOA amendment.

The MOA Amendment will follow the structure from the Advisory Council on Historic Preservation (ACHP) Outline for an MOA Amendment, shown below:

AMENDMENT TO
[INSERT FULL NAME OF THE AGREEMENT]
(AGREEMENT)

WHEREAS, the Agreement was executed on [insert month and year of execution];

WHEREAS, [insert a concise explanation of the reasons for the amendment];

NOW, THEREFORE, in accordance with Stipulation [insert the number of the amendment stipulation] of the Agreement, [insert the Signatories of the Agreement] agree to amend the Agreement as follows:

1. Amend Stipulation [insert the number of the stipulation to be amended] so it reads as follows:

[insert the amended text of the stipulation]

[AND/OR, if the amendment involves adding a new stipulation to the Agreement]

2. Add new Stipulation [insert the number of the new stipulation]:

[insert the text of the new stipulation]

[AND/OR, if the amendment involves deleting a stipulation of the Agreement]

3. Delete Stipulation [insert the number of the stipulation to be deleted].

[Repeat #1, 2, and 3 as necessary]

[OR, if the amendments are so pervasive that it is easier to cut/paste a copy of the entire, amended Agreement]

1. Amend the Agreement so it reads as follows:

[attach the text of the entire, amended agreement]

[Insert signature and date lines for all Signatories. If the amendments add duties to a party that did not sign the Agreement, add a signature line for that party.]

Preamble

- Recitals (generally referred to as “Whereas” clauses) in the MOA Amendment will be revised to indicate both VA and ACHP are becoming signatories to the amended MOA. Stipulations will include VA and ACHP where appropriate.
- VA has designated FTA as the lead federal agency for this undertaking.
- The Los Angeles County Metropolitan Transportation Authority (Metro, referred to as LACMTA in the MOA) is the project sponsor.
- Provide information as to why the MOA is to be amended.
- Provide information on signatories, invited signatories, consulting parties and Native American groups. (Per ACHP: “the involvement and role of the signatories, invited signatories, and concurring parties should be clearly documented in the Preamble section, since the roles they will play with regard to the execution, amendment, and termination of the agreement will differ.” Specific language can be determined during consultation.)

Stipulations

Design Review for Project Elements

- The Undertaking would be designed in adherence to the 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 historic properties that will be affected by either construction staging activities or station entrances to avoid adverse effect to these properties.
- Because a portion of the WPLE Project will occur on VA property and within the VA Medical Center Historic District (this is the name used in the current MOA; this could be amended to the West Los Angeles Veterans Affairs [WLA VA] Historic District if VA prefers).
- VA will be afforded an opportunity to review and comment on permanent surface design features, such as station design and vent grate structures, within the WLA VA Historic District to avoid adverse effects to historic properties. Comment resolution and dispute resolution processes will also be in the MOA amendment. (Note: SHPO review processes are described in existing MOA.)
- FTA and Metro will retain a qualified historic preservation consultant to support review of designs for project elements within the WLA VA Historic District to ensure compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. (This will apply to other historic properties, such as the Linde (Westwood) Medical Plaza in addition to the WLA VA Historic District.)
- Further Section 106 review will occur in consultation with VA, SHPO, ACHP, and consulting parties for any project changes, as necessary. Additional historic resources identification and evaluation efforts for project changes will take into consideration the methodology in the Archaeological Sensitivity Model – Veterans Affairs West Los Angeles Campus Master Plan (2018).

Landscape Elements within the WLA VA Historic District

- Landscape treatments and related decisions will be included in the MOA amendment. FTA and Metro will implement the project according to the *Guidelines for the Treatment of Cultural Landscapes*.
- The MOA Amendment will describe the decision-making and review process for proposals to treat unhealthy trees, as feasible, as well as removal, storage, and replanting of trees within the WLA VA Historic District.
- Should trees require replacement within the WLA VA Historic District, VA and SHPO will be afforded opportunity to review proposals for replacement trees (either with original trees or in-kind, or with agreed-upon species) and placement of those trees within the historic landscape at the WLA VA Historic District.

Historic Properties Monitoring and Unanticipated Discoveries

- The MOA amendment will include stipulations which discuss monitoring during construction and the approach to notification, consultation, and development of treatments, as needed, for unanticipated discoveries.
- The stipulation will include provisions for compliance with Native American Graves Protection and Repatriation Act (NAGPRA) and Native American consultation.
- In consultation with VA, SHPO, and consulting parties, FTA/Metro will develop an Historic Resources Monitoring and Discovery Plan (HRMDP) for construction activities, including the construction within the WLA VA Historic District. The MOA Amendment will include provisions for the development and content of the HRMDP.
- The construction monitoring will include an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards as well as a Native American tribal monitor, where appropriate. The coordination of monitoring efforts will be included in the HRMDP.
- The HRMDP will include descriptions of the notifications and processes for unanticipated discoveries and will include a process to develop and consult on proposed treatment plans for unanticipated discoveries.
- The HRMDP will outline the protocol for NAGPRA compliance and the roles of the FTA, Metro, and the VA.
- FTA/Metro will ensure that any treatment plan for NAGPRA compliance includes a plan of action that satisfies VA's obligations under the federal and state law.
- FTA/Metro will consult with VA and Native American tribes to determine disposition of any artifacts—historic or prehistoric—that are identified during construction.
- HRMDP will include protocols for monitoring and avoiding and treatment of inadvertent damage to historic structures. (This will apply to other historic properties, such as the Linde (Westwood) Medical Plaza, in addition to the WLA VA Historic District.) Note that some monitoring requirements, such as noise and vibration monitoring on buildings are contained within contract documents and the Mitigation Monitoring and Reporting Plan (MMRP) for the Project. The HRMDP will include a cross reference to related contract or MMRP requirements. VA's role in the review and development of construction-monitoring plans under the MMRP would be stipulated in the real estate Memorandum of Understanding (MOU) and the details will be covered in the Access and Easement Agreement (AEA).

Consultation and Outreach

- The MOA Amendment will include discussion on the areas where additional consultation/reviews with consulting parties and Native American groups will occur.
- The approach for public outreach, including information to be included on the project website for historic properties, will be further discussed with all parties to the MOA during Section 106 consultation.

Administrative Provisions

- Administrative provisions include reporting requirements and review procedures. These will outline the process for signatory parties and consulting parties to review and comment on reports prepared under the MOA amendment. (Note: This information exists in the current MOA and can be amended as needed.)
- SHPO, ACHP, and FTA previously agreed that having two provisions for dispute resolution (one in the original MOA and an additional one in the amendment specific to the VA) was not desirable. The existing stipulation could be amended or updated if needed.

WPLE Section 3 - Environmental Commitment Crosswalk						
October/November 2018						
Issue	Metro Contractor Specifications	Design Plans	Section 106 MOA*	Real Estate AEA**	VA Review	Notes/Considerations
Vibration monitoring of historic buildings/resources	01 56 19 - Construction Noise and Vibration Control 01 56 18 - Operational Train Noise and Vibration Control 01 56 20 - Acoustic, Noise and Vibration Control for Station Environment	PDD Dwgs G-5231, G-5232, G-5251 Show the area of the Historic District		VA to add language if needed	Weekly review of results of Construction Noise and Vibration Control reports	
Noise monitoring during construction	01 56 19 - Construction Noise and Vibration Control 01 56 18 - Operational Train Noise and Vibration Control 01 56 20 - Acoustic, Noise and Vibration Control for Station Environment			VA to add language if needed	Weekly review of results of Construction Noise and Vibration Control reports	Additional language can be added as an item outside of the MOA.
Tree storage/replanting	C1151 - 01 71 43 - Permits Licenses and Agreements C1152 - 01 56 39 - Shrub and Tree Protection	C1151 - PDD C-4133, C-4141, C-4146 C1152 - PDD C-5133, C-5138, C-5141 and C-5146	X		VA review of the Arborists reports and tree species and locations - covered in the MOA	
Monitoring of building facades for dust/dirt	01 57 19 - Temporary Environmental Controls			VA to add language if needed		This is a Metro typical specification. If VA requires additional language specific to the historic district, add to the AEA. Additional language can be added as an item for Consideration outside of the MOA.
Archaeological monitoring during construction	01 35 80 - Archaeological and Paleontological Coordination		X		Covered by the MOA	
Public outreach during construction	01 35 95 - Public Information and Community Relations					Public outreach related to historic resources during construction may occur as needed
Soundwall/barrier fence around construction staging areas	01 71 43 - Permits Licenses and Agreements 01 50 00 - Temporary Facilities and Control 01 56 19 - Construction Noise and Vibration Control	C1151 - PDD C-4133 to C-4146 C1152 - PDD C-5132, C-5133 and C-5141		VA to add language if needed	VA may wish to review the plans and reports	
VA Access Plan to maintain vehicular/pedestrian access on Bonsall Avenue during construction	C1151 & C1152 - 01 71 43 - Permits Licenses and Agreements - 'VA Access Plan' required			VA to add language if needed	VA review of the Access Plan report is included in the specification	
Inadvertent damage to buildings	General Conditions - GC-25 - Protection of Existing Structures, Equipment and Vegetation			VA to add language if needed		

* For Clarification - MOA = Memorandum of Agreement between the Federal Transit Administration and the California State Historic Preservation Officer regarding the Los Angeles Westside Extension Project, Los Angeles County, California.

** For Clarification - AEA = Access and Easement Agreement between Metro and Veterans Affairs, a Real Estate Document outlining the details of the obligations from the Memorandum of Understanding

Carlson, Kristin

Subject: FW: WPLE - Section 3 - Historic Properties Reassessment of Effects Report

From: Abreu, Hector M. (CFM) [<mailto:Hector.Abreu@va.gov>]
Sent: Thursday, November 01, 2018 5:59 AM
To: Martin, Roger; Andrew Strain (astrain@concoursefederal.com)
Cc: Carlson, Kristin (Kristin.Carlson@wsp.com); Foell, Stephanie (Stephanie.Foell@wsp.com); Ellwood, Martin; 'guy.blanchard@wsp.com'; Sah, Maressa
Subject: RE: WPLE - Section 3 - Historic Properties Reassessment of Effects Report

Roger,
Thanks for your response. VA concurs with your statements and approves the Effects Report. Please remember to include VA in any communications you may receive with regards to comments on the report for our knowledge.
Thanks

From: Martin, Roger [<mailto:MartinR@metro.net>]
Sent: Thursday, November 01, 2018 8:49 AM
To: Abreu, Hector M. (CFM) <Hector.Abreu@va.gov>; Andrew Strain (astrain@concoursefederal.com) <astrain@concoursefederal.com>
Cc: Carlson, Kristin (Kristin.Carlson@wsp.com) <Kristin.Carlson@wsp.com>; Foell, Stephanie (Stephanie.Foell@wsp.com) <Stephanie.Foell@wsp.com>; Ellwood, Martin <Martin.Ellwood@wsp.com>; 'guy.blanchard@wsp.com' <guy.blanchard@wsp.com>; Sah, Maressa <SahM@metro.net>
Subject: [EXTERNAL] RE: WPLE - Section 3 - Historic Properties Reassessment of Effects Report
Importance: High

Good morning, Hector.

Thank you for your comments. We have reviewed the information you provided, we understand the design of permanent structures will be a collaboration between parties. We look forward to working with the VA and FTA in the development of MOA and the appropriate language for the Access and Easement Agreement (AEA).

At this time, we understand VA approves of the Historic Properties Reassessment of Effects Report (Effects Report) and FTA can provide to SHPO for their review and concurrence. Please affirm this and FTA will move the Effects Report to SHPO.

Thank you,

Roger Martin

From: Abreu, Hector M. (CFM) [<mailto:Hector.Abreu@va.gov>]
Sent: Wednesday, October 31, 2018 1:37 PM
To: Martin, Roger; Andrew Strain (astrain@concoursefederal.com)
Cc: Carlson, Kristin (Kristin.Carlson@wsp.com); Foell, Stephanie (Stephanie.Foell@wsp.com); Ellwood, Martin; 'guy.blanchard@wsp.com'; Sah, Maressa
Subject: RE: WPLE - Section 3 - Historic Properties Reassessment of Effects Report

Roger,

Upon review of all the material submitted we have one small change to the Outline for the Amended MOA (see attachment). Once this change is made, VA approves of the Historic Properties Reassessment of Effects Report (Effects Report) for the Westside Purple Line – Section 3. Please remember that said approval is based upon on FTA, Metro and VA agreeing to develop appropriate language for the Access and Easement Agreement (AEA) and the Amendment to the MOA to address any remaining VA concerns. If you have any further questions please feel free to call.
Thanks

From: Martin, Roger [<mailto:MartinR@metro.net>]
Sent: Tuesday, October 30, 2018 10:33 PM
To: Abreu, Hector M. (CFM) <Hector.Abreu@va.gov>; Andrew Strain (astrain@concoursefederal.com) <astrain@concoursefederal.com>
Cc: Carlson, Kristin (Kristin.Carlson@wsp.com) <Kristin.Carlson@wsp.com>; Foell, Stephanie (Stephanie.Foell@wsp.com) <Stephanie.Foell@wsp.com>; Ellwood, Martin <Martin.Ellwood@wsp.com>; 'guy.blanchard@wsp.com' <guy.blanchard@wsp.com>; Sah, Maressa <SahM@metro.net>
Subject: [WARNING: ATTACHMENT UNSCANNED][EXTERNAL] WPLE - Section 3 - Historic Properties Reassessment of Effects Report
Importance: High

Hello Hector and Andrew,

Thanks again (to everyone) for taking time out of your day today to meet with FTA, Metro/WSP, and VA staff to discuss VA's approval of the *Historic Properties Reassessment of Effects Report* (Effects Report) for the Westside Purple Line – Section 3. Per VA's direction from today's meeting, included in this email are the various attachments to support the actions items that came out of our last meeting on October 23, 2018 and the meeting summary from October 30. This would include:

1. Meeting Minutes from October 30
2. Meeting notes from October 23
3. Maps showing: (1) where only pedestrian surveys were completed, (2) where only GPR surveys occurred, and (3) an overlay of WPLE construction activities.
4. Contractor specifications for noise and vibration monitoring, and inadvertent damage.
5. Overview of the construction methods for the bus layover area, including equipment.
6. Outline of the amended MOA
7. "Crosswalk" of commitments in documents.

At this time, we are requesting VA's concurrence/approval of the Effects Report, which was provided to VA on October 4, 2018 for review. FTA can then send the Effects Report to SHPO to start their 30-day review.

Best,

Roger

—

Roger Martin, AICP, ENV SP
Metro Los Angeles
Transportation Planning Manager, Countywide Planning

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U.S. Department
of Transportation
**Federal Transit
Administration**

REGION IX
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Hawaii, Nevada, Guam
American Samoa,
Northern Mariana Islands

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NOV 8 2018

Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816
Attention: Kathleen Forrest, State Historian

Re: Continued Section 106 Consultation:
Reassessment of Effects for Section 3 of the
Westside Purple Line Extension Project
(OHP Reference #: FTA090722B)

Dear Ms. Polanco:

The Federal Transit Administration (FTA), in coordination with the Los Angeles County Metropolitan Transportation Authority (LACMTA), is continuing consultation per Section 106 of the National Historic Preservation Act, as amended (36 Code of Federal Regulations (CFR) 800) for Section 3 of the Westside Purple Line Extension (WPLE) Project located in Los Angeles, California. Pursuant to 36 CFR 800.5, this letter seeks concurrence on FTA's finding that the refinements to Section 3 of the WPLE Project would result in no additional adverse effects and the previous finding of effect remains unchanged.

In addition, this letter serves to inform you, as the official with jurisdiction, that FTA intends to make a *de minimis* impact finding for historic properties where the Project may result in a use under Section 4(f) of the U.S. Department of Transportation Act of 1966, based on the concurrence on the Section 106 finding of effect.

Undertaking Background

The WPLE Project is an approximate nine-mile, seven-station extension of the existing Metro Purple Line. It will be constructed in three sections. Your office issued a letter of concurrence with FTA's determinations of eligibility and finding of effect to historic properties on December 8, 2011. FTA determined the undertaking will have an adverse effect on one historic property, the Ace Gallery Building in Section 2, which was proposed to be demolished. All other historic properties within the Area of Potential Effects (APE) would not be adversely affected. In March 2012, a Memorandum of Agreement (MOA) was executed as a result of the adverse effect determination. (OHP Reference # 100816B).

Since that time, LACMTA started construction on Sections 1 and 2 and completed advanced engineering for Section 3, which resulted in design refinements to the alignment and stations between the Westwood/University of California Los Angeles (UCLA) and Westwood/Veterans Affairs (VA) Hospital Stations. Additional details may be found in Chapter 5 of the enclosed *Historic Properties Reassessment of Effects Report*. A summary of project refinements is provided below.

At the Westwood/UCLA Station, locations of two station entrances shifted east and closer to Gayley Avenue. The station's northeastern entrance at Wilshire and Westwood Boulevards was relocated within the east side of the Linde (Westwood) Medical Plaza in a space currently occupied by Chase Bank. Relocation

of the station entrance to this area would require reconstruction of the one-story retail space. Additionally, four planters located in front of the building would be removed to support station construction. The planters are not proposed to be replaced in order to promote safe pedestrian circulation at the station.

As shown in Figure 5-2 in the *Historic Properties Reassessment of Effects Report*, refinements within the Westwood/VA Hospital Station area include straightening the tunnel alignment beneath the Veterans Affairs West Los Angeles (VA WLA) South Campus so that the underground alignment no longer curves along the south side of Wilshire Boulevard. Additionally, a subterranean track crossover, previously located near the U.S. General Services Administration (GSA) (Westwood) Federal Building at 11000 Wilshire Boulevard was eliminated. Instead, a crossover will be constructed via a cut-and-cover method west of the Westwood/VA Hospital Station, which is located in Lot 42 north of the VA Hospital.

The Project has been further refined to launch the tunnel boring machine at the western edge of the VA WLA Campus adjacent to the U.S. Army Reserve site. Canary Island palm trees located along Bonsall Avenue and within the Palm-Tree Grid near the tunnel boring machine launch site would be temporarily relocated during project construction and replanted in their original location following construction. Permanent project features include small methane vents that will be flush with the ground, three ventilation grates, an emergency egress hatch, and an emergency egress gravel path. A parking structure is proposed to offset the temporary parking loss on the VA WLA Campus that would occur during construction. The proposed parking structure is located in Lot 43 adjacent to Interstate 405.

Underground conduits along Ohio and Federal Avenues and Wilshire Boulevard are required to provide temporary and permanent power to construction staging areas and the Westwood/VA Hospital Station. The underground conduits required a minor expansion of the APE. All other project refinements occur within the previously established APE. The revised APE was submitted to your office for comment on September 17, 2018. On October 15, 2018, your office commented that the expanded APE was sufficient for the undertaking.

Reassessment of Effects

Built Environment

Within Section 3 of the Project, the Linde (Westwood) Medical Plaza at 10291 Wilshire Boulevard and the (Westwood) Federal Building at 11000 Wilshire Boulevard were previously determined eligible for listing in the National Register of Historic Places (NRHP). The West Los Angeles Veterans Affairs Historic District (WLA VA Historic District, referred to as the VA Medical Center Historic District in prior documentation), is listed in the NRHP. Within the WLA VA Historic District, two historic properties are contributing elements to the historic district but also listed individually in the NRHP: the Wadsworth Chapel and the News Stand (Streetcar Depot). One property, the Los Angeles National Cemetery, is individually eligible for listing in the NRHP.

Linde (Westwood) Medical Plaza. The Linde (Westwood) Medical Plaza is located at the Westwood/UCLA Station. A station entrance would be constructed at the Chase Bank portion of the building. This portion of the building is substantially altered and no longer retains historic integrity or contributes to the historic property. A new Department of Parks and Recreation form has been prepared that describes and documents these changes and has been included as an attachment to the *Historic Properties Reassessment of Effects Report*. The station entrance would be of similar dimensions and massing as the Chase Bank retail space. By following the Secretary of the Interior's (SOI) Standards for the Treatment of Historic Properties, this portion of the building would more closely resemble its original appearance after project work is completed.

The proposed project work would also remove four planters located in front of the building. As described in the *Westside Purple Line Extension Palm Inventory for: Chase Bank Site, Westside Purple Line Extension Project* and the *Historic Properties Reassessment of Effects Report*, the planters contain a mix of original, non-original, and altered elements, with vegetation of various sizes and species, including tall palms.

While the palm trees along Wilshire Boulevard are a prominent feature, the majority of street trees along this roadway are significantly shorter and of a more human scale. Therefore, the palm trees are not consistent with the overall setting and feeling of the roadway and removing them would have no adverse effect to the historic integrity of the Linde (Westwood) Medical Plaza.

Because project elements would be constructed in a portion of the Linde (Westwood) Medical Plaza which is substantially altered and no longer retains historic integrity, does not contribute to the historic property, is designed utilizing SOI standards, no adverse effect is anticipated for this historic property.

(Westwood) Federal Building. The (Westwood) Federal Building at 11000 Wilshire Boulevard is eligible for the NRHP and is located adjacent to construction-related grouting activities and construction staging. The scope of work near the (Westwood) Federal Building and the area of construction staging have been reduced compared to the previous 2011 proposal. The current Project alignment will be 60 feet underground as it crosses the northwest corner of the property boundary and at least 115 feet from the (Westwood) Federal Building. In 2011, no adverse effect was anticipated at the (Westwood) Federal Building, and with the refined scope of work, the Project would still result in no adverse effect to this historic property.

WLA VA Historic District. The WLA VA Historic District is being reassessed for effects because the cut-and-cover station location and alignment have shifted, and the station configuration has changed. Additionally, the alignment and construction staging area, including a tail track exit shaft, would be located within the historic district boundaries. No adverse effects are anticipated for the WLA VA Historic District. Chapter 7 of the *Historic Properties Reassessment of Effects Report* provides a detailed analysis of the contributing elements, including historic landscape features, within the WLA VA Historic District.

The Project will have no effect on the News Stand (Streetcar Depot) which is located within the WLA VA Historic District and approximately 1,540 feet northwest of a proposed bus layover area. The temporary Western VA construction staging area which includes the tail track exit is located approximately 1,740 feet to the south-southeast. No temporary or permanent project features would be visible from the News Stand (Streetcar Depot) due to distance, vegetation, and intervening large buildings.

No adverse effects are anticipated to the contributing elements to the WLA VA Historic District (including the Wadsworth Theater, Building 23, or the duplexes) or the individually listed or eligible historic properties (including the Wadsworth Chapel and the Los Angeles National Cemetery). No work would directly alter these historic properties, and no adverse indirect effects from noise, vibration, or visual effects would occur due to project activities. Effects to the integrity of setting due to construction are minor, temporary, or are in locations where the integrity of setting has been compromised by recent intrusions not related to the Project.

The station, bus layover, replacement parking structure, passenger drop-off area, pedestrian access bridge, and mosaic would be located outside of the WLA VA Historic District but may be visible from select vantage points from within the district. A small emergency exit hatch on the westernmost portion of the WLA VA Historic District and a portion of the gravel path to Wilshire Boulevard for emergency exits would be present within a contributing landscape feature, the Palm-Tree Grid. Wilshire Boulevard. Unobtrusive elements, located at grade or below ground such as the three ventilation grates, access hatches, and a gravel path, would not diminish the district's setting.

While activities in support of tunnel and station box construction may occur over a period of three years, the area would be restored to its prior or an improved condition as determined through consultation with the VA. A small subset of trees comprising the Palm-Tree Grid would be removed, temporarily stored within and adjacent to the grid, and replanted or replaced by a substitute tree species as agreed upon with the VA in consultation with the SHPO. This would allow for the continuity of a historic landscape element.

WPLE Project activities would not affect the character-defining features of any contributing elements within the WLA VA Historic District and would not affect the district's integrity of location, design, materials, workmanship, or association; WPLE Project activities would only temporarily affect the district's integrity of feeling and diminished integrity of setting during Project construction. As a result, no adverse effect to the WLA VA Historic District is anticipated.

Archeological Resources

As described in the attached *Archeological Extended Identification Report*, supplemental research, record searches, and Native American consultation were conducted to identify cultural resources and areas of sensitivity for archeological resources within the revised APE. Within the revised APE, no previously recorded cultural resources were identified, and no new resources were identified. Geotechnical borings were completed within construction staging areas. Locations of known utilities near the VA WLA Campus were mapped. The results of the geotechnical studies based on the borings show that fill is present at the eastern and western edges of Construction Staging Areas 2A and 2B (located along the alignment and crossing Bonsall Avenue), including Lot 42 (See figures in Chapter 3 of the *Archeological Extended Identification Report*).

The analysis included a review of the *Archaeological Sensitivity Model Veterans Affairs West Los Angeles Campus Master Plan, City of Los Angeles, Los Angeles County, California* (Onken et al. 2018). This report indicated low and moderate sensitivity for prehistoric resources in Construction Area 1 adjacent to the Army Reserve site. However, analysis in the *Archeological Extended Identification Report* indicates that Construction Area 1 may have high sensitivity for prehistoric resources based on information on prehistoric burials provided by Chairman Robert Dorame, Gabrielino Tongva Tribe of California. Regarding the areas outside of Construction Area 1, although the Native American Heritage Commission Sacred Lands file did note a sacred land within the APE, no specific record was identified by the tribal parties consulted. The prehistoric village of Kuruvungna Springs (Serra Springs) is located approximately 0.33 mile to the southwest of the APE. Subsequent consultation by FTA with Native American tribes also did not identify any specific cultural resources within the APE. Overall, the potential for intact prehistoric archaeological deposits is low because of a lack of tribal cultural resources identified through tribal consultation, the lack of suitable habitation, and prior surface disturbances.

Ground penetrating radar (GPR) surveys conducted in 2017 and 2018 did not find evidence of intact archeological deposits. The GPR analysis showed that the possibility of encountering intact buried historic archaeological resources is moderate-to-low rather than high as indicated in the *Archaeological Sensitivity Model Veterans Affairs West Los Angeles Campus Master Plan, City of Los Angeles, Los Angeles County, California*.

Construction of the underground conduits would require trenches that are a maximum of 10 feet in depth and within existing roadway right-of-way. As-builts for the roadway show that sewer and storm drain lines are installed much deeper than the proposed conduits and vaults. A duct bank and a water line at depths greater than 14 feet. The as-builts are attached. No archeological resources were identified in this area. These conduits would be within the depth of disturbance for prior roadway construction activities. Therefore, the underground conduits do not have the potential to affect archaeological resources.

The proposed project work would have no effect to known archaeological resources. There is a potential to affect undiscovered resources that are eligible for the NRHP during construction. The *Archaeological Sensitivity Model Veterans Affairs West Los Angeles Campus Master Plan, City of Los Angeles, Los Angeles County, California* recommended archaeological monitoring for areas identified as having moderate or high sensitivity, with a particular focus on the high sensitivity areas. The existing WPLE MOA includes an unanticipated discoveries stipulation, and the WPLE Cultural Resources Monitoring and Mitigation Plan provides procedures to ensure proper treatment of unanticipated discoveries. This plan will be updated for WPLE Section 3 in consultation with the VA, SHPO, and consulting parties.

Consultation

FTA has conducted extensive outreach and held several meetings for consulting parties, as shown in Appendix C of the *Historic Properties Reassessment of Effects Report*. A summary of Native American consultation is included in Appendix A of the *Archeological Extended Identification Report*. Consulting parties and Native American tribes were given copies of the draft *Historic Properties Reassessment of Effects Report* for review and comment on July 5, 2018. Only the GSA and VA provided comments on the report.

The Federal Preservation Officer from GSA stated in an email dated July 17, 2018, that the GSA concurs with the determination that the WPLE Project will have no adverse effect on the historic characteristics of the (Westwood) Federal Building since the Project alignment will be underground as it crosses the northwest corner of the property boundary and is at least 100 feet from the (Westwood) Federal Building.

In general, VA comments related to historic properties involved measures to minimize and avoid effects to the WLA VA Historic District, such as noise and vibration near historic buildings, dust during construction, visual effects of surface features, and tree replacement and landscape restoration. The *Historic Properties Reassessment of Effects Report* provides detailed project information and an effects assessment. FTA anticipates amending the existing MOA to include the VA and the Advisory Council on Historic Preservation as signatories and to outline measures to minimize and avoid effects. In an email dated November 1, 2018, the VA concurred with findings in the attached *Historic Properties Reassessment of Effects Report*. The correspondence with the VA is attached.

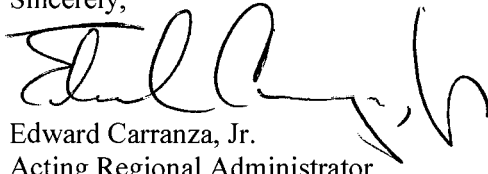
Request for Concurrence

Consistent with 36 CFR 800.5, FTA requests concurrence that no additional adverse effects to historic properties are anticipated for WPLE Section 3. The prior finding of effect remains unchanged for the WPLE Project.

FTA and LACMTA will coordinate with your office to discuss the draft MOA amendment in the coming months. FTA will continue to coordinate with all consulting parties as the project progresses.

If you have any questions, contact Charlene Lee Lorenzo, Transportation Program Specialist, at (213) 202-3952, or Mary Nguyen, Environmental Protection Specialist, at (213) 202-3960.

Sincerely,



Edward Carranza, Jr.
Acting Regional Administrator

Attachments:

- *Historic Properties Reassessment of Effects Report* (October 2018)
- *Archeological Extended Identification Report* (October 2018)
- Arborist Reports:
 - West Los Angeles Veterans Affairs Historic District Palm & Tree Inventory For: Metro Westside Extension Transit Corridor Project (June 2018)
 - Westside Purple Line Extension Palm Inventory For: Chase Bank Site, Westside Purple Line Extension Project (May 2017)
- Correspondence from the VA

Attachment:

Correspondence from the Department of Veterans Affairs (VA)

- Letter from VA to FTA regarding Response to Metro/FTA Section 106 Consultation Meeting (June 5, 2018)
- Letter from FTA to VTA responding to comments from VA's June 2018 letter (October 5, 2018)
- Emails between VA, FTA and Metro regarding concurrence on the Section 106 finding of effect (November 1, 2018)



DEPARTMENT OF VETERANS AFFAIRS
Greater Los Angeles Healthcare System
11301 Wilshire Boulevard
Los Angeles, CA 90073

June 5, 2018

In Reply Refer To: 691-Mailcode

Mary Nguyen
Environmental Protection Specialist
Federal Transit Administration, Region 9
Los Angeles Metropolitan Office
888 South Figueroa Street, Suite 440
Los Angeles, California 90017-5467

West Los Angeles
Healthcare Center
11301 Wilshire Boulevard
Los Angeles, CA 90073
(310) 478-3711

RE: Response to Metro/FTA Section 106 Consultation Meeting

Dear Ms. Nguyen:

Thank you for hosting the Section 106 Consulting Party meeting on May 22, 2018, to discuss the FTA/Metro Purple Line expansion. We would like to reiterate the importance of the continued participation of U.S. Department of Veterans Affairs (VA), and our stakeholders, in the consultation process. This letter serves as VA's response to the referenced consultation meeting, and provides VA's comments on the definition of the Area of Potential Effect (APE), historic properties within the APE, and the next steps as presented during that meeting.

APE:

- VA concurs that the APE for visual and indirect effects appears adequate; however, further clarification is necessary regarding the adequacy of the APE for archaeology.
 - In the 2011 Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR), the APE for archaeology was 100 feet on either side of the center line of the right-of-way (ROW) except where excavation, earth moving, or staging would extend beyond 100 feet; and 500-feet around every station. By contrast, in the *Draft Archaeological Extended Phase I And Phase II Testing Proposal for the Westside Purple Line Extension Project, Section 3 Los Angeles County, California* (January 2018), only a 50-foot buffer on either side of the ROW for non-invasive testing (GPR) is recommended, with additional pedestrian survey for the remainder of the APE. It also appears from both the above-mentioned report and the *Archaeological Extended Identification Report* that only the actual construction area of the VA station was surveyed, with no buffer, and the station box included less than a 50-foot buffer. Please describe the exact size of the APE for archaeology that was surveyed using ground-penetrating radar (GPR) study in late 2017 and early 2018.
 - The GPR survey identified several anomalies. These have been identified as areas of low data potential, because the areas were previously disturbed; however, there is at least one feature (evidence of a potential archaeological site) and no ground-truthing has been done to confirm the level of disturbance. It is unclear to VA whether Metro/FTA is suggesting further work on anomalies or not.
 - Also, as VA noted previously, GPR does not identify ephemeral artifacts that might be associated with the earliest period of VA ownership, nor is it a comprehensive method for identifying prehistoric artifacts, which may be of interest to the Tribes. What identification methods for these potential artifacts are planned?

Historic Properties:

- As defined in the 2014 National Register Nomination, the Period of Significance for the West Los Angeles VA National Register Historic District (WLA VA NRHD runs from 1923-1952. There are also some resources constructed during the National Home period (1887-1923) that are contributing resources due to their use during the Period of Significance. Additionally, the Los Angeles National Cemetery, which is individually eligible and is also a contributing resource to the WLA VA NRHD, has a Period of Significance that extends from 1888 to the present.
- The historic resource is the WLA VA NRHD. Please evaluate effects to the resource as a whole.

Next Steps:

VA looks forward to receiving the effects report, and offers these questions and comments to help inform that document:

- VA is prepared to continue consulting with FTA/Metro on determining ways to minimize any potential adverse effects to the historic landscape.
- As currently outlined, when the Purple Line extension is complete, the project will include permanent built elements added to the cultural landscape. VA requests the contemplated mechanisms for design input into all temporary and permanent above-ground resources and decision-making authority over the final designs. VA also requests this process be memorialized in the revised Memorandum of Agreement.
- VA is prepared to continue consulting with FTA/Metro on measures to minimize and/or mitigate temporary and permanent adverse effects to the palm trees along Bonsall Avenue and in the area north of Building 23. Currently, a Metro/FTA recommendation to move trees prior to construction, and replace them after construction is completed, does not include treatment measures for the temporary effects.
- VA anticipates continuing consulting with FTA/Metro to avoid, minimize, and/or mitigate temporary adverse effects to the bucolic setting of the South Campus residential area related to noise, vibration, and dust.

Recommendations:

- VA recommends that all the identified consulting parties receive copies of any communication or correspondence generated by any other consulting party.
- Has there have been any other communications (other than what has been transmitted) with any consulting parties?
- VA understands that a meeting had been scheduled with at least one Tribe in February. Did the Tribes make any specific requests of Metro/FTA? Please indicate the requests, comments, and results of this conversation.
- Metro/FTA's next steps slide reflected that Metro will "Continue Section 106 working group meetings and consultation with VA historic preservation and medical center staff." VA will assist Metro/FTA in any way possible to ensure the continuing Section 106 consultation process is productive; however, Metro/FTA must ensure that all records or minutes of these meetings are subsequently made available to all consulting parties.

130C and NEPA-related questions:

- Please provide any information on the Metro/FTA 4(f) analysis process and how VA will be included.
- VA recommends that Metro/FTA consider accepting and responding to comments as part of its public outreach process. This will greatly facilitate NEPA compliance and Section 106 good faith consultation efforts, and will afford VA's stakeholders better opportunities to have their concerns about the Purple Line addressed than have been afforded heretofore.

VA looks forward to working cooperatively with FTA/Metro on this project. Please don't hesitate to contact Hector Abreu, VA Senior Historic Preservation Specialist, at Hector.Abreu@va.gov or (202) 632-5775 with any questions on our comments and suggestions.

Sincerely,



Meghan Flanz
Executive Director
VA West Los Angeles Campus Draft Master Plan

Cc:

Sharyn LaCombe, Federal Transit Administration
Alan Tabachnick, Federal Transit Administration
Angela McArdle, ACHP
Sarah Stokely, ACHP
Charlene Vaughn, ACHP
Julianne Polanco, California State Historic Preservation Officer
Kathleen Forrest, California State Historic Preservation Officer
Ed Carroll, California State Historic Preservation Officer
Alicia Perez, California State Historic Preservation Officer
Leah Jackson, 1887 Fund
Curtis Mack, Veterans Park Conservancy
Andrew Salas, Gabrielino Band of Mission Indians -Kizh Nation
Robert Dorame, Gabrielino Tongva Indians of California
John Tommy Rosas, Tongva Ancestral Territorial Tribal Nation
Sandonne Goad, Gabrielino/Tongva Nation
Charles Alvarez, Gabrielino-Tongva Tribe
Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians
Rudy Ortega, Fernandeno Tataviam Band of Mission Indians
Adrian Scott Fine, Los Angeles Conservancy
John Valenzuela, San Fernando Band of Mission Indians
Amy Martin, The Muller Co.
Beverly Hills Historical Society
Reina Kapadia, City of Beverly Hills Historic Preservation Division
Ken Bernstein, City of Los Angeles Office of Historic Resources
Karen Hudson, Family of Paul Williams
Beth Savage, General Services Administration
Todd Gaydowski, Los Angeles City Historical Society



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OCT 5 2018

Ms. Meghan Flanz
Executive Director
VA West Los Angeles Campus Draft Master Plan
West Los Angeles Healthcare Center
11301 Wilshire Boulevard
Los Angeles, CA 90073

Re: Response to VA letter (dated June 5, 2018)
regarding Section 106 Process for Section 3 of
the Westside Purple Line Extension

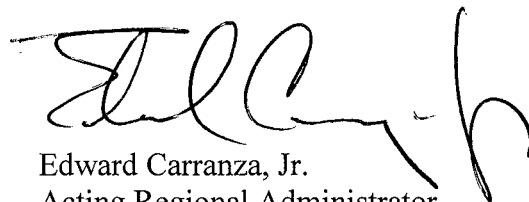
Dear Ms. Flanz:

Thank you for the U.S. Department of Veteran Affairs (VA) letter dated June 5, 2018, in response to the Section 106 Consultation Meeting for the Section 3 of the Westside Purple Line Extension Project (WPLE Project). The Federal Transit Administration (FTA) in coordination with the Los Angeles County Metropolitan Transportation Authority (Metro) hosted the meeting on May 22, 2018. Attached are the responses to the comments in the VA's letter. The responses to the VA's letter were delayed to accommodate consultation, public outreach, and consideration of comments by other consulting parties and the public.

If you have any questions or concerns, please contact Mary Nguyen, FTA Environmental Protection Specialist via phone at (213) 202-3960 or via email at mary.nguyen@dot.gov.

We look forward to our continued coordination and Section 106 consultation on the WPLE Project.

Sincerely,



Edward Carranza, Jr.
Acting Regional Administrator

Attachment: Attachment 1 –Response to VA June 5 Comments

VA Letter Dated June 5, 2018 Regarding Response to Metro/FTA Section 106 Consultation Meeting

Topic	VA Comment	Response/Action
APE	VA concurs that the APE for visual and indirect effects appears adequate; however, further clarification is necessary regarding the adequacy of the APE for archaeology.	Further information on the revised APE is provided below.
APE	In the 2011 Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR), the APE for archaeology was 100 feet on either side of the center line of the right-of-way (ROW) except where excavation, earth moving, or staging would extend beyond 100 feet; and 500-feet around every station. By contrast, in the <i>Draft Archaeological Extended Phase I And Phase II Testing Proposal for the Westside Purple Line Extension Project, Section 3 Los Angeles County, California</i> (January 2018), only a 50-foot buffer on either side of the ROW for non-invasive testing (GPR) is recommended, with additional pedestrian survey for the remainder of the APE. It also appears from both the above-mentioned report and the <i>Archaeological Extended Identification Report</i> that only the actual construction area of the VA station was surveyed, with no buffer, and the station box included less than a 50-foot buffer. Please describe the exact size of the APE for archaeology that was surveyed using ground-penetrating radar (GPR) study in late 2017 and early 2018.	<p>The larger buffer was included in the Final EIS/EIR to provide flexibility for refinements to the alignment and station as design progressed. The revised APE delineated in 2017 included more precise buffer than what was used in the Final EIS/EIR because more design details on the alignment and station were known. This informed the delineation of the area of direct and indirect effect to historic resources.</p> <p>Figure 4-1 in the <i>Archaeological Extended Identification Report</i> that was submitted to VA on January 24, 2018 and on June 29, 2018 shows the areas that were surveyed via for GPR in 2017 and 2018. The surveys focused on areas where ground disturbance could occur during construction of the WPLE Project. The proposed survey area included the majority of the construction staging areas on the western portion of the VA (as defined at that time) and in Lot 42 where the station entrance and a portion of the station box is located as well as the entire Lot 43, the location of the proposed replacement parking structure. A 50-foot buffer was used along the alignment between Lot 42 and the western staging area. Surveys could not be completed in some locations due to the presence of vehicles, dense ground cover, landscaping, or buildings.</p>
APE	The GPR survey identified several anomalies. These have been identified as areas of low data potential, because the areas were previously disturbed; however, there is at least one feature (evidence of a potential archaeological site) and no ground-truthing has been done to confirm the level of disturbance. It is unclear to VA whether Metro/FTA is suggesting further work on anomalies or not.	<p>Section 4.2.2 of the <i>Archaeological Extended Identification Report</i> that was submitted to VA on January 24, 2018 summarizes the findings of the GPR surveys.</p> <p>When compared to the 1910 and 1934 maps, 18 anomalies within the areas of direct impact and construction staging areas are co-located within or in close proximity to known buildings that are no longer extant. The shallow refilled pits may represent removal of prior foundations as nothing that appears structural in nature has been identified through surveys. The scattered metallic objects may be rebar or other refuse. In general, a portion of foundation that formerly occupied a previously disturbed area does not require additional evaluation because data potential is low. Using guidance provided in National Register Bulletin 15, data potential is the likelihood to meet National Register Criterion D in that significance is evaluated for properties that can provide important new information or can be used to test alternative hypotheses. From an archaeological perspective, if the scattered metallic objects are rebar or concrete, such items are unlikely to yield significant information and therefore do not have data potential.</p> <p>No anomalies appear to represent intact archaeological features or deposits. The three shallow backfilled pits and 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. For these reasons, the project archaeologist has determined that the anomalies do not have data potential and no further testing is recommended. FTA and Metro do not propose further testing for the anomalies, based on the results of the findings.</p>
APE	Also, as VA noted previously, GPR does not identify ephemeral artifacts that might be associated with the earliest period of VA ownership, nor is it a comprehensive method for identifying prehistoric artifacts, which may be of interest to the Tribes. What identification methods for these potential artifacts are planned?	When a GPR survey identifies ephemeral artifacts, it is assumed to indicate the presence of archaeological isolates, which is defined as one or two artifacts in a location that may include one artifact broken into multiple pieces or formed by multiple reduction flakes. Under existing best practices and legal regulatory framework, isolates do not meet the criteria for significance and therefore do not require further evaluation. The WPLE <i>Cultural Resources Monitoring and Mitigation Plan</i> provides procedures to ensure proper evaluation and

Topic	VA Comment	Response/Action
		treatment, as needed, of discoveries during the excavation. In response to requests of the Gabrielino Tongva Tribe and the Gabrieleno Band of Mission Indians – Kizh Nation, a Tribal monitor will be present during ground disturbing activities and Tribes will be consulted, as necessary, if potential cultural artifacts are discovered.
Historic Properties	As defined in the 2014 National Register Nomination, the Period of Significance for the West Los Angeles VA National Register Historic District (WLA VA NRHD) runs from 1923-1952. There are also some resources constructed during the National home period (1887-1923) that are contributing resources due to their use during the Period of Significance. Additionally, the Los Angeles National Cemetery, which is individually eligible and is also a contributing resource to the WLA VA NRHD, has a Period of Significance that extends from 1888 to the present.	The <i>Historic Properties Reassessment of Effects Report</i> reflects a period of significance for the West Los Angeles VA National Register Historic District as being from 1923-1952, consistent with information provided by VA in this comment.
Historic Properties	The historic resource is the WLA VA NRHD. Please evaluate effects to the resource as a whole.	The historic property is the WLA VA Historic District for the purposes of Section 106. However, in 2017, VA requested that Metro/FTA consider effects to individual contributing elements—as well as features not identified as contributing in the 2014 NRHP nomination—in order to develop the overall effects assessment to the WLA VA Historic District. The effects on these individual resources in turn inform an effects assessment for the historic district as a whole. This approach was described in Section 7.2.1 of the <i>Historic Properties Reassessment of Effects Report</i> (draft version 1) that was provided to VA on January 24, 2018.
Next Steps	VA is prepared to continue consulting with FTA/Metro on determining ways to minimize any potential adverse effects to the historic landscape.	FTA and Metro appreciate VA’s support to seek to avoid and minimize any potential adverse effects to the identified historic landscapes through continued consultation.
Next Steps	As currently outlined, when the Purple Line extension is complete, the project will include permanent built elements added to the cultural landscape. VA requests the contemplated mechanisms for design input into all temporary and permanent above-ground resources and decision-making authority over the final designs. VA also requests this process be memorialized in the revised Memorandum of Agreement.	FTA and Metro will continue consultation with VA and develop a mutually agreeable review and approval process.
Next Steps	VA is prepared to continue consulting with FTA/Metro on measures to minimize and/or mitigate temporary and permanent adverse effects to the palm trees along Bonsall Avenue and in the area north of Building 23. Currently, a Metro/FTA recommendation to move trees prior to construction, and replace them after construction is completed, does not include treatment measures for temporary effects.	FTA and Metro seek to avoid and minimize any potential adverse effects to the Bonsall Avenue palms and Building 23: Landscape. Through continued consultation, FTA and Metro will seek ways to minimize any temporary effects caused by the removal and replanting of trees. FTA and Metro welcome input VA may have on this subject. FTA and Metro appreciate VA’s email dated August 24, 2018 which provided concurrence on replanting palms associated with the Palm Tree Grid. As discussed during the September 11, 2018 discussion, the <i>Historic Properties Reassessment of Effects Report</i> (draft version 3) will consider the temporary effects associated with the locations where palms will be stored during construction. The revised draft is expected to be completed in the Fall of 2018.
Next Steps	VA anticipates continuing consulting with FTA/Metro to avoid, minimize, and/or mitigate temporary adverse effects to the bucolic setting of the South Campus residential area related to noise, vibration, and dust.	FTA and Metro will continue to consult with VA to seek to avoid and minimize effects to the South Campus setting related to noise, vibration, and dust through the use of measures such as construction walls, best practices for construction processes, or other appropriate temporary measures.
Recommendations	VA recommends that all the identified consulting parties receive copies of any communication and correspondence generated by any other consulting party.	Correspondence and meeting summaries associated with the Section 106 evaluation for the project refinements was included in Appendix A of the <i>Archaeological Extended Identification Report</i> and Appendix C of the <i>Historic Properties Reassessment of Effects Report</i> (draft version 1), both of which were submitted to VA on January 24, 2018. These appendices were updated with correspondence and meeting summaries that occurred after the January submittal of the first draft of these documents; the updated reports were provided to VA on June 29, 2018. The consulting parties received a copy of the <i>Historic Properties Reassessment of Effects Report</i> (draft version 2) on July 5, 2018 with a request for comment.

Topic	VA Comment	Response/Action
		<p>Additionally, all consulting parties invited to the May 22, 2018 Section 106 consulting party meeting received copies of the meeting materials and meeting summary after that meeting, regardless of whether they were in attendance. Comments were requested on the meeting materials. VA provided comments to the consulting parties on June 5, 2018. No other consulting parties have provided comments.</p>
Recommendations	<p>Has there been any other communications (other than what has been transmitted) with any consulting parties?</p>	<p>Please see prior response.</p>
Recommendations	<p>VA understands that a meeting had been scheduled with at least one Tribe in February. Did the Tribes make any specific requests of Metro/FTA? Please indicate the requests, comments, and results of this conversation.</p>	<p>Summaries of the meeting with the Gabrieleño Band of Mission Indians (Kizh Nation) and the Gabrielino Tongva Tribe of California were included in the appendices of the <i>Archaeological Extended Identification Report</i> and the <i>Historic Properties Reassessment of Effects Report</i> (revised draft version 2) that was transmitted to VA on June 29, 2018. The summaries include requests and comments from the meetings. Mr. Salas requested tribal monitors during construction. Additional correspondence that occurs after June 29, 2018 will be included in the appendices of the next version of these reports, as needed.</p>
Recommendations	<p>Metro/FTA's next steps slide reflected that Metro will "Continue Section 106 working group meetings and consultation with VA historic preservation and medical center staff." VA will assist Metro/FTA in any way possible to ensure the continuing Section 106 consultation process is productive; however, Metro/FTA must ensure that all records or minutes of these meetings are subsequently made available to all consulting parties.</p>	<p>FTA and Metro appreciate VA's continued support of the Section 106 process. Metro provided meeting materials and a meeting summary of the May 22 consulting party meeting to all consulting parties on May 25, 2018 requesting a review. As noted earlier, meeting summaries were included in the revised <i>Historic Properties Reassessment of Effects Report</i> (draft version 2), which was provided to consulting parties for review on July 5, 2018.</p>
130c and NEPA-related questions	<p>Please provide any information on Metro/FTA 4(f) analysis process and how VA will be included.</p>	<p>The FTA and Metro follow the Section 4(f) analysis process identified in the U.S. DOT Section 4(f) Policy Paper (https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.pdf). For the WLA VA NRHD, FTA and Metro have been consulting with the VA through the Section 106 process to determine effect on the historic property. The Section 4(f) analysis is dependent on the effect determination. In the event that the FTA, in consultation with the VA, makes a determination of No Adverse Effect under Section 106 and the SHPO concurs with the determination, FTA will review whether a <i>de minimis</i> impact finding is appropriate under Section 4(f). If there is no adverse effect to the historic property, FTA will notify the VA and SHPO of its intent to make a <i>de minimis</i> impact determination under Section 4(f).</p>
130c and NEPA-related questions	<p>VA recommends that Metro/FTA consider accepting and responding to comments as part of its public outreach process. This will greatly facilitate NEPA compliance and Section 106 good faith consultation efforts, and will afford VA's stakeholders better opportunities to have their concerns about the Purple Line addressed than have been afforded heretofore.</p>	<p>As discussed during the May 10, 2018 meeting with VA, Metro is open to a joint public information meeting with the VA. The joint public information meeting was held on July 27, 2018.</p> <p>Separately, Metro held a public outreach meeting regarding the project refinements on June 21, 2018 as part of a scheduled Section 3 Community Meeting held at the Westwood United Methodist Church on Wilshire Boulevard. An overview of the refinements made since the Record of Decision and the analysis related to historic resources was provided during the meeting. Information on this meeting is distributed to a large stakeholder database. The meeting is summarized in the June 29, 2018 version of the 130(c) Environmental Technical Memorandum (Section 5.1). In coordination with VA, Metro has also conducted additional outreach to veterans groups. Outreach efforts that have occurred since June 2018 will be summarized in the next draft of the 130(c) Environmental Technical Memorandum that will be provided to VA in October 2018.</p> <p>If those in attendance at public outreach meetings held for the project have questions, Metro addresses them at that time. A summary of any questions received and the responses have been included in the 130(c) Environmental Technical Memorandum.</p>

Nguyen, Mary (FTA)

From: Martin, Roger <MartinR@metro.net>
Sent: Thursday, November 01, 2018 6:05 AM
To: Nguyen, Mary (FTA); Lee Lorenzo, Charlene (FTA)
Cc: Carlson, Kristin (Kristin.Carlson@wsp.com); Sah, Maressa
Subject: FW: WPLE - Section 3 - Historic Properties Reassessment of Effects Report

Good morning, Mary and Charlene.

VA approves the Effects Report. Please see the email below. Hard copies of all the documents that need to go to SHPO should be with your Region IX office. Let us know if you need anything else.

Thank you.

From: Abreu, Hector M. (CFM) [mailto:Hector.Abreu@va.gov]
Sent: Thursday, November 01, 2018 5:59 AM
To: Martin, Roger; Andrew Strain (astrain@concoursefederal.com)
Cc: Carlson, Kristin (Kristin.Carlson@wsp.com); Foell, Stephanie (Stephanie.Foell@wsp.com); Ellwood, Martin; 'guy.blanchard@wsp.com'; Sah, Maressa
Subject: RE: WPLE - Section 3 - Historic Properties Reassessment of Effects Report

Roger,

Thanks for your response. VA concurs with your statements and approves the Effects Report. Please remember to include VA in any communications you may receive with regards to comments on the report for our knowledge.
Thanks

From: Martin, Roger [<mailto:MartinR@metro.net>]
Sent: Thursday, November 01, 2018 8:49 AM
To: Abreu, Hector M. (CFM) <Hector.Abreu@va.gov>; Andrew Strain (astrain@concoursefederal.com) <astrain@concoursefederal.com>
Cc: Carlson, Kristin (Kristin.Carlson@wsp.com) <Kristin.Carlson@wsp.com>; Foell, Stephanie (Stephanie.Foell@wsp.com) <Stephanie.Foell@wsp.com>; Ellwood, Martin <Martin.Ellwood@wsp.com>; 'guy.blanchard@wsp.com' <guy.blanchard@wsp.com>; Sah, Maressa <SahM@metro.net>
Subject: [EXTERNAL] RE: WPLE - Section 3 - Historic Properties Reassessment of Effects Report
Importance: High

Good morning, Hector.

Thank you for your comments. We have reviewed the information you provided, we understand the design of permanent structures will be a collaboration between parties. We look forward to working with the VA and FTA in the development of MOA and the appropriate language for the Access and Easement Agreement (AEA).

At this time, we understand VA approves of the Historic Properties Reassessment of Effects Report (Effects Report) and FTA can provide to SHPO for their review and concurrence. Please affirm this and FTA will move the Effects Report to SHPO.

Thank you,

Roger Martin

Attachment:

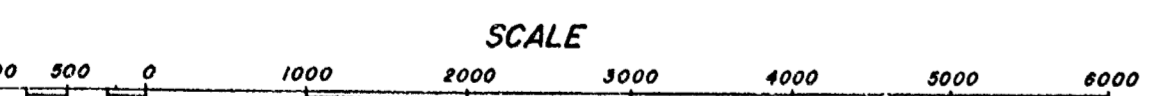
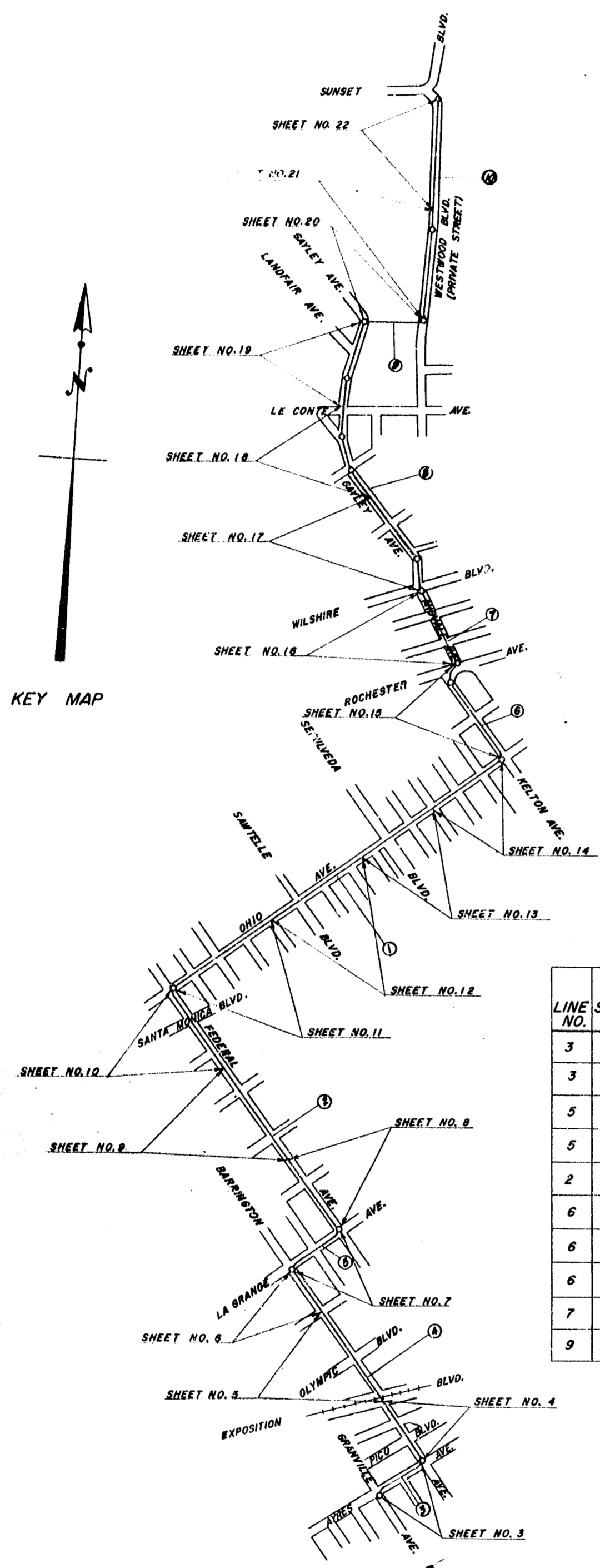
As-Builts for Ohio and Federal Avenues

INDEX OF SHEETS

SHEET NO	LINE NO	DESCRIPTION	LIMITS
1		TITLE SHEET	
2		RESURFACING DIAGRAM	
3	3	AYRES AVENUE	GRANVILLE AVE. TO BARRINGTON AVE.
4	4	BARRINGTON AVENUE	AYRES AVE. TO EXPOSITION BLVD.
5	4	BARRINGTON AVENUE	EXPOSITION BLVD. TO MISSISSIPPI AVE.
6	4	BARRINGTON AVENUE	MISSISSIPPI AVE. TO LA GRANGE AVE.
7	5	LA GRANGE AVENUE	BARRINGTON AVE. TO FEDERAL AVE.
8	2	FEDERAL AVENUE	LA GRANGE AVE. TO 280' S. OF NEBRASKA AVE.
9	2	FEDERAL AVENUE	280' S. OF NEBRASKA AVE. TO 280' N. OF IOWA AVE.
10	2	FEDERAL AVENUE	280' N. OF IOWA AVE. TO OHIO AVE.
11	1	OHIO AVENUE	FEDERAL AVE. TO CORINTH AVE.
12	1	OHIO AVENUE	CORINTH AVE. TO ALLEY E. OF COTNER AVE.
13	1	OHIO AVENUE	ALLEY E. OF COTNER AVE. TO CAMDEN AVE.
14	1	OHIO AVENUE	CAMDEN AVE. TO KELTON AVE.
15	6	KELTON AVENUE	OHIO AVE. TO ROCHESTER AVE.
16	7	MIDVALE AVENUE	ROCHESTER AVE. TO WILSHIRE BLVD.
17	8	GAYLEY AVENUE	WILSHIRE BLVD. TO 350' N. OF KINROSS AVE.
18	8	GAYLEY AVENUE	350' N. OF KINROSS AVE. TO LE CONTE AVE.
19	8	GAYLEY AVENUE	LE CONTE AVE. TO H/W 2700' S. OF SUNSET BLVD.
20	9	R/W 2700' S. OF SUNSET BLVD.	GAYLEY AVE. TO WESTWOOD BLVD.
21	10	WESTWOOD BLVD.	2633' S. OF, TO 1346' S. OF SUNSET BLVD.
22	10	WESTWOOD BLVD.	1346' S. OF, TO 100' S. OF SUNSET BLVD.

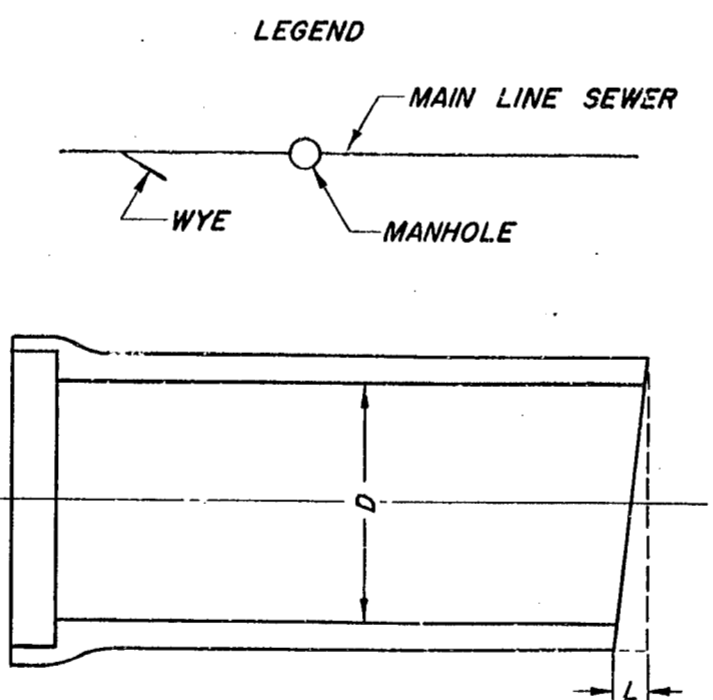
See C.D. 3347-18
 (Sewer) between the 11th
 City Stations:

Line No.	St. to Sta.	Length
3	7004 7041	37
3	7041 7024	17
10	2117 1123	96
10	3123 1817	504
10	1817 2412	595
	2412 2409	3



(NOTES CONTINUED)

9. LIST OF STANDARD PLANS
- B-2855 MANHOLE FRAME AND COVER
 - B-2914 CONCRETE REINFORCEMENT
 - B-2925 M.H. "B"
 - B-2949 D.M.H. "S"
 - B-2999 J.C. "F"
 - B-3005 J.C. "H"
 - B-3055 M.H. DISK
 - B-3221 PIPE LAYING
 - B-3289 PIPE SUPPORT
 - B-3459 SPECIFICATIONS
 - B-3463 TRAP D.M.H.
 - B-3495 ABBREVIATIONS



SUMMARY OF MITERED PIPE

LINE NO.	SHEET NO.	STATIONS B.C. TO E.C.	NO. OF 4' LENGTHS REQ'D	24" DIA. STANDARD STRENGTH
3	3	0+19.03 0+80.85		10
3	3	5+74.82 8+13.06		10
5	7	0+06.21 0+45.45		10
5	7	6+63.01 7+02.25		10
2	10	32+13.25 32+54.53		10
6	15	0+30.70 0+50.86	5	
6	15	0+70.13 0+82.47	4	
6	15	10+75.32 11+14.69	10	
7	16	9+19.48 9+45.66	7	
9	20	6+97.68 6+88.08	8	
TOTALS			34	20

10. DETAIL OF MITERED CLAY PIPE TO BE USED FOR CONSTRUCTION OF 50' RADIUS CURVES. PIPE SHALL BE MITERED BY MANUFACTURER. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DEFECTS. FOR 24" DIAMETER PIPE, L=2". FOR 18" DIAMETER PIPE, L=1.5". SEE SUMMARY HERE- FOR NUMBER OF PIPE LENGTHS REQUIRED. FOR 21" DIAMETER PIPE, L=1.75".

11. THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS WITH PACIFIC ELECTRIC RAILWAY COMPANY PRIOR TO CONSTRUCTING THE SEWER ACROSS THE P.E. RAILWAY R/W AT BARRINGTON AVE. AND EXPOSITION BLVD. AND AT OHIO AVE. AND SEPULVEDA BLVD.

- 1 OHIO AVENUE
- 2 FEDERAL AVENUE
- 3 AYRES AVENUE
- 4 BARRINGTON AVENUE
- 5 LA GRANGE AVENUE
- 6 KELTON AVENUE
- 7 MIDVALE AVENUE
- 8 GAYLEY AVENUE
- 9 R.W 2700± FEET SOUTHERLY OF SUNSET BOULEVARD
- 10 R/W IN WESTWOOD BOULEVARD (PRIVATE STREET)

PLAN AND PROFILE OF SEWERS IN

FROM KELTON AVENUE TO FEDERAL AVENUE.

FROM OHIO AVENUE TO LA GRANGE AVENUE.

FROM BARRINGTON AVENUE TO GRANVILLE AVENUE.

FROM LA GRANGE AVENUE TO AYRES AVENUE.

FROM FEDERAL AVENUE TO BARRINGTON AVENUE.

FROM ROCHESTER AVENUE TO OHIO AVENUE.

FROM WILSHIRE BOULEVARD TO ROCHESTER AVENUE.

FROM A POINT 329 FEET NORTHERLY OF LANFAIR AVENUE (S/LY INTERSECTION) TO WILSHIRE BOULEVARD.

FROM WESTWOOD BOULEVARD TO GAYLEY AVENUE.

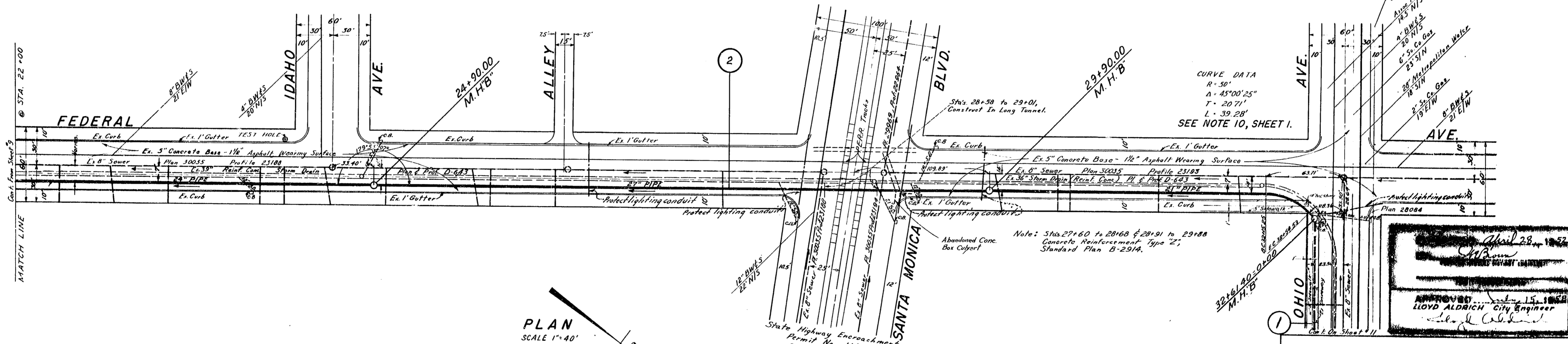
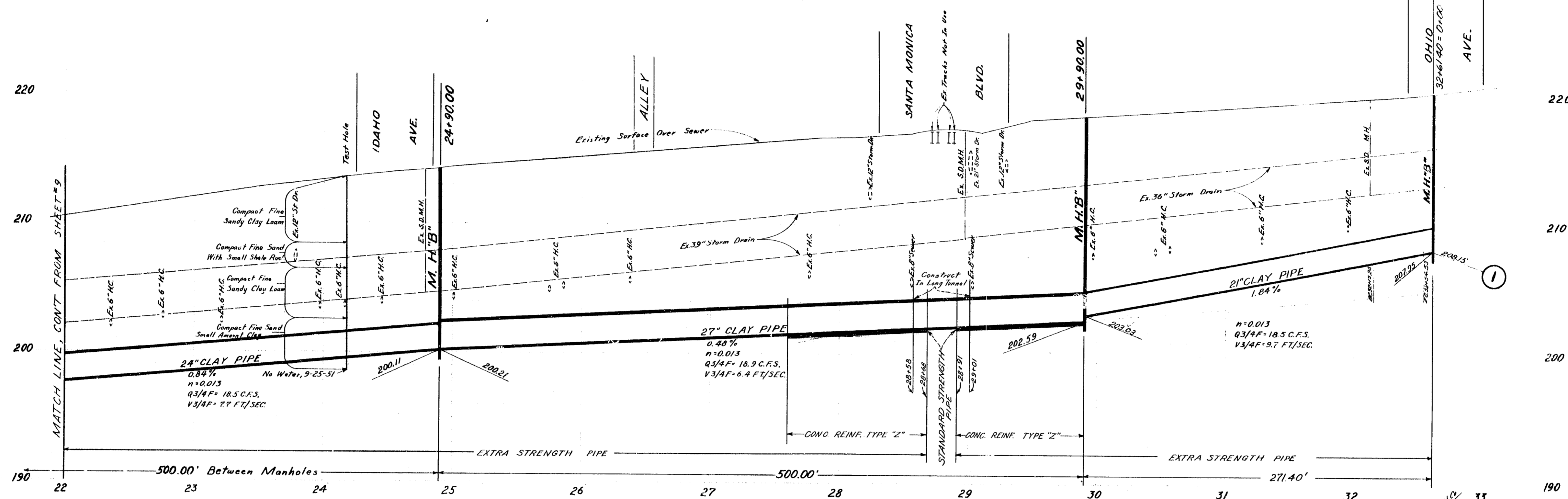
FROM A POINT 100 FEET SOUTHERLY OF, 10 R/W 2700± FEET SOUTHERLY OF SUNSET BOULEVARD.

CITY OF LOS ANGELES
 LLOYD ALDRICH, CITY ENGINEER

DATUM NOTE
 U. S. S. DATUM EFFECTIVE JULY 1, 1928. ORDINANCE NO. 55333. COUNTY OF LOS ANGELES TO DETERMINE PLACES TO USE PRIOR TO 1928 DATUM.

REFERENCES
 FIELD BOOK NO. 22221
 DATE OF SURVEY: 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 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② FEDERAL AVE.
ST. PROF 22039, 22038



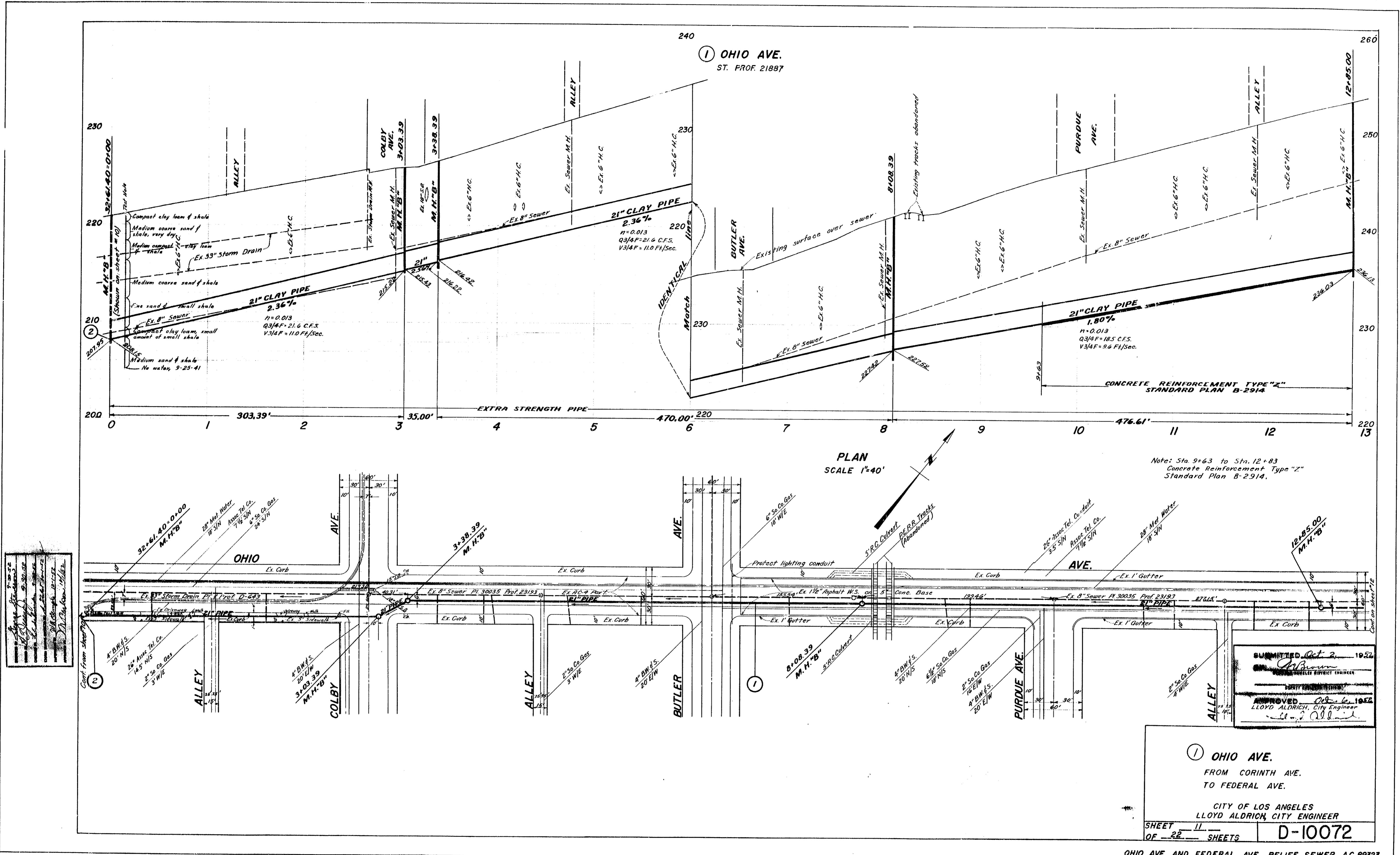
PLAN
SCALE 1"=40'

② FEDERAL AVE.
FROM OHIO AVE. TO 280' N.
OF IOWA AVE.
CITY OF LOS ANGELES
LLOYD ALDRICH, CITY ENGINEER
SHEET 10 OF 25 SHEETS D-10072

OHIO AVE. AND FEDERAL AVE. RELIEF SEWER, A.C. 89323

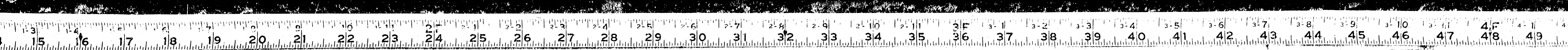
D-10072

CERTIFICATE
I hereby certify that this is a true and accurate copy of the official city record described there, made in accordance with Section 434 of the Charter of the City of Los Angeles, and Section 2402.5 of the Government Code.
Date 12-21-75
By [Signature]
City Clerk

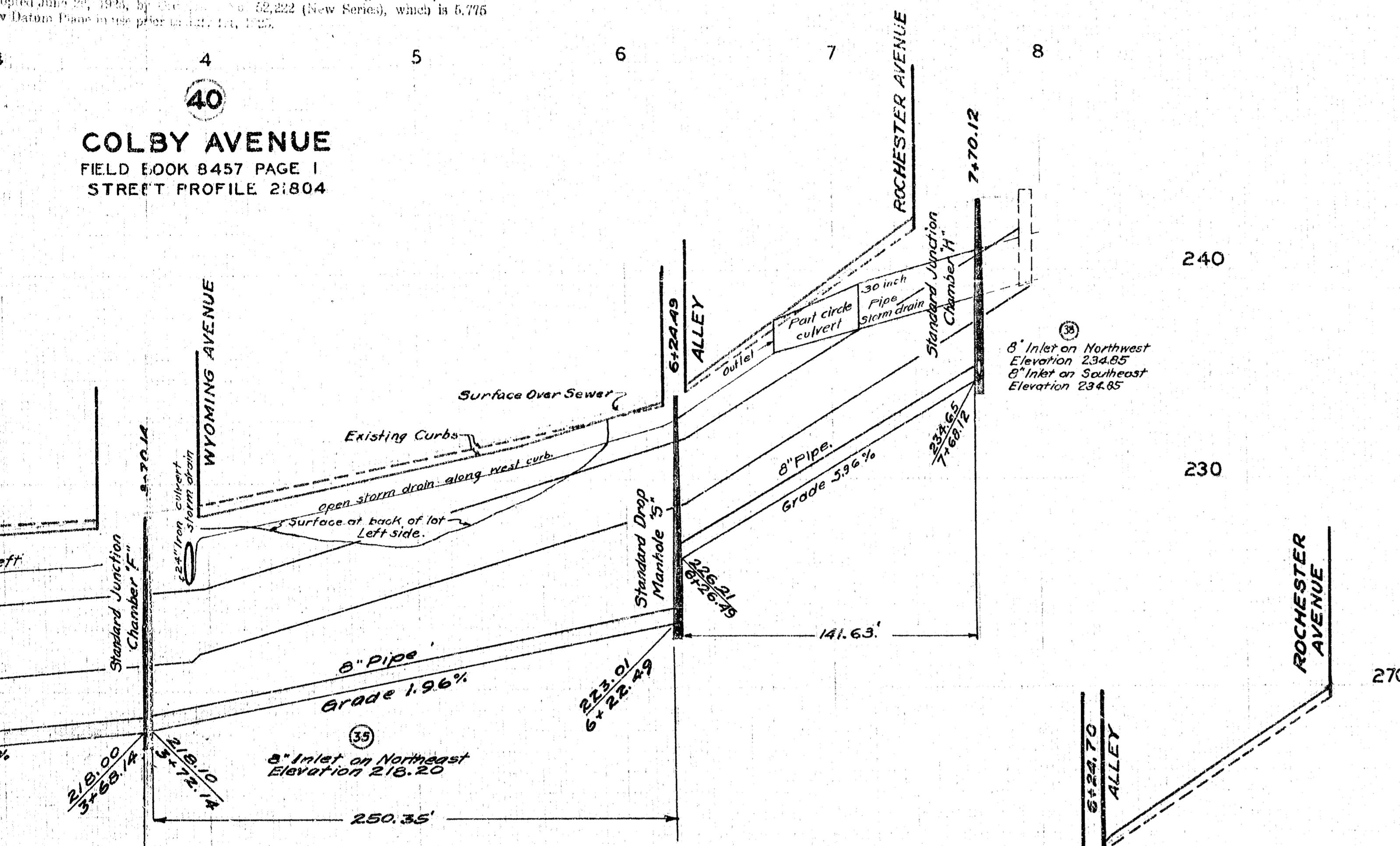


D-10072

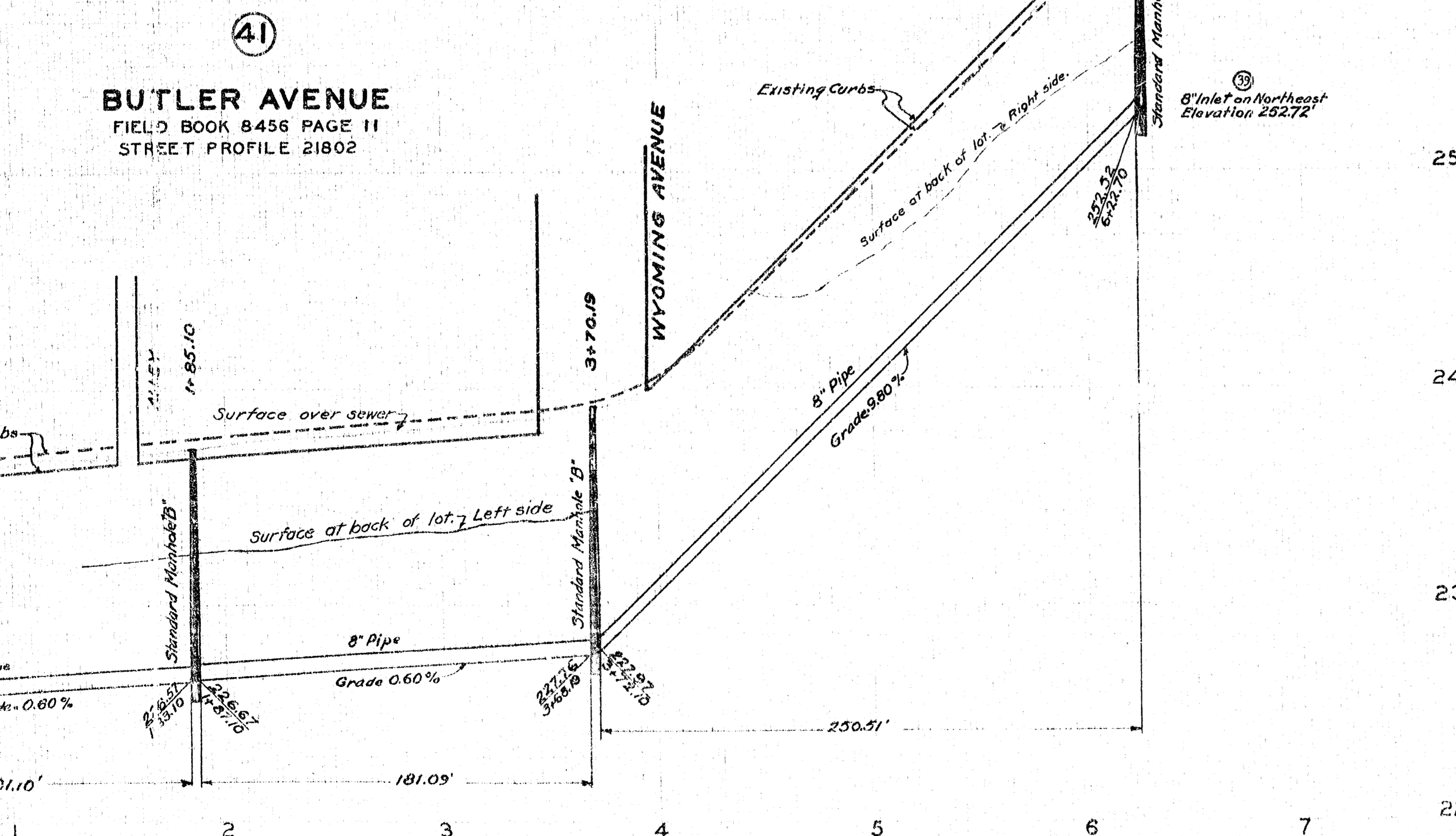
CERTIFICATE
I hereby certify that this is a true and accurate copy of the official city record described there, made in accordance with Section 494 of the Charter of the City of Los Angeles, and Section 3406, 5 of the Government Code.
Date 10-31-75
By *L. Layton*, City Clerk



40
COLBY AVENUE
 FIELD BOOK 8457 PAGE I
 STREET PROFILE 21804



41
BUTLER AVENUE
 FIELD BOOK 8456 PAGE II
 STREET PROFILE 21802



CITY OF LOS ANGELES
PROFILE
 OF **SEWER** IN

- ✓ 32 ALLEY SOUTHEASTERLY FROM WYOMING AVENUE
 Between the alley southwesterly from Colby Avenue and Federal Avenue.
- ✓ 33 ALLEY SOUTHWESTERLY FROM COLBY AVENUE
 Between Wyoming Avenue and the alley southeasterly from Wyoming Avenue.
- ✗ 34 FEDERAL AVENUE
 Between Wilshire Boulevard and Santa Monica Boulevard.
- ✓ 35 WYOMING AVENUE
 Between Butler Avenue and Colby Avenue.
- ✓ 36 OHIO AVENUE
 Between Sawtelle Boulevard and Federal Avenue.
- ✓ 37 ALLEY SOUTHWESTERLY FROM SAWTELLE BOULEVARD
 Between Ohio Avenue and a point feet southeasterly from Ohio Avenue.
- ✓ 38 ROCHESTER AVENUE
 Between a point 129.00 feet northeasterly from Butler Avenue and Federal Avenue.
- ✓ 39 FIRST ALLEY SOUTHEASTERLY FROM ROCHESTER AVENUE
 Between a point 126.00 feet northeasterly from Butler Avenue and Butler Avenue.
- ✗ 40 COLBY AVENUE
 Between Rochester Avenue and Ohio Avenue.
- ✗ 41 BUTLER AVENUE
 Between the first alley southeasterly from Rochester Avenue and Ohio Avenue.

Elevations shown hereon are based on the United States Geological Survey Datum Plane, adopted June 23, 1925, by Ordinance No. 52,222 (New Series), which is 3.75 feet below Datum Plane in use prior to July 1st, 1925.

DESIGNED BY Smetzer
 DRAWN BY Cassidy
 CHECKED BY H. J. Wheeler
 APPROVED BY J. C. Shaw

NOTES

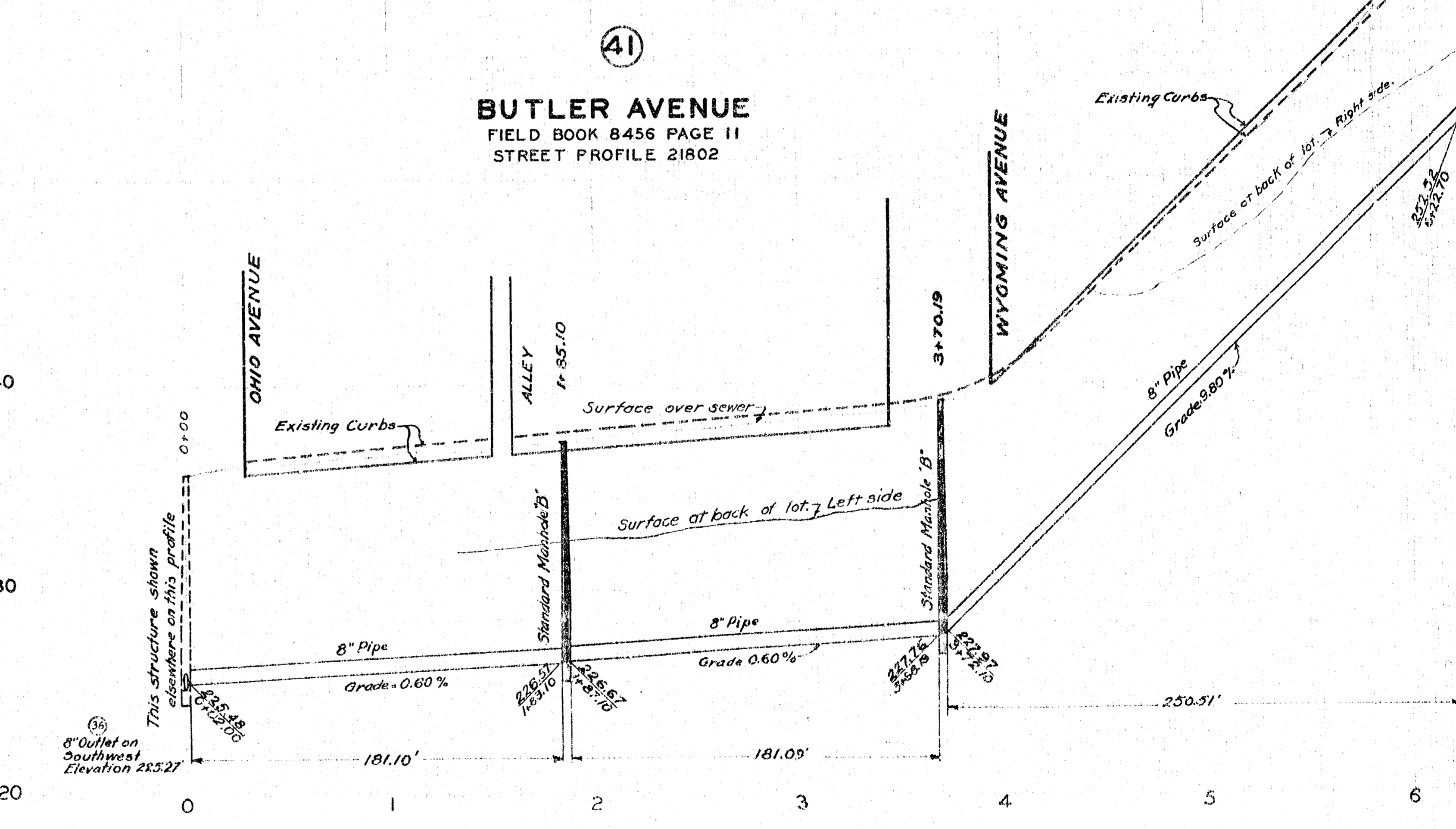
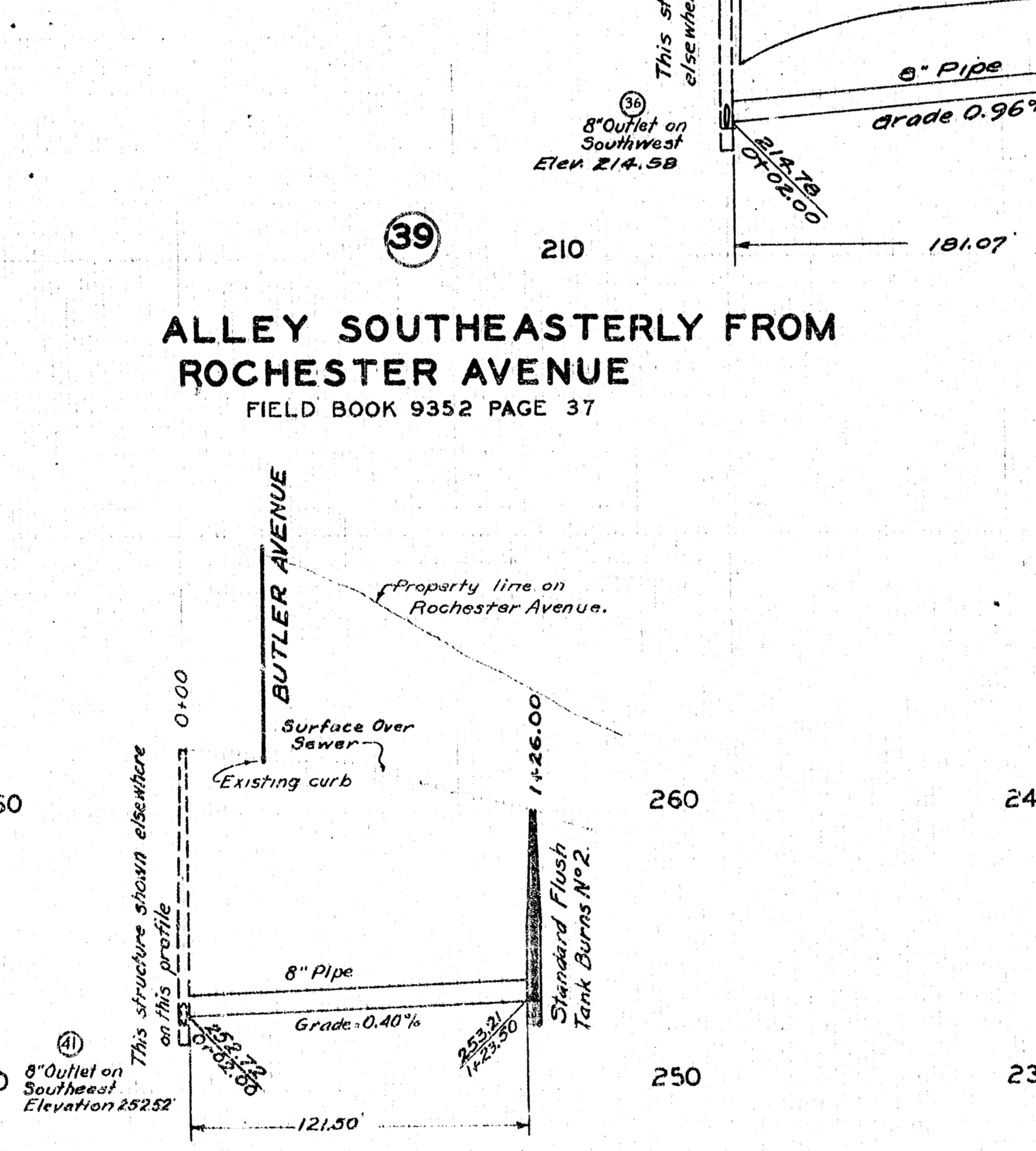
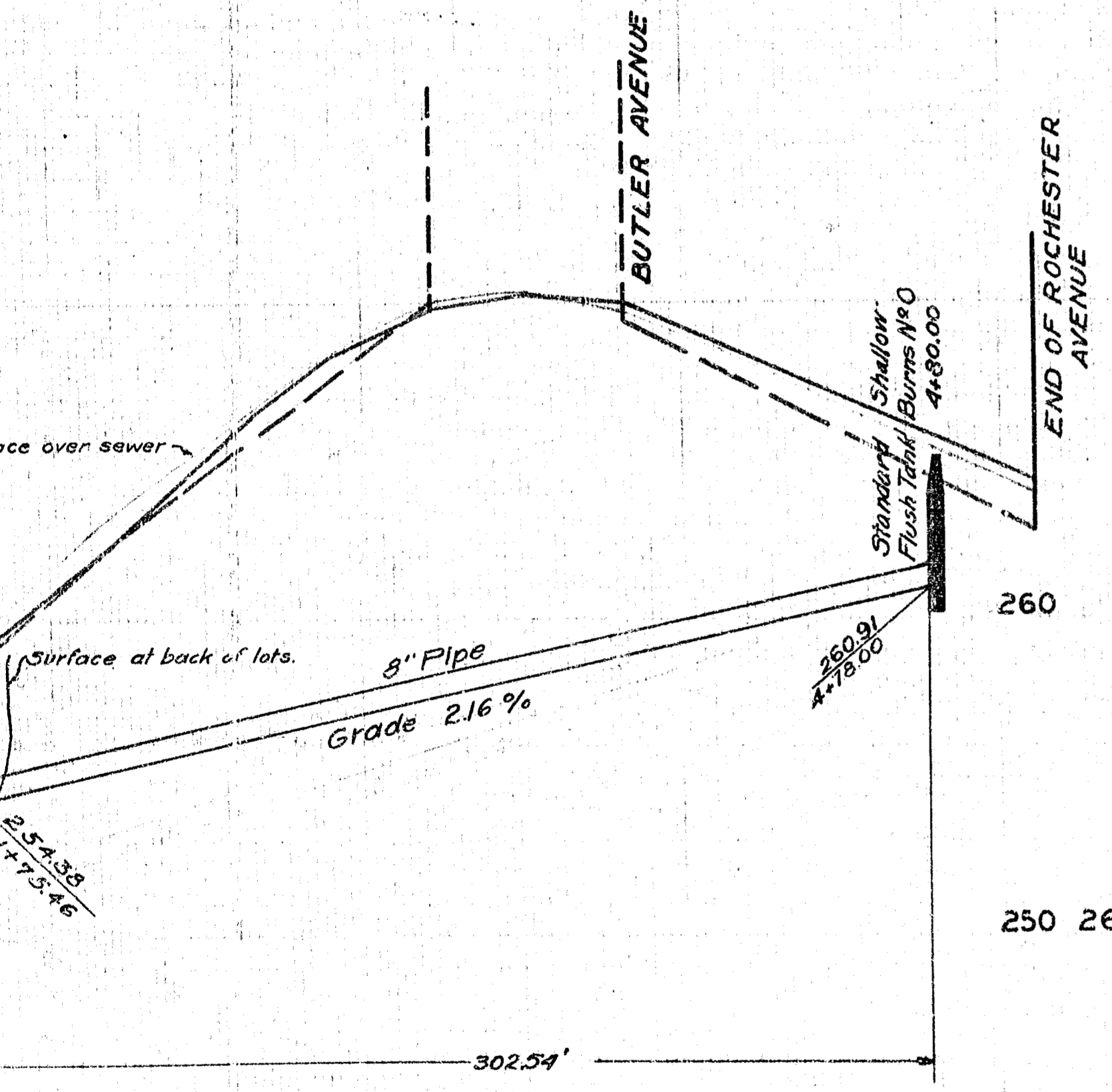
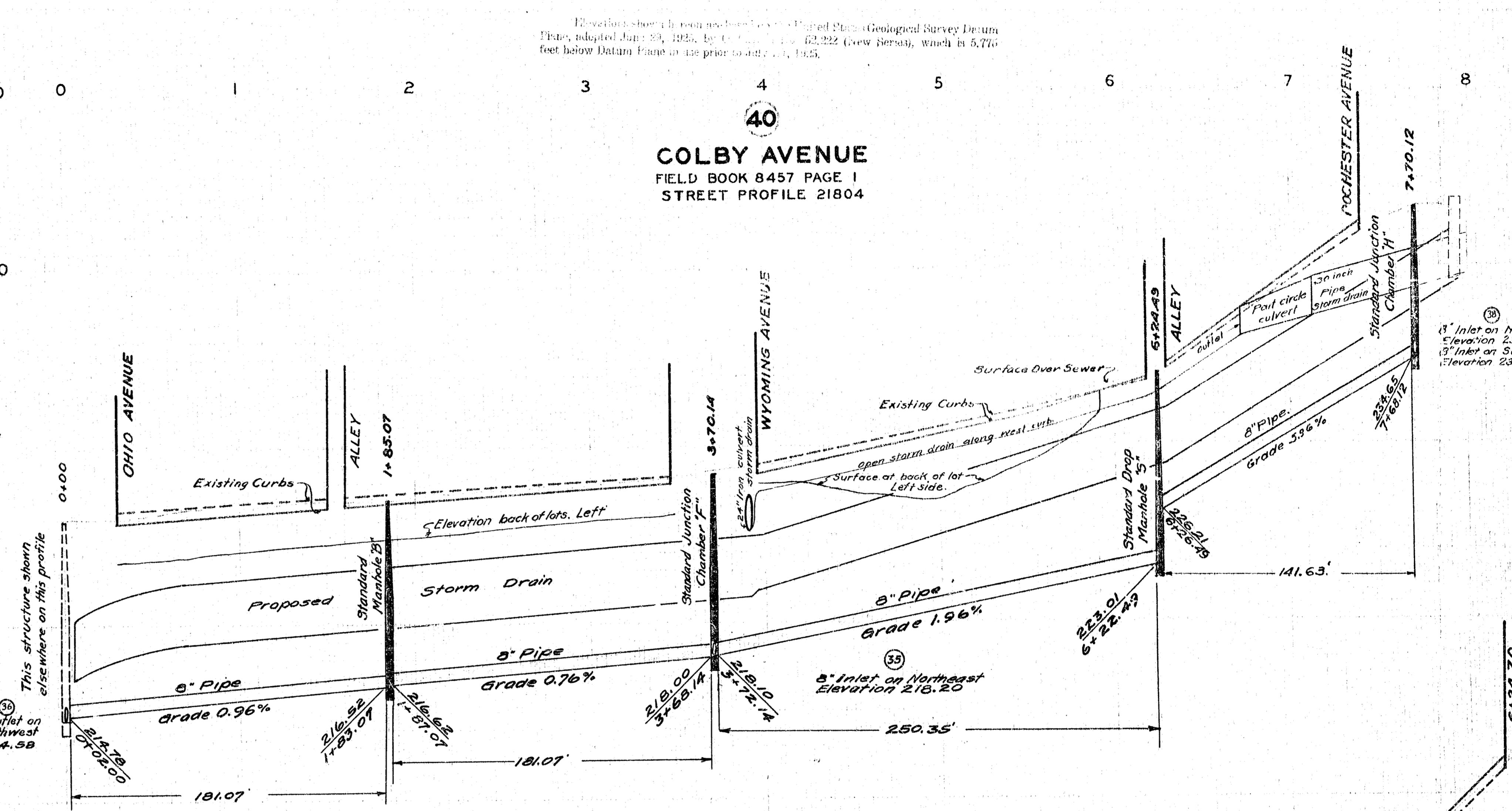
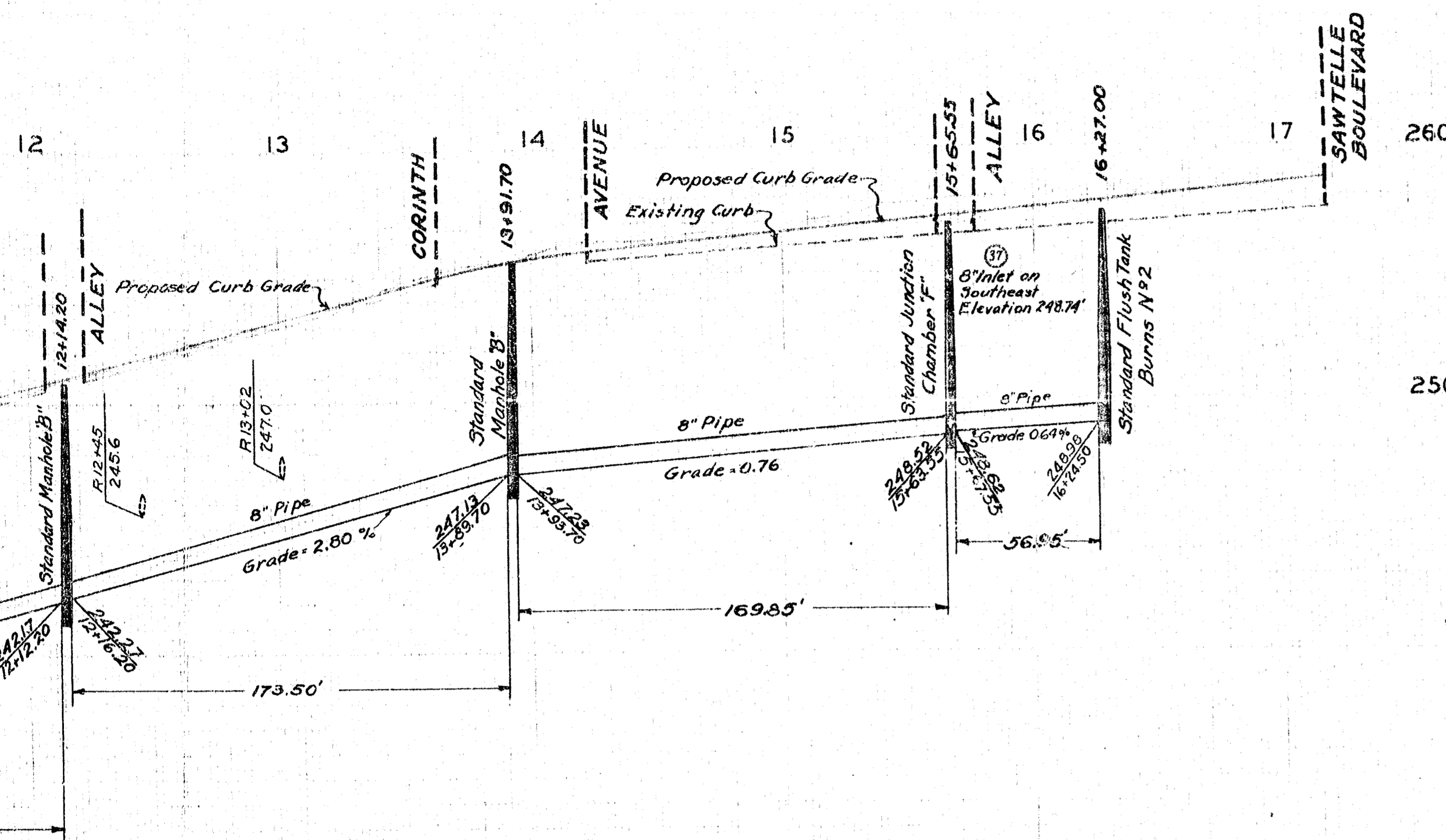
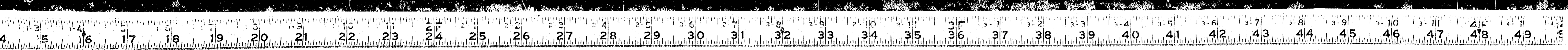
FOR NOTES SUMMARY AND OTHER INFORMATION NOT SHOWN HEREON SEE SEWER PLAN NO. 30035

APPROVED John C. Shaw, 1926
 JOHN C. SHAW
 City Engineer
 BY J. C. Shaw
 Chief Deputy

A-II-33536

8 SHEETS SHEET 7

FEDERAL AVENUE AND SANTA MONICA BOULEVARD
 SEWER DISTRICT



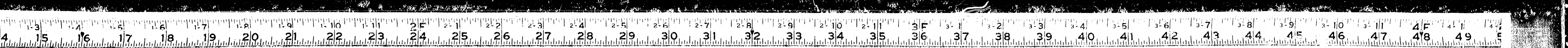
Elevation shown here are based on the United States Geological Survey Datum (Ft. M., adopted Jan. 24, 1929, by Ordinance No. 32,222 (New Series), which is 5.776 feet below Datum Plane in use prior to July 1st, 1925.

Elevation shown here are based on the United States Geological Survey Datum (Ft. M., adopted Jan. 24, 1929, by Ordinance No. 32,222 (New Series), which is 5.776 feet below Datum Plane in use prior to July 1st, 1925.

ALLEY SOUTHEASTERLY FROM ROCHESTER AVENUE
FIELD BOOK 9352 PAGE 37

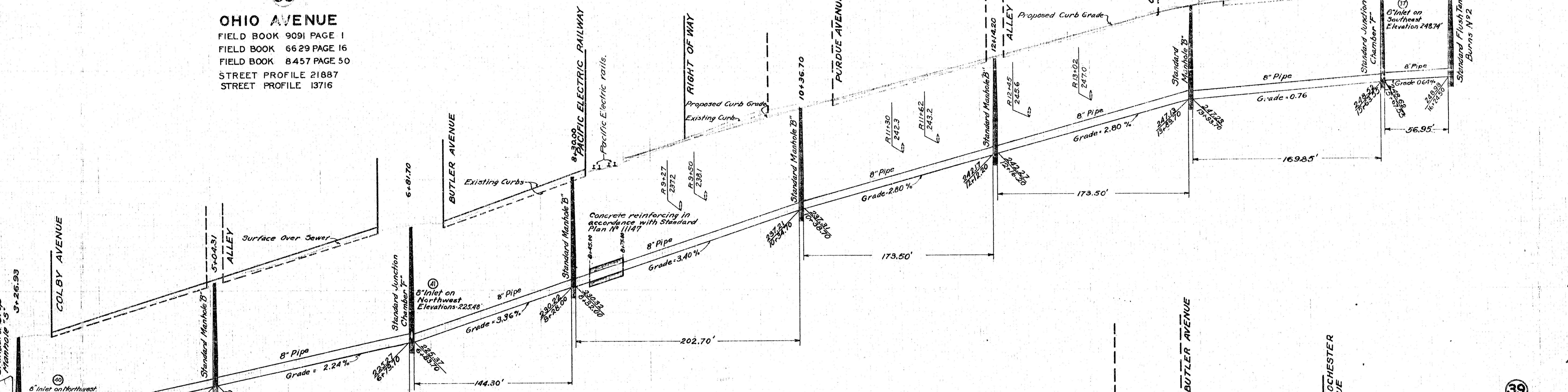
COLBY AVENUE
FIELD BOOK 8457 PAGE I
STREET PROFILE 21804

BUTLER AVENUE
FIELD BOOK 8456 PAGE II
STREET PROFILE 21802



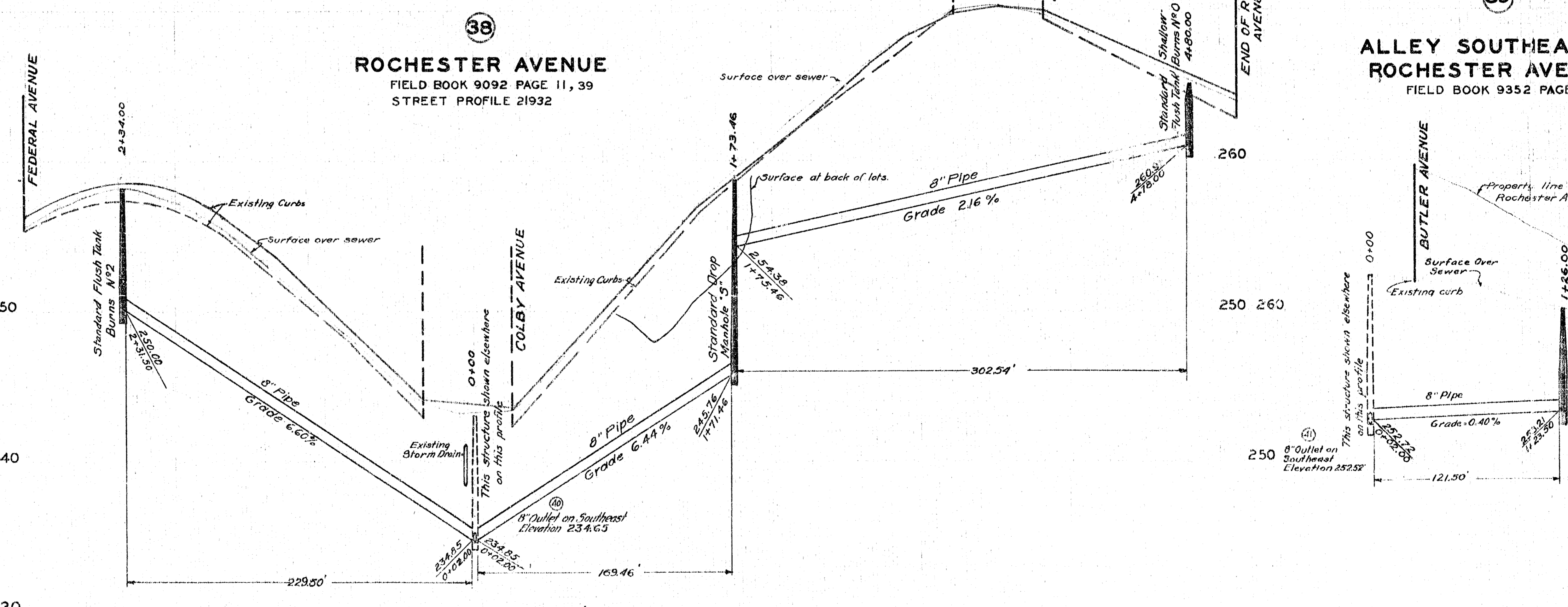
36

OHIO AVENUE
 FIELD BOOK 9091 PAGE 1
 FIELD BOOK 6629 PAGE 16
 FIELD BOOK 8457 PAGE 50
 STREET PROFILE 21887
 STREET PROFILE 13716



38

ROCHESTER AVENUE
 FIELD BOOK 9092 PAGE 11, 39
 STREET PROFILE 21932

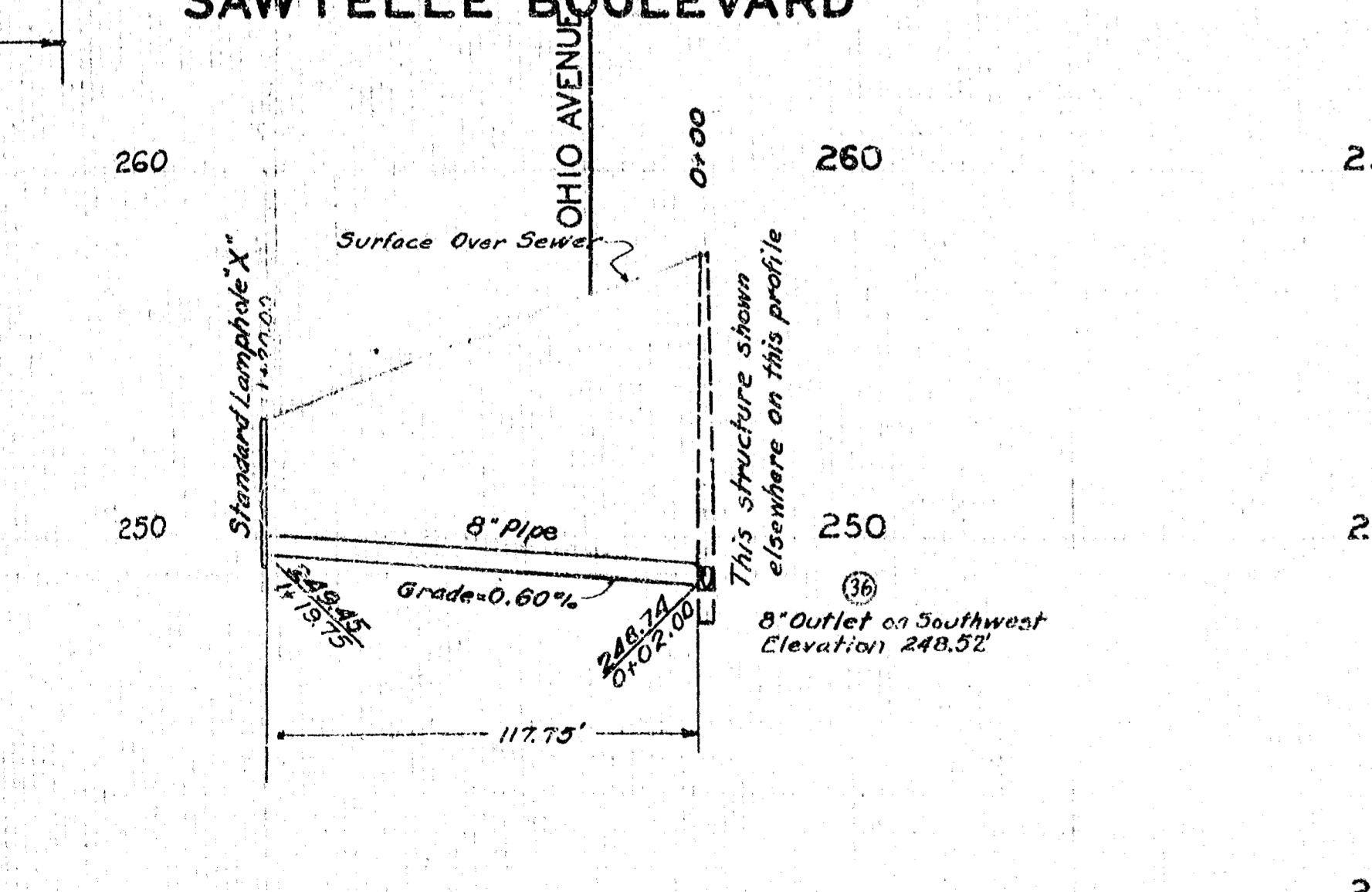


39

ALLEY SOUTHEAST ROCHESTER AVENUE
 FIELD BOOK 9352 PAGE 37

37

ALLEY SOUTHWESTERLY FROM SAWTELLE BOULEVARD



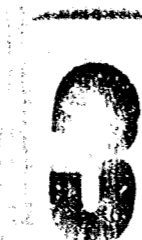
Plans shown herein are based on the United States Geological Survey Datum. Plans adopted June 29, 1925, by Ordinance No. 52,232 (New Series), which is a 77-foot below Datum Plane as in effect on July 1st, 1925.

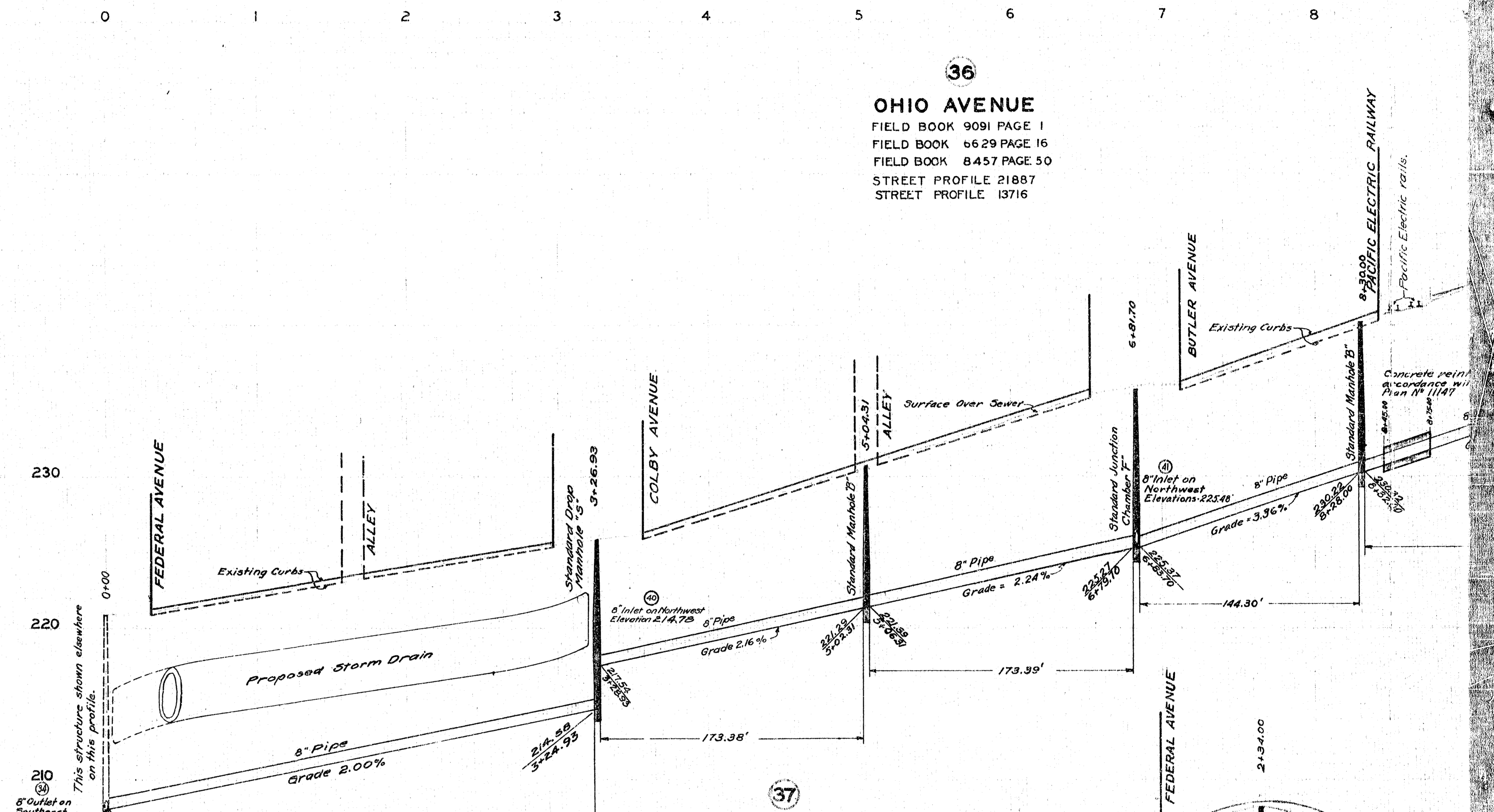
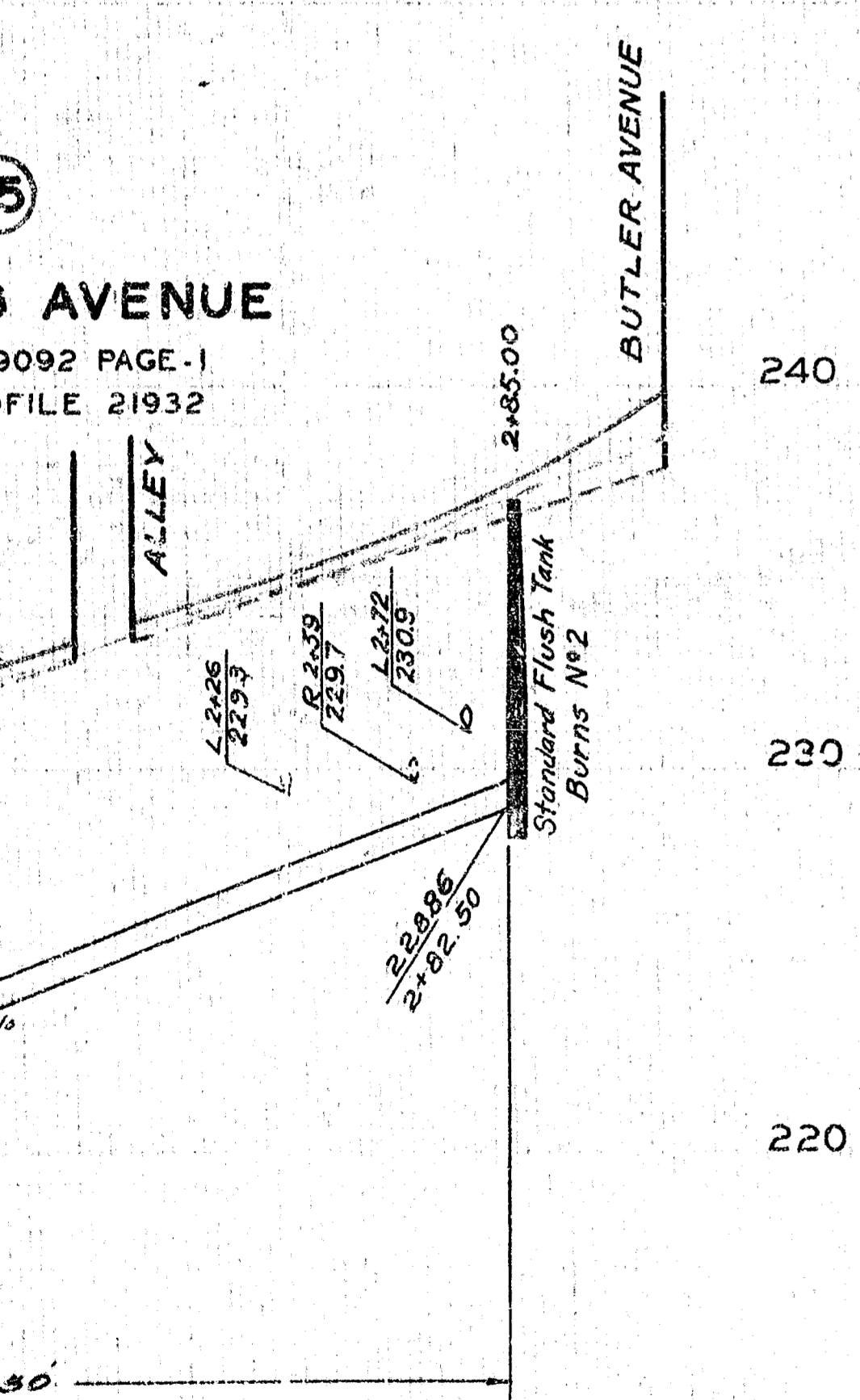
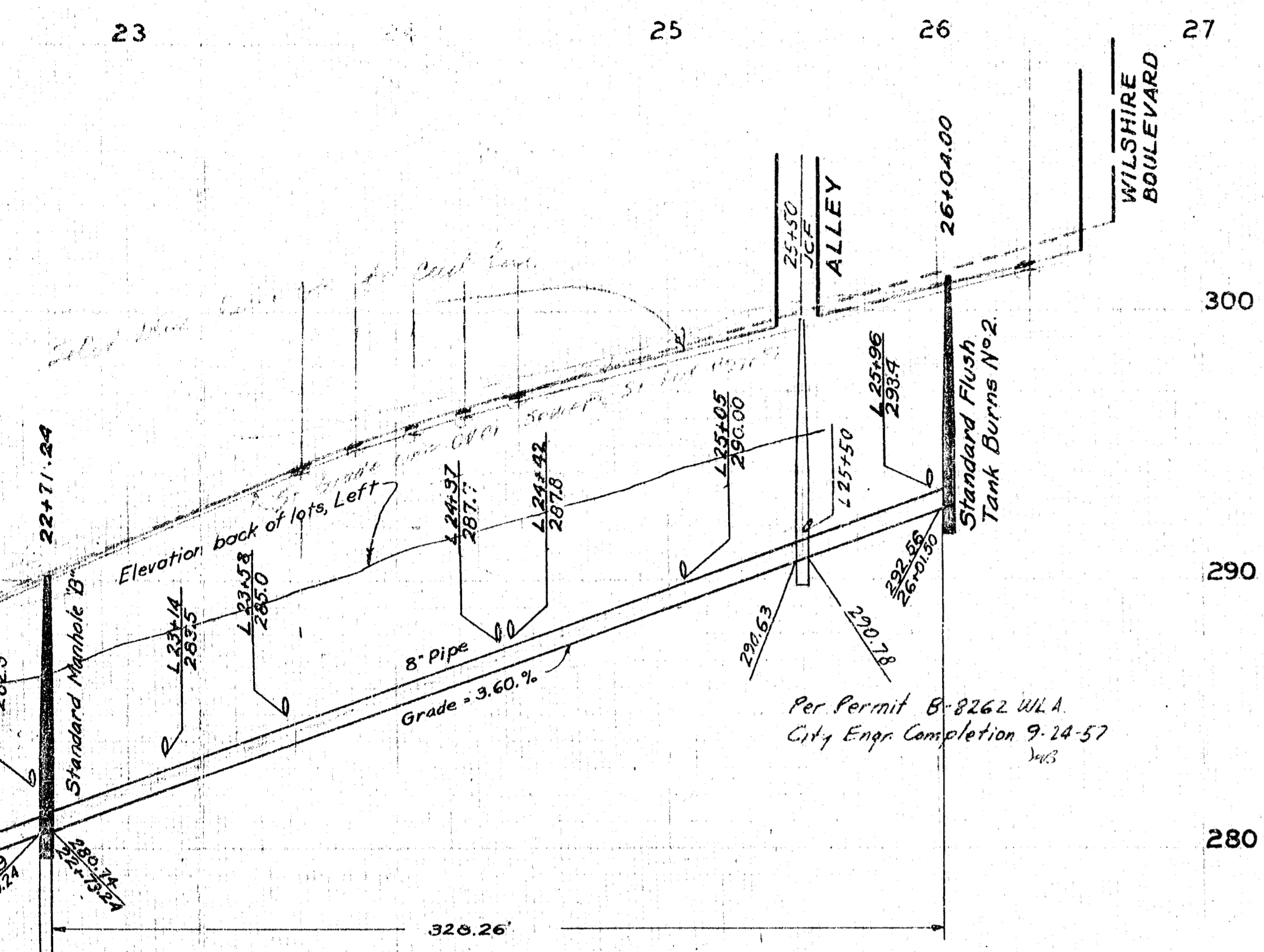
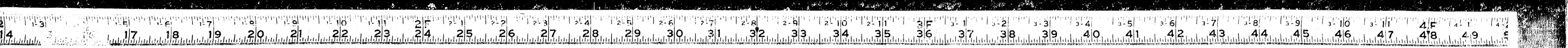
Plans shown herein are based on the United States Geological Survey Datum. Plans adopted June 29, 1925, by Ordinance No. 52,232 (New Series), which is a 77-foot below Datum Plane as in effect on July 1st, 1925.

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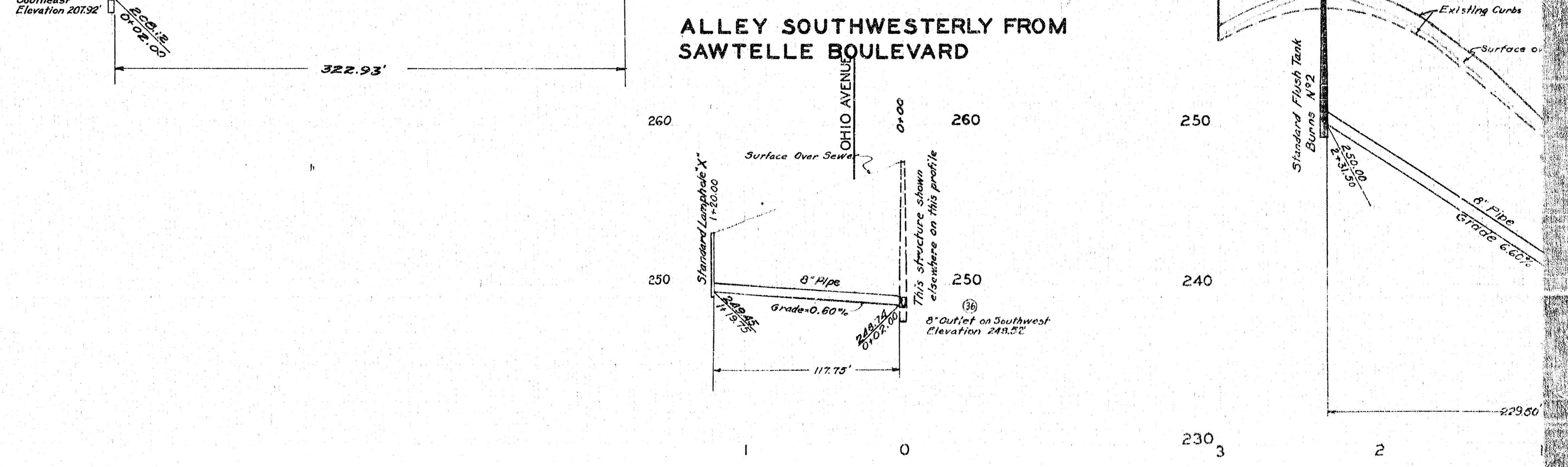
2310

2310

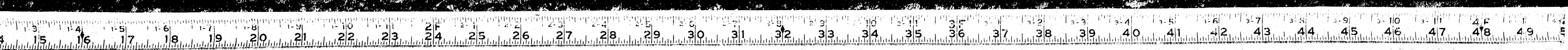




36
OHIO AVENUE
 FIELD BOOK 9091 PAGE 1
 FIELD BOOK 6629 PAGE 16
 FIELD BOOK 8457 PAGE 50
 STREET PROFILE 21887
 STREET PROFILE 13716



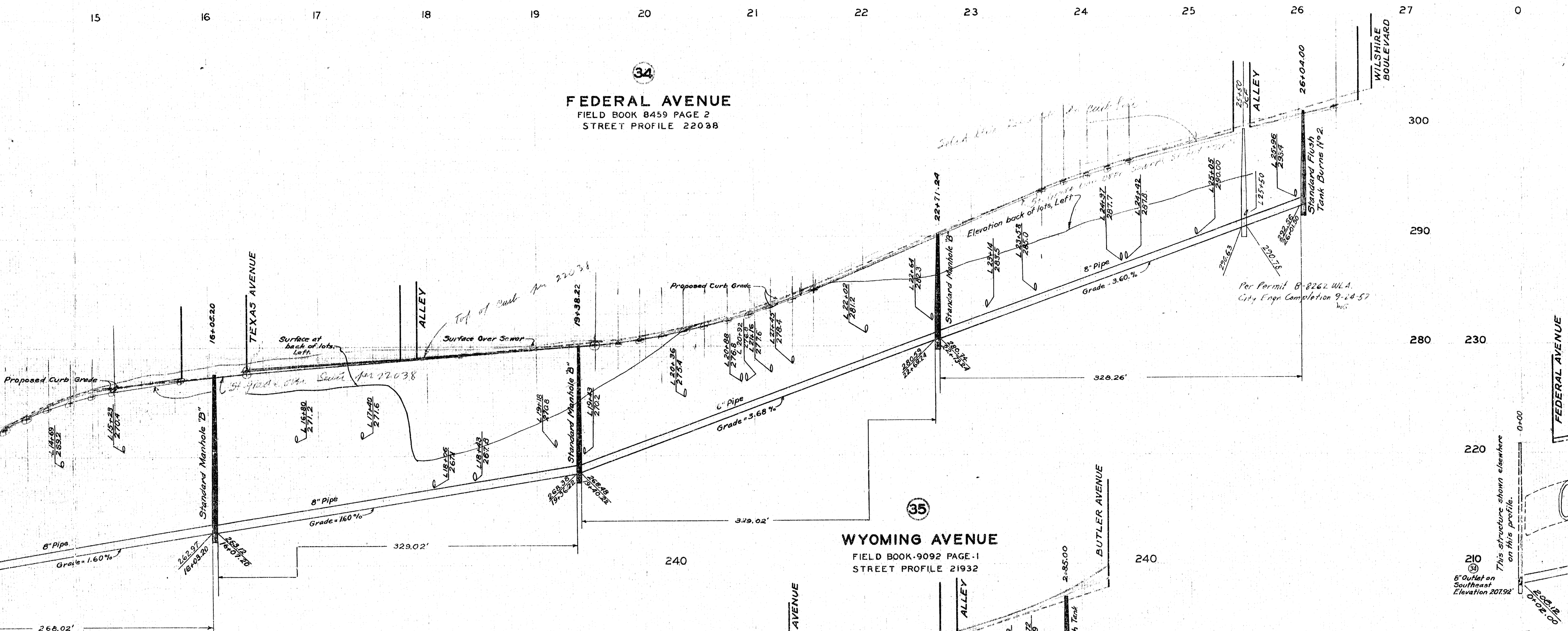
37
ALLEY SOUTHWESTERLY FROM SAWTELLE BOULEVARD



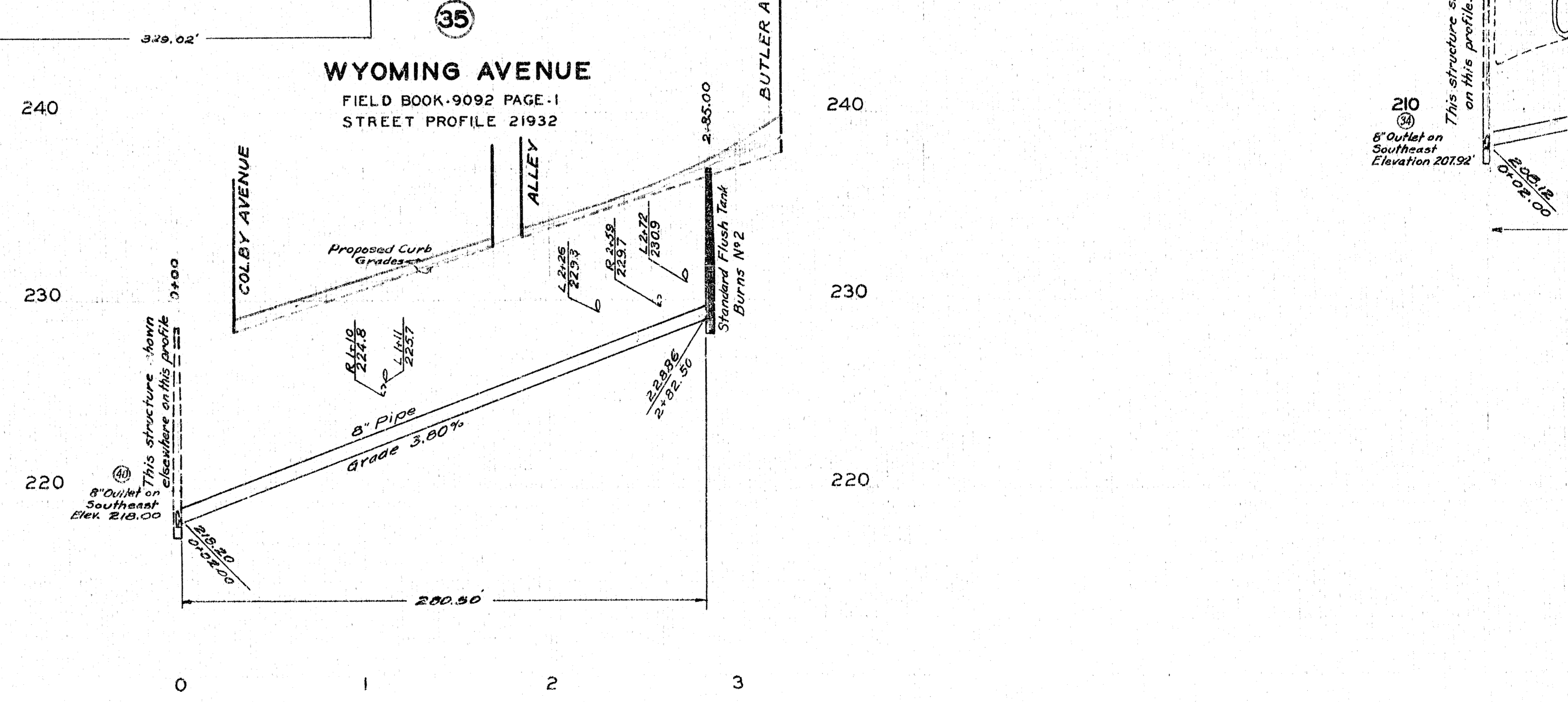
Descriptive notes on the United States Geological Survey Form
 Form 8459 (Rev. 1-1-57) (Field Book No. 8459) (New Series), which is 6.775
 feet below Datum Plane of the Survey of 1853.

15 16 17 18 19 20 21 22 23 24 25 26 27 0

FEDERAL AVENUE
 FIELD BOOK 8459 PAGE 2
 STREET PROFILE 22038



WYOMING AVENUE
 FIELD BOOK 9092 PAGE 1
 STREET PROFILE 21932



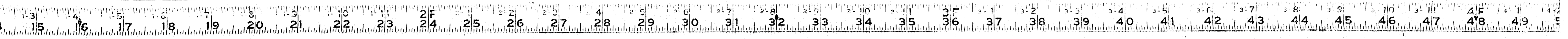
210
 8" Outlet on Southeast Elevation 207.92
 This structure shown elsewhere on this profile.

0 1 2 3

Descriptive notes on the United States Geological Survey Form
 Form 9092 (Rev. 1-1-57) (Field Book No. 9092) (New Series), which is 6.775
 feet below Datum Plane of the Survey of 1853.

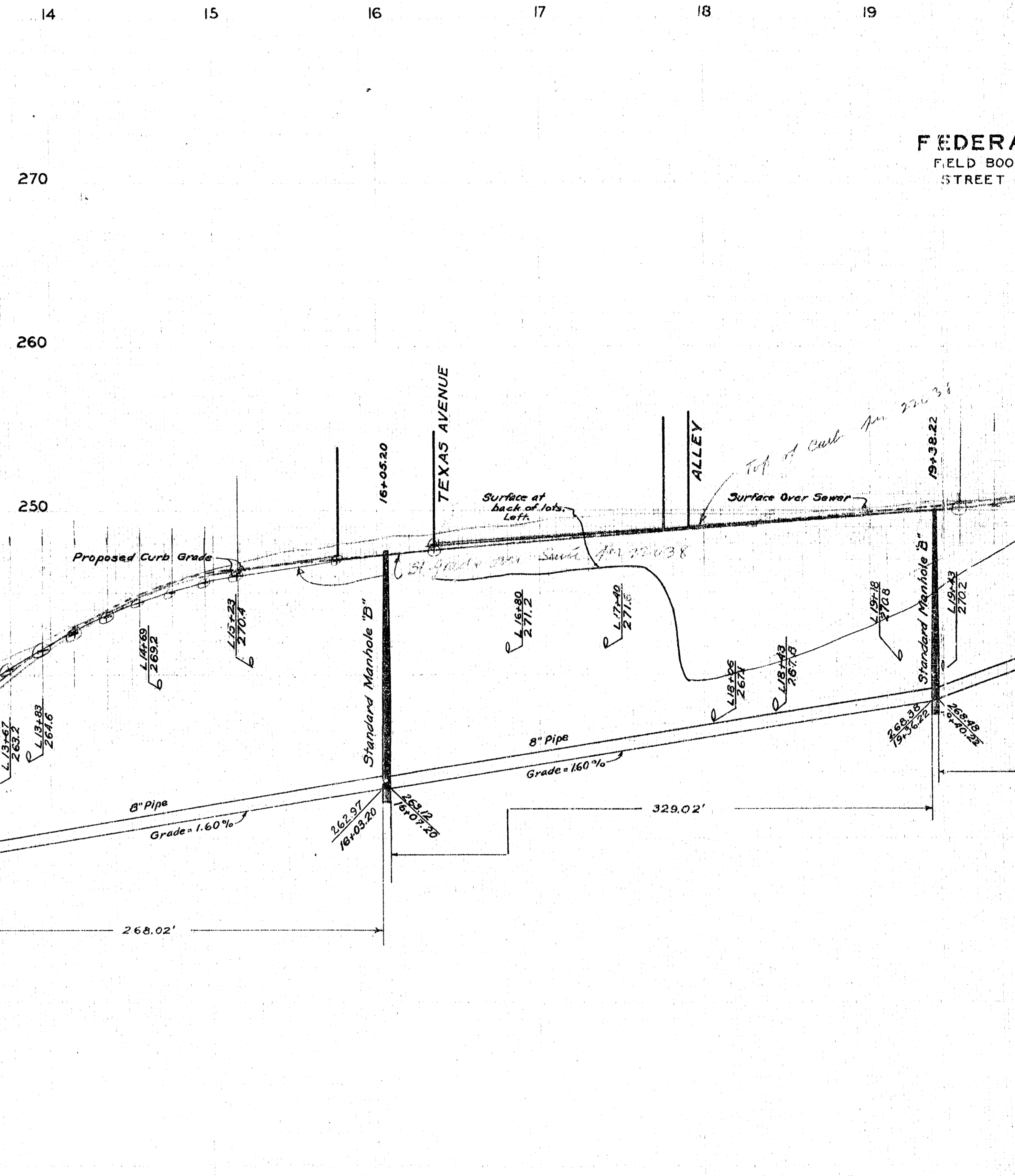
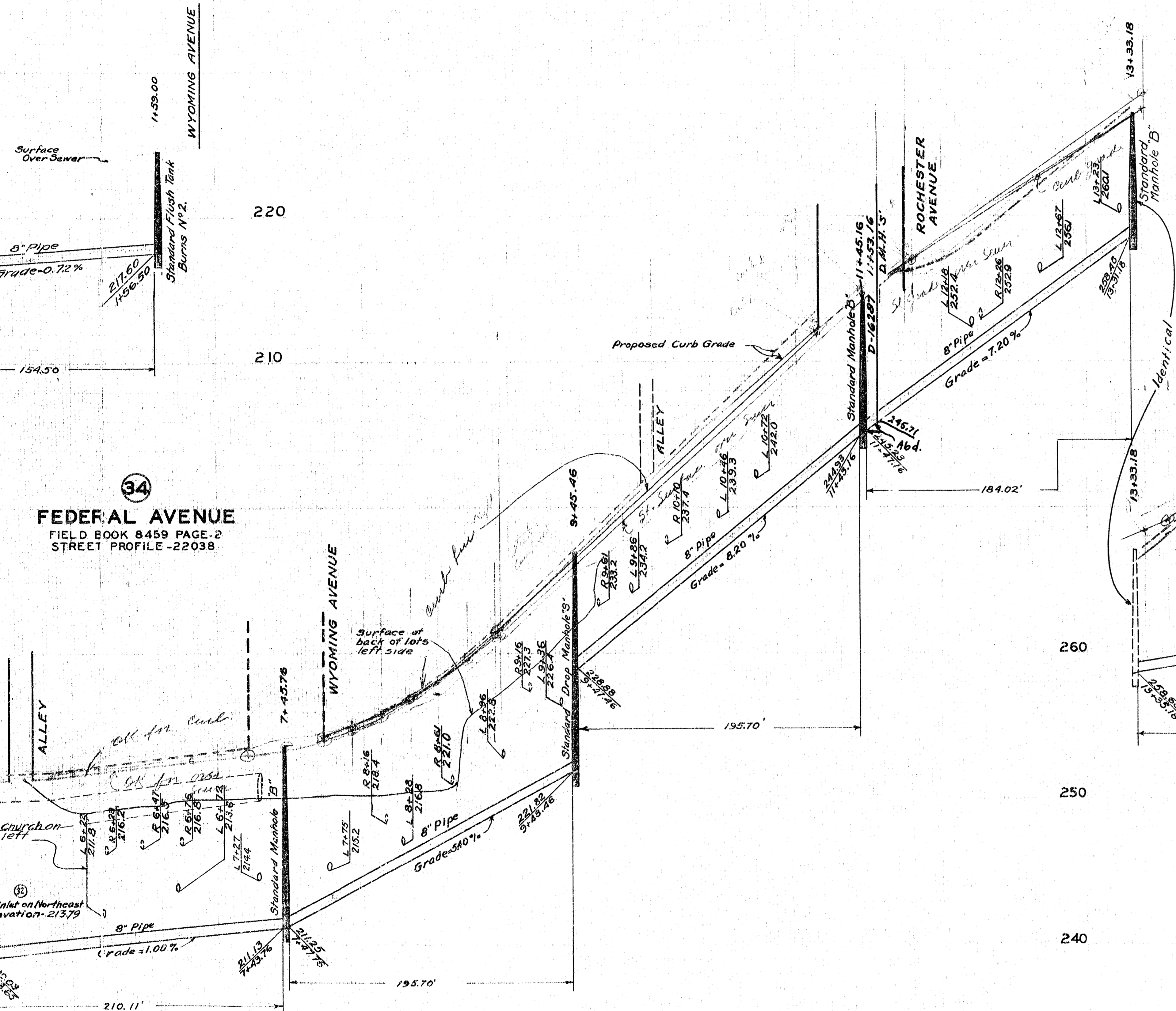


28 10



United States Geological Survey, District of Columbia, No. 12,022 (New Series), Sheet 1 of 1, 1915.

33
Y SOUTHWESTERLY FROM
COLBY AVENUE
LD BOOK 9352 PAGE - 45



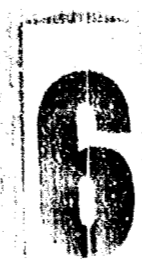
FEDERAL
FIELD BOOK
STREET P

34
FEDERAL AVENUE
FIELD BOOK 8459 PAGE 2
STREET PROFILE - 22038



United States Geological Survey, District of Columbia, No. 12,022 (New Series), Sheet 1 of 1, 1915.

2910

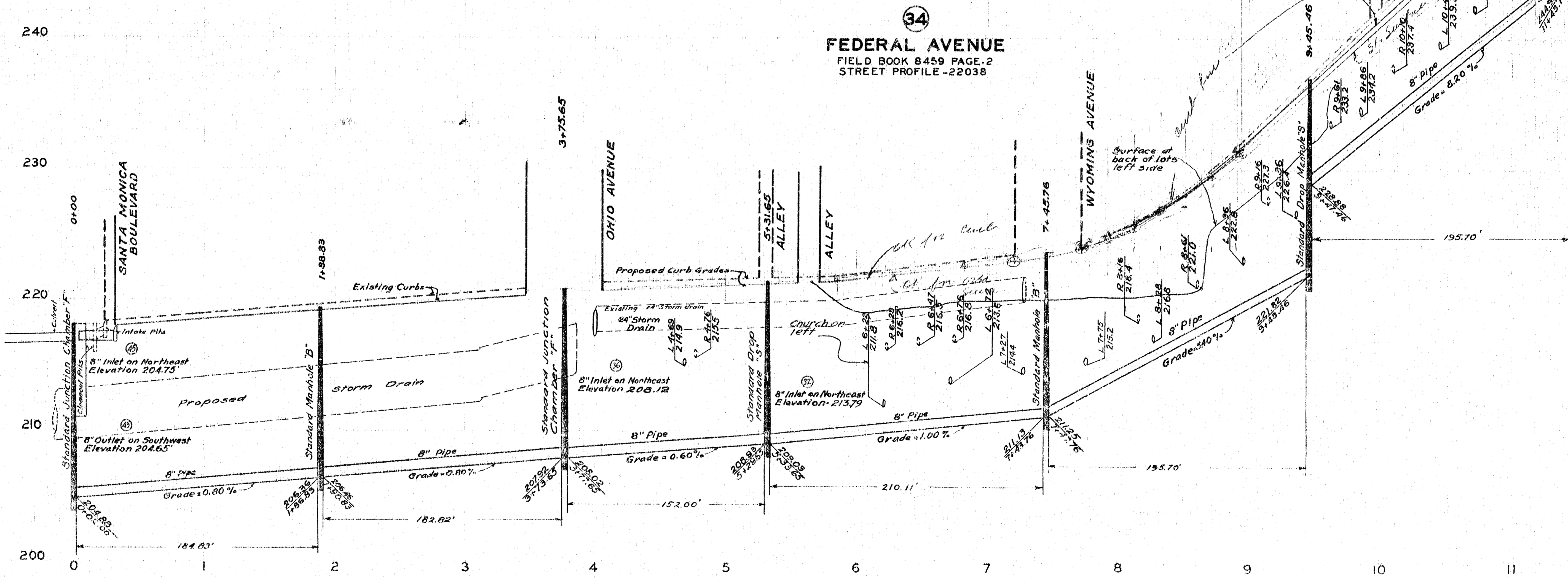
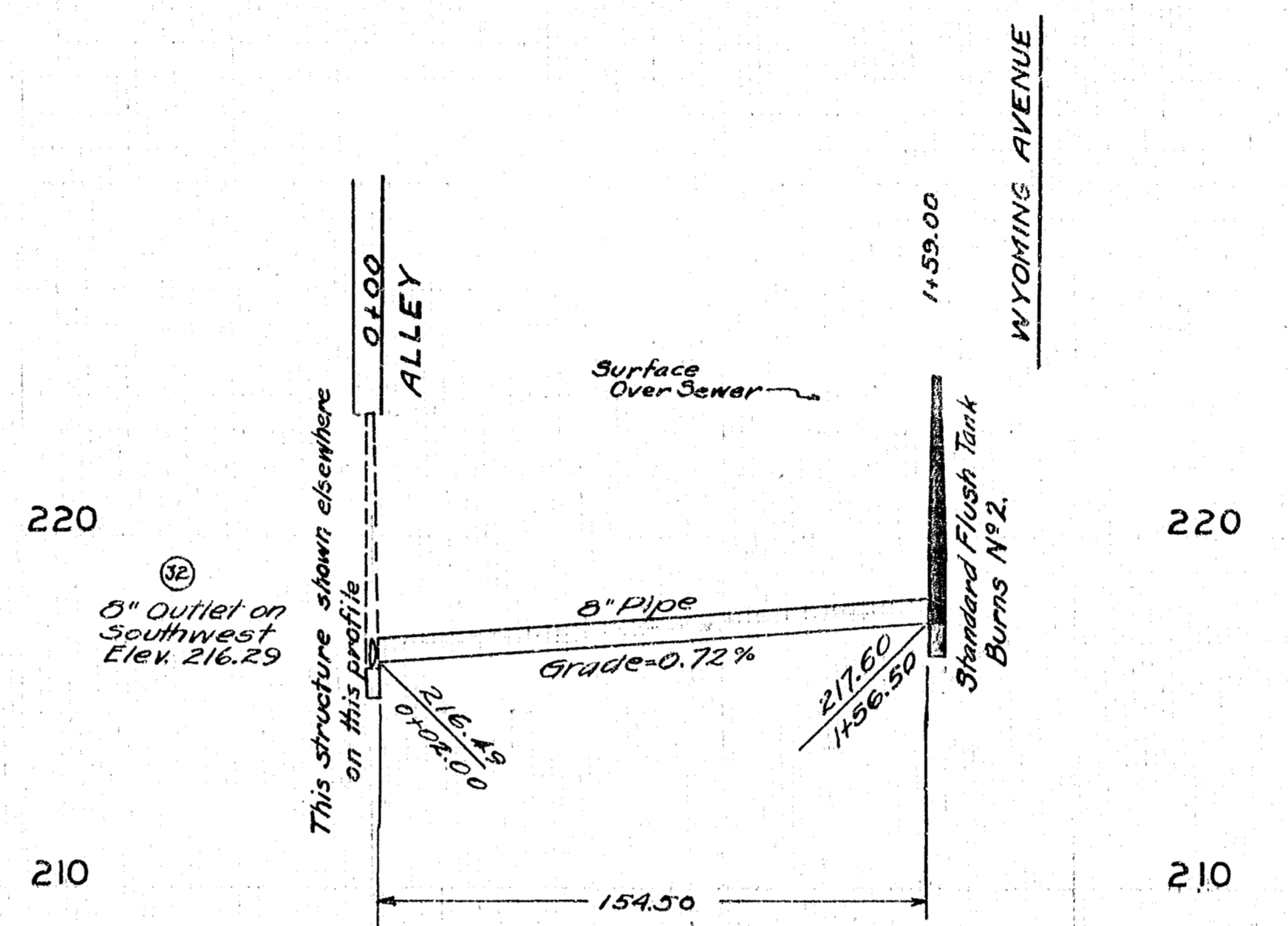
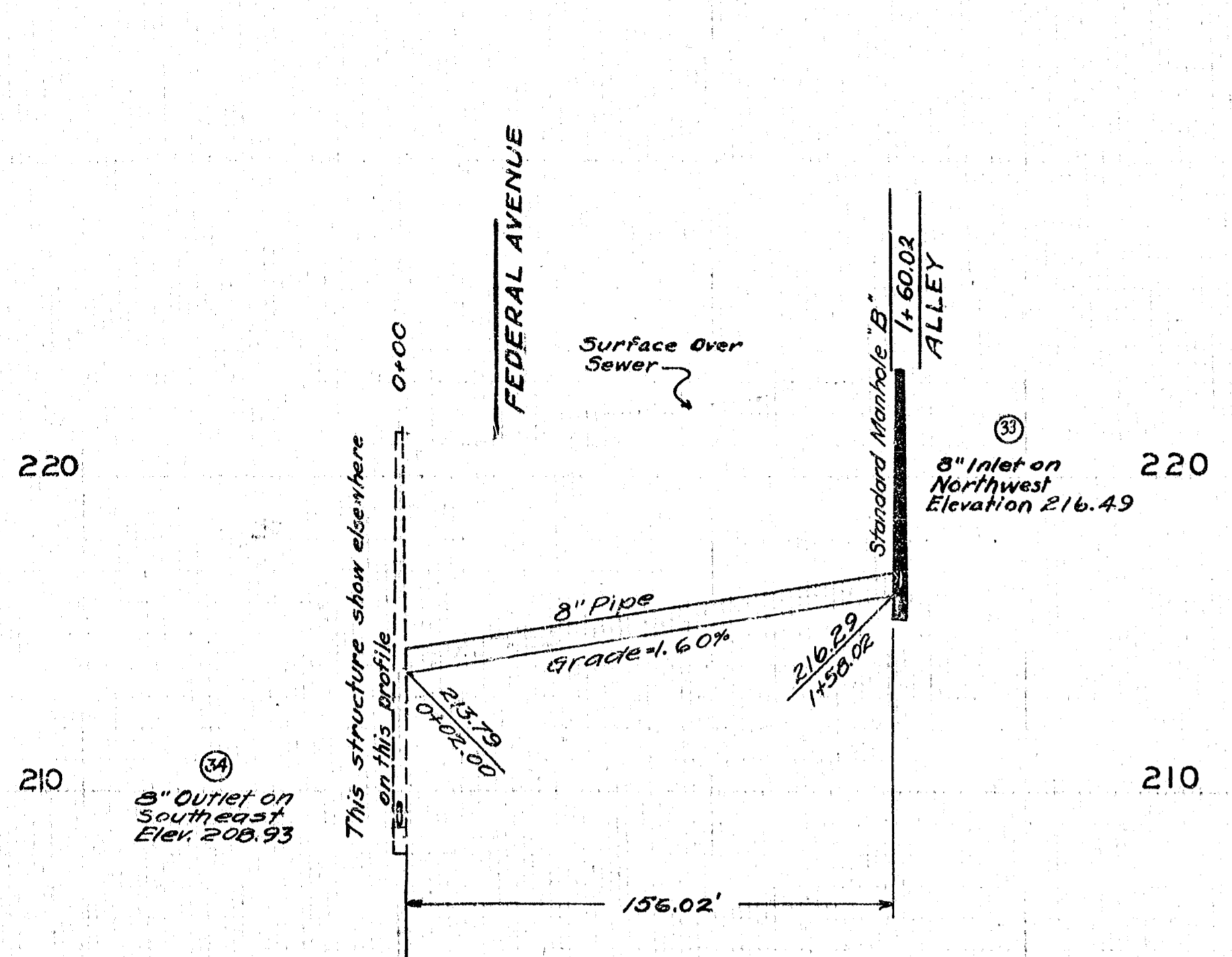


Elevation shown herein are based on the United States Geological Survey datum. Plans, sheets 1 and 2, of the Ordinance No. 62,225 (New Series), which is in force below Datum Plane in use prior to July 1, 1912.

Elevation shown herein are based on the United States Geological Survey datum. Plans, sheets 1 and 2, of the Ordinance No. 62,225 (New Series), which is in force below Datum Plane in use prior to July 1, 1912.

32
 ALLEY SOUTHEASTERLY FROM
 WYOMING AVENUE
 FIELD BOOK 9352, PAGE - 43

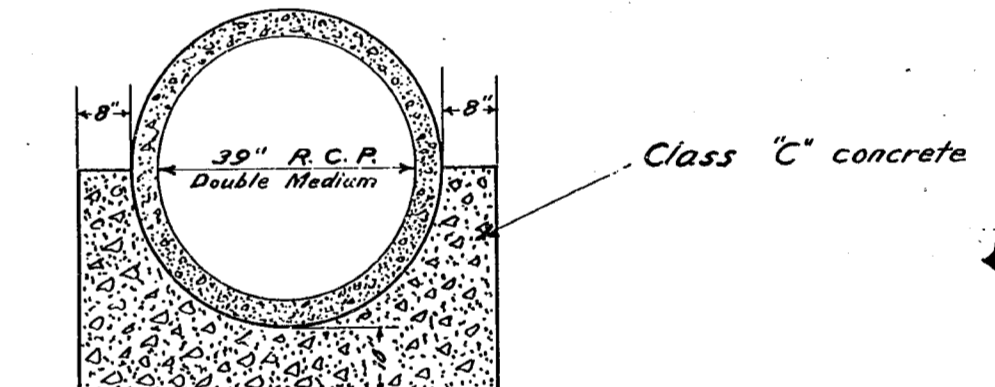
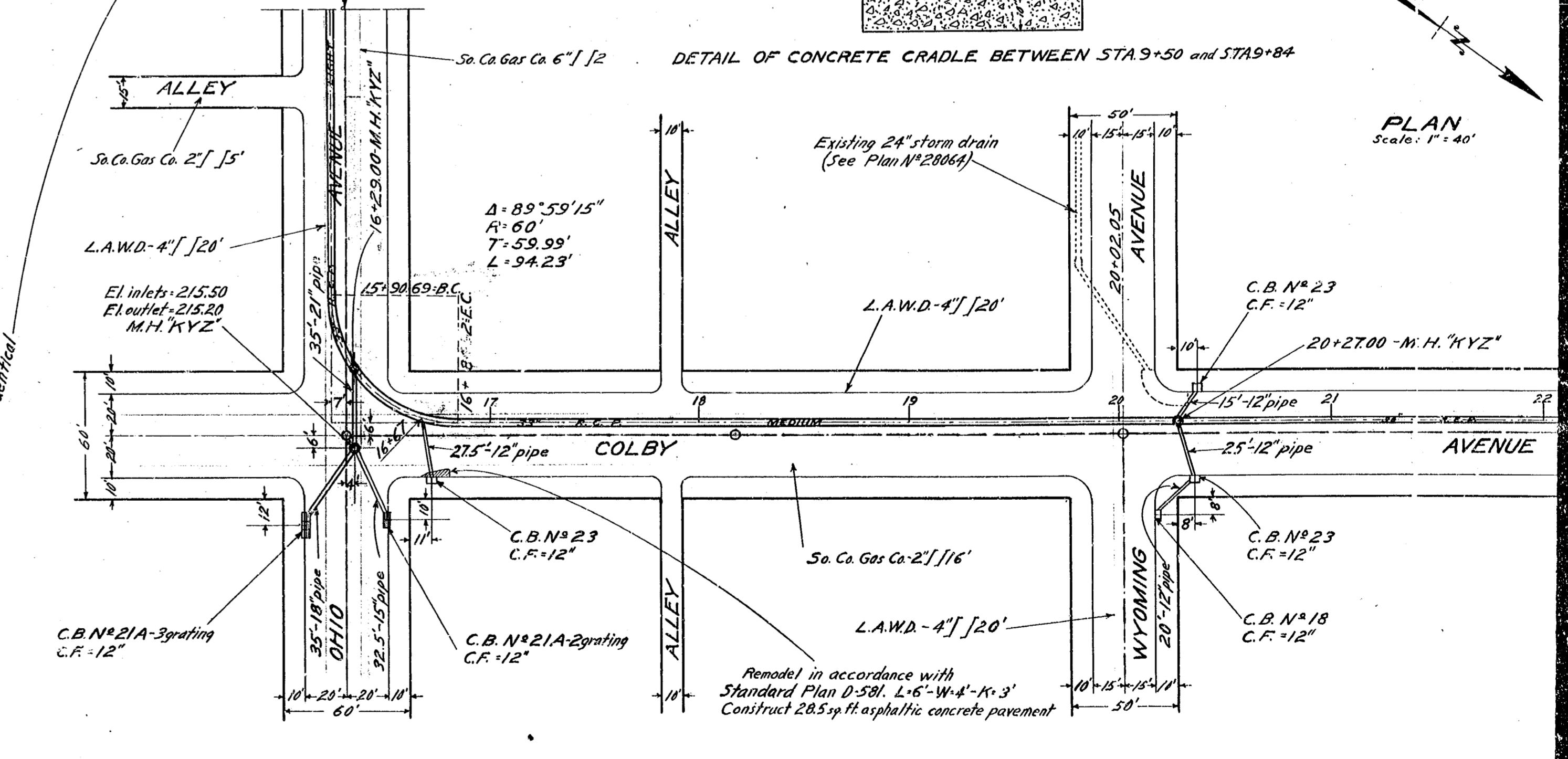
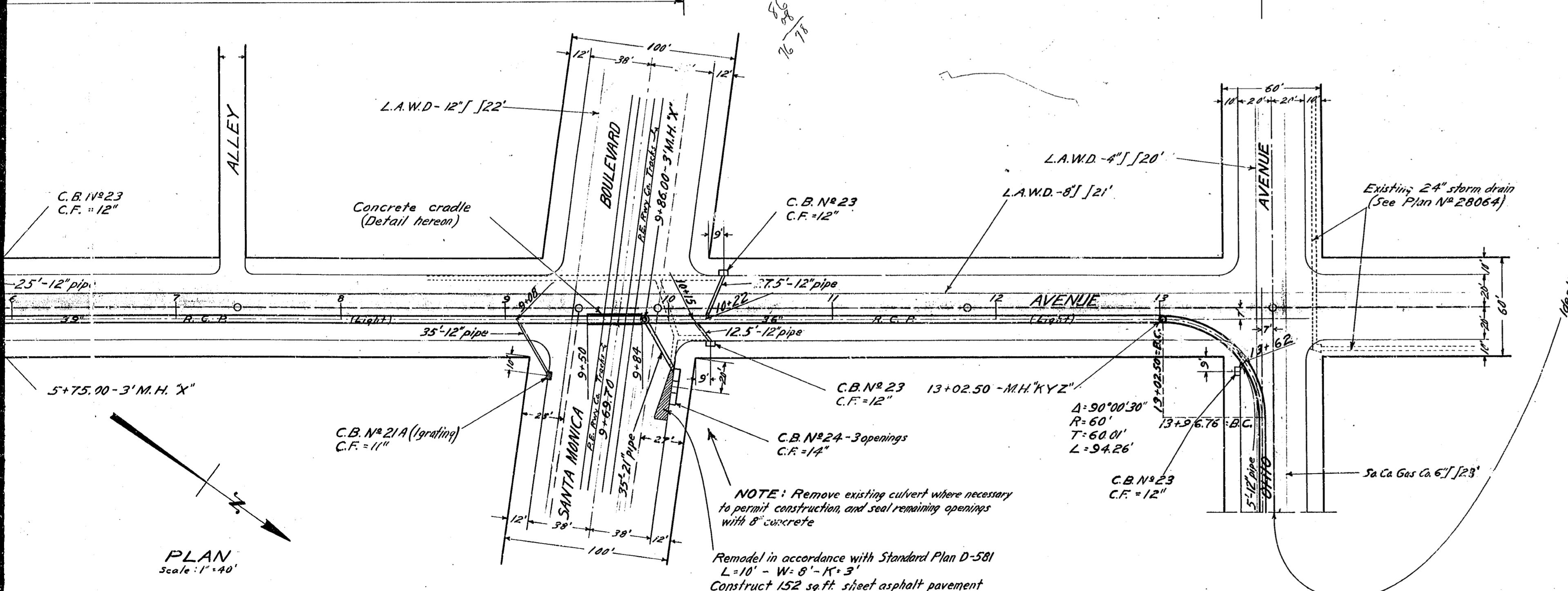
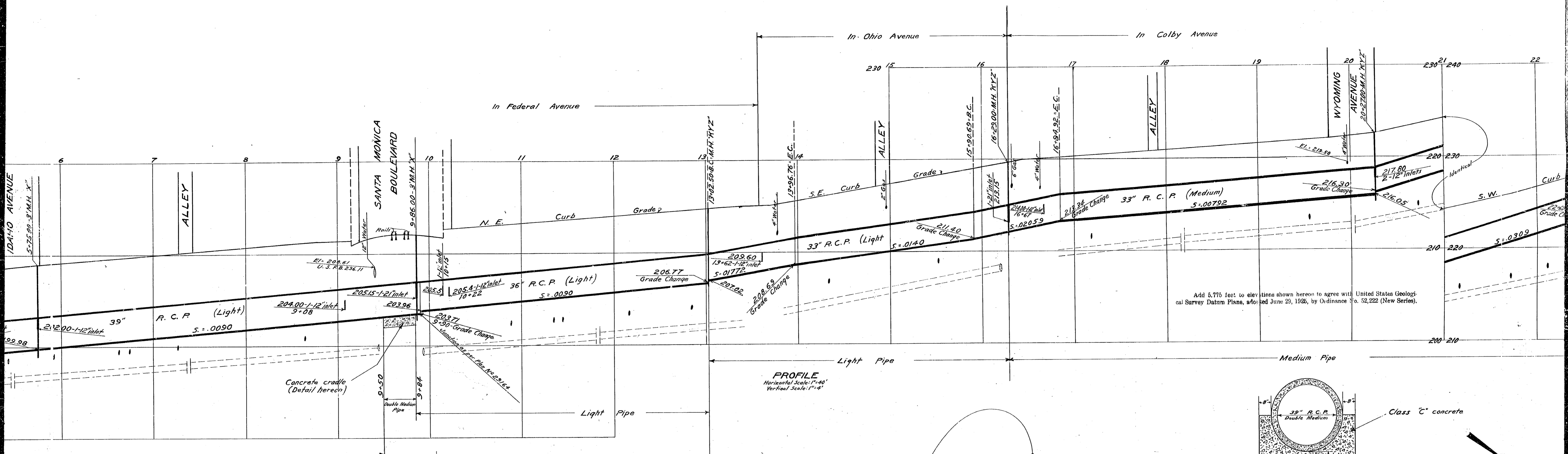
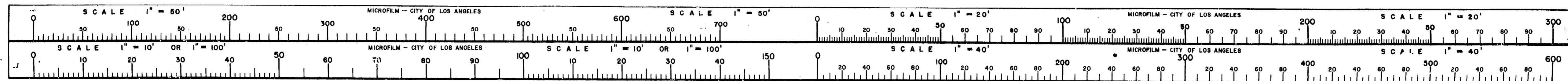
33
 ALLEY SOUTHWESTERLY FROM
 COLBY AVENUE
 FIELD BOOK 9352 PAGE - 45



23199

7

2310

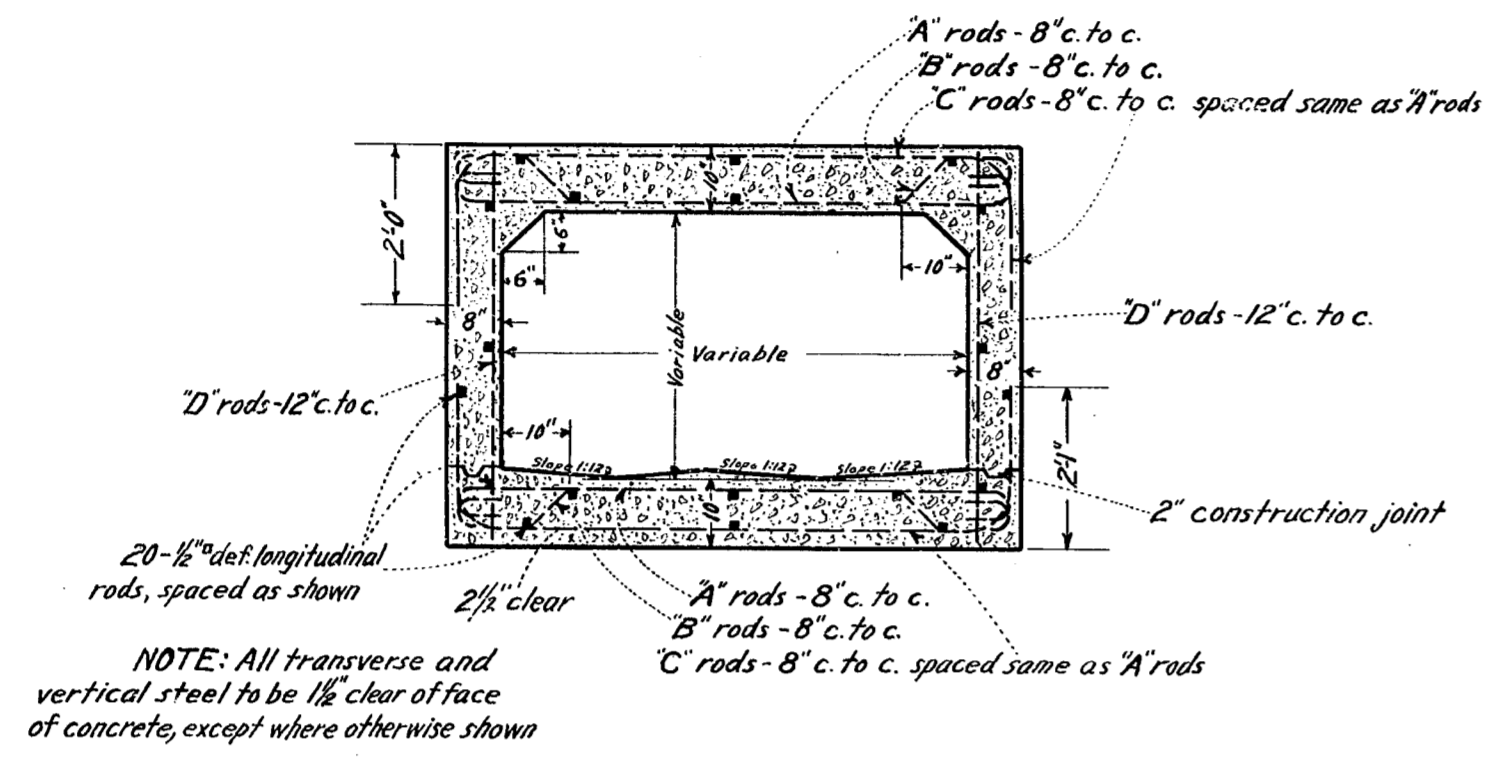
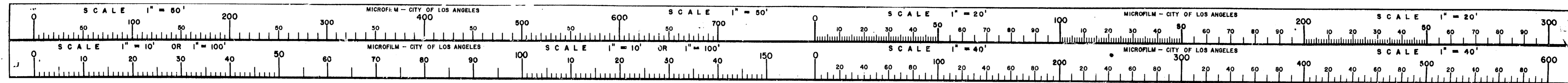


PLAN
Scale: 1" = 40'

PLAN
Scale: 1" = 40'

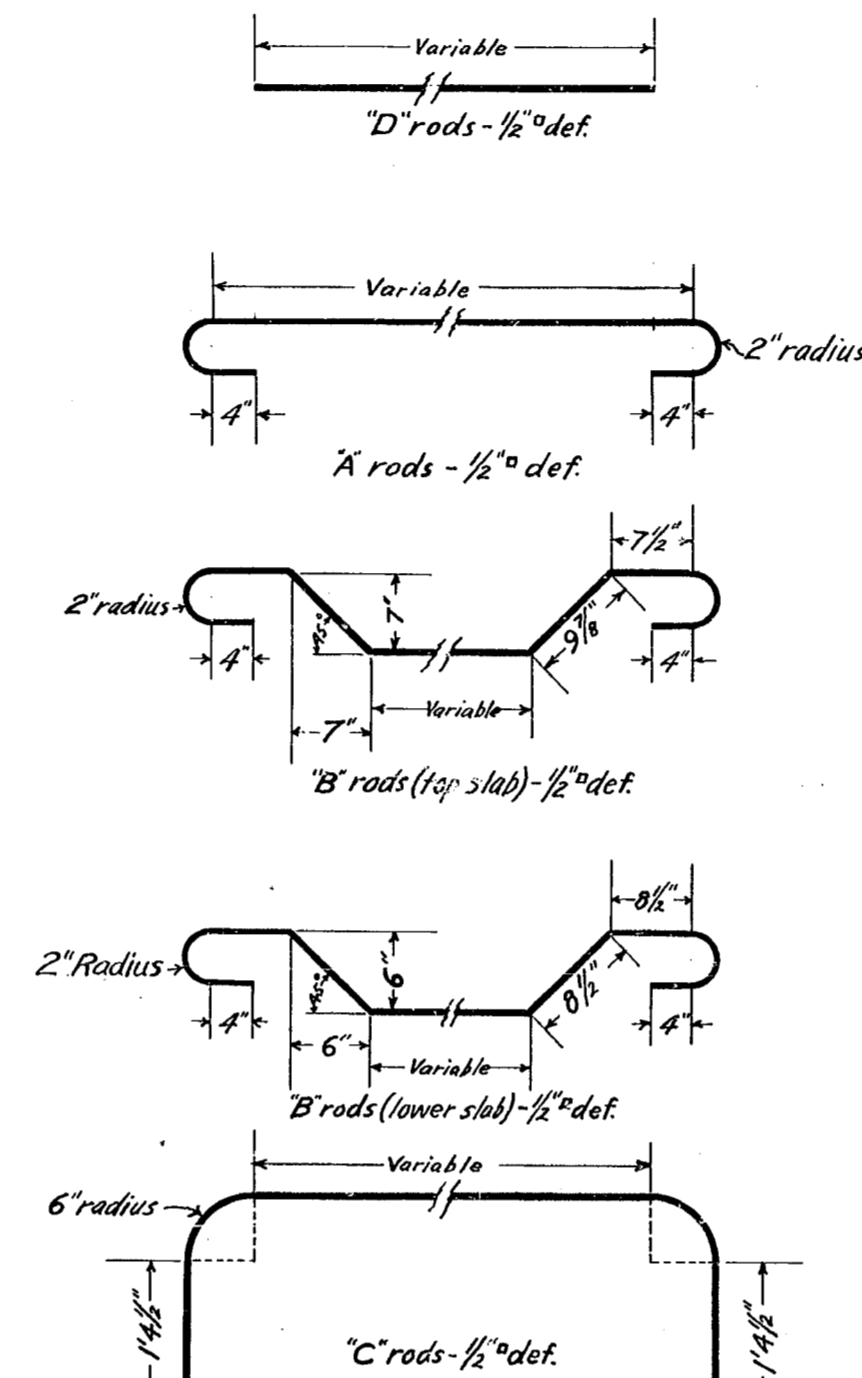
D 6 4 3 2

CERTIFICATE
I hereby certify that this is a true and accurate copy of the official city record described there, made in accordance with Section 434 of the Charter of the City of Los Angeles and Section 34930.5 of the Government Code.
Date 4-10-67
By REX E. LAYTON, City Clerk
By [Signature]

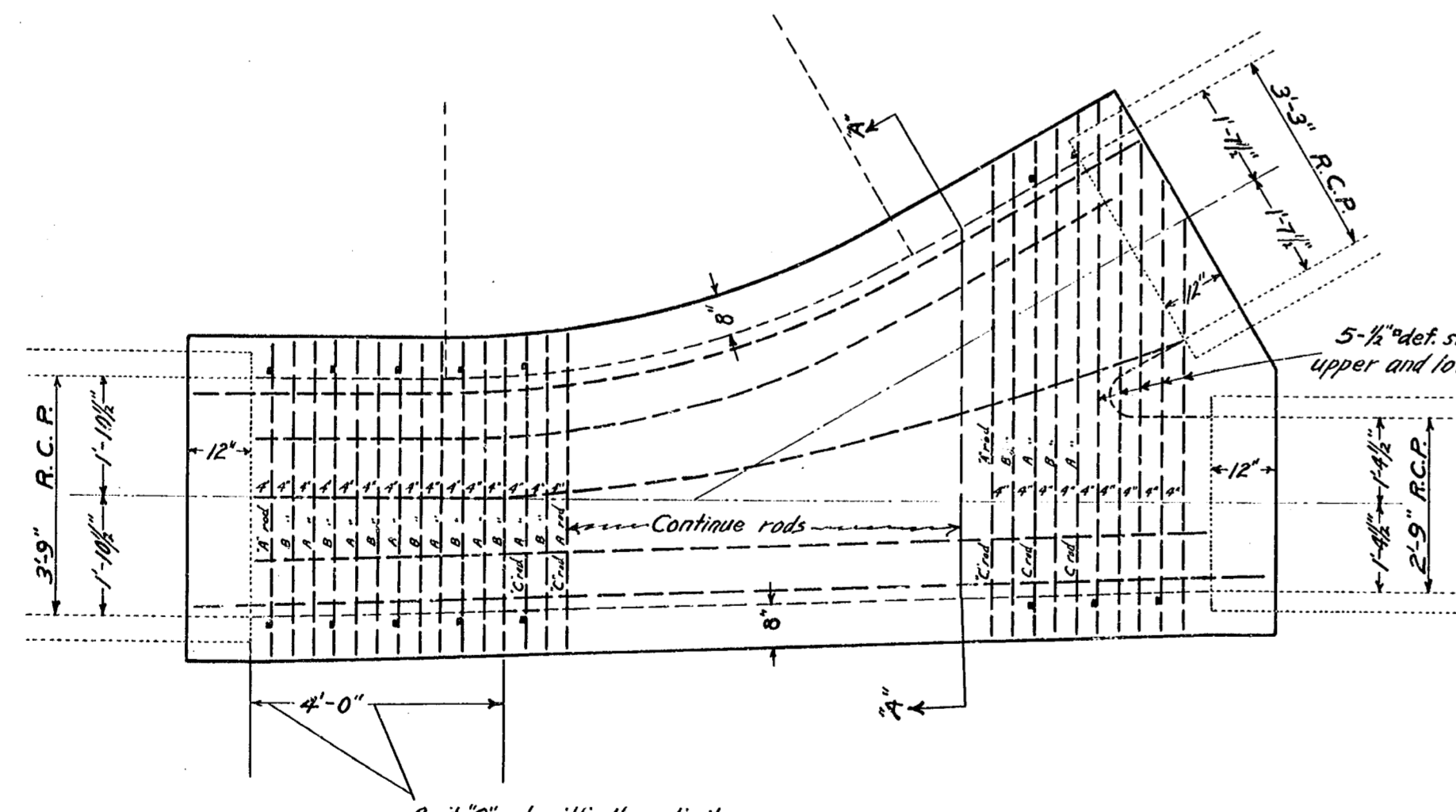


SECTION A-A
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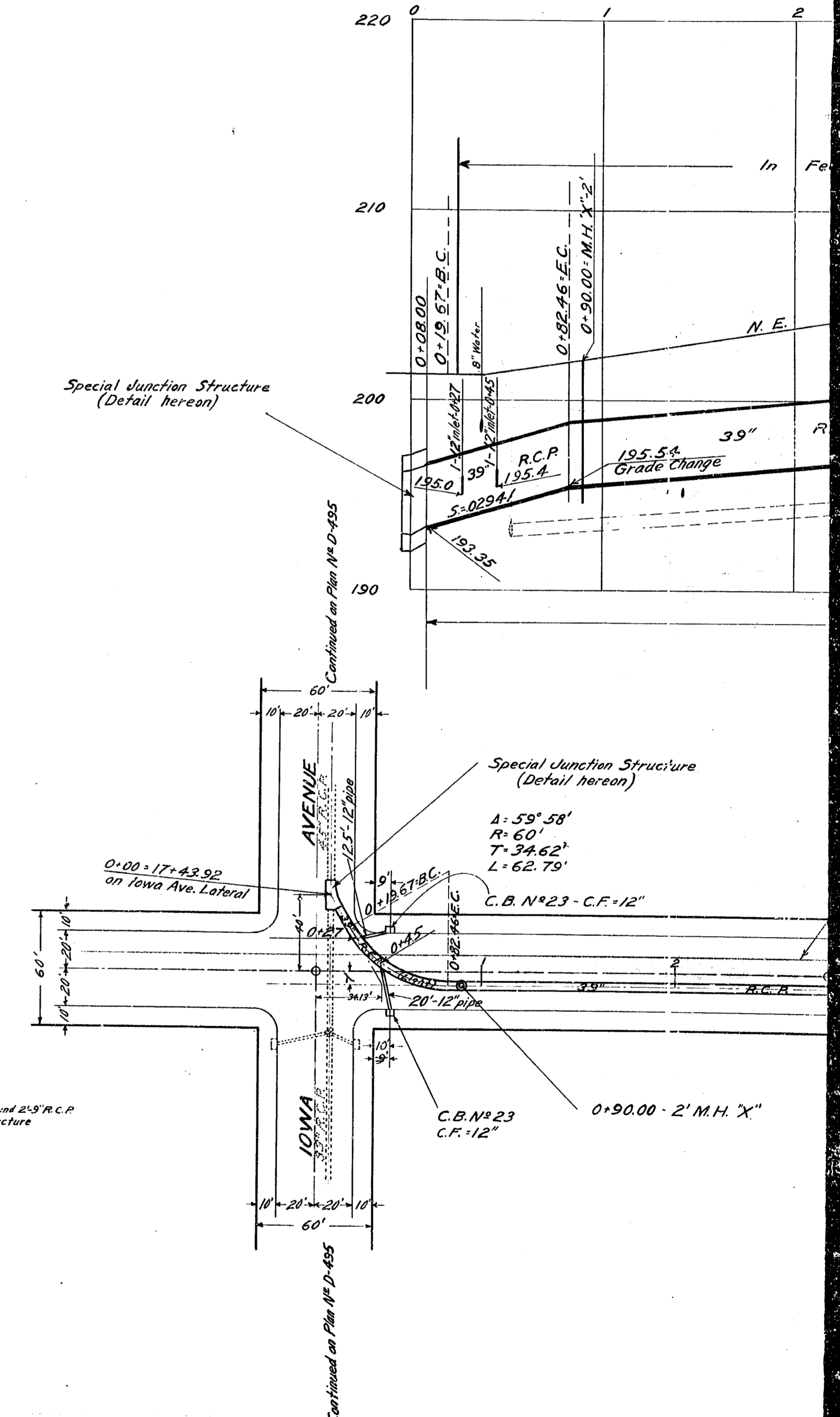
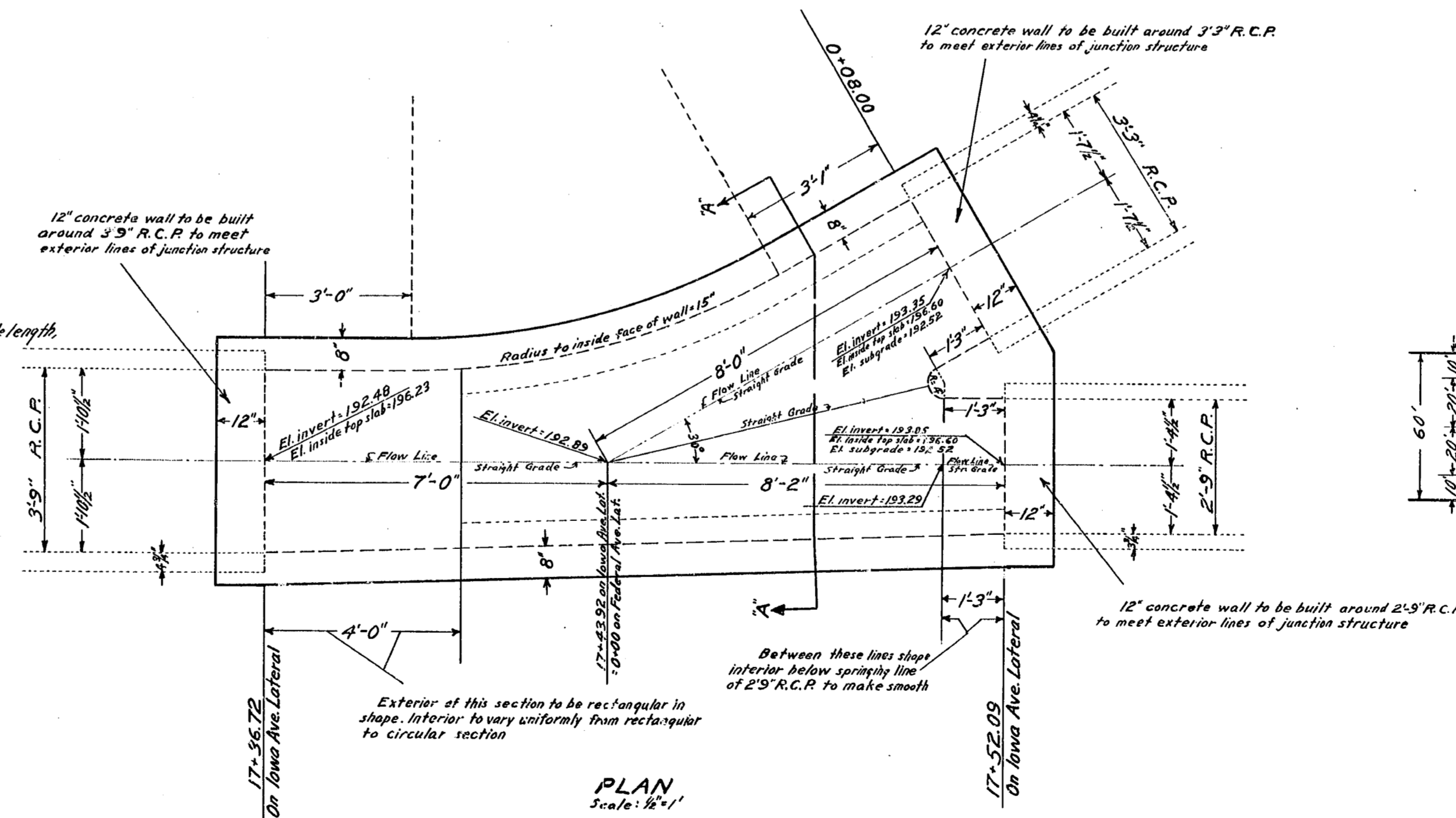
DETAIL OF SPECIAL JUNCTION STRUCTURE AT STA. 0+00



Add 5.75 feet in elevation shall be made to agree with United States Geological Survey Datum that is used for the City of Los Angeles (New Style).



643



CERTIFICATE

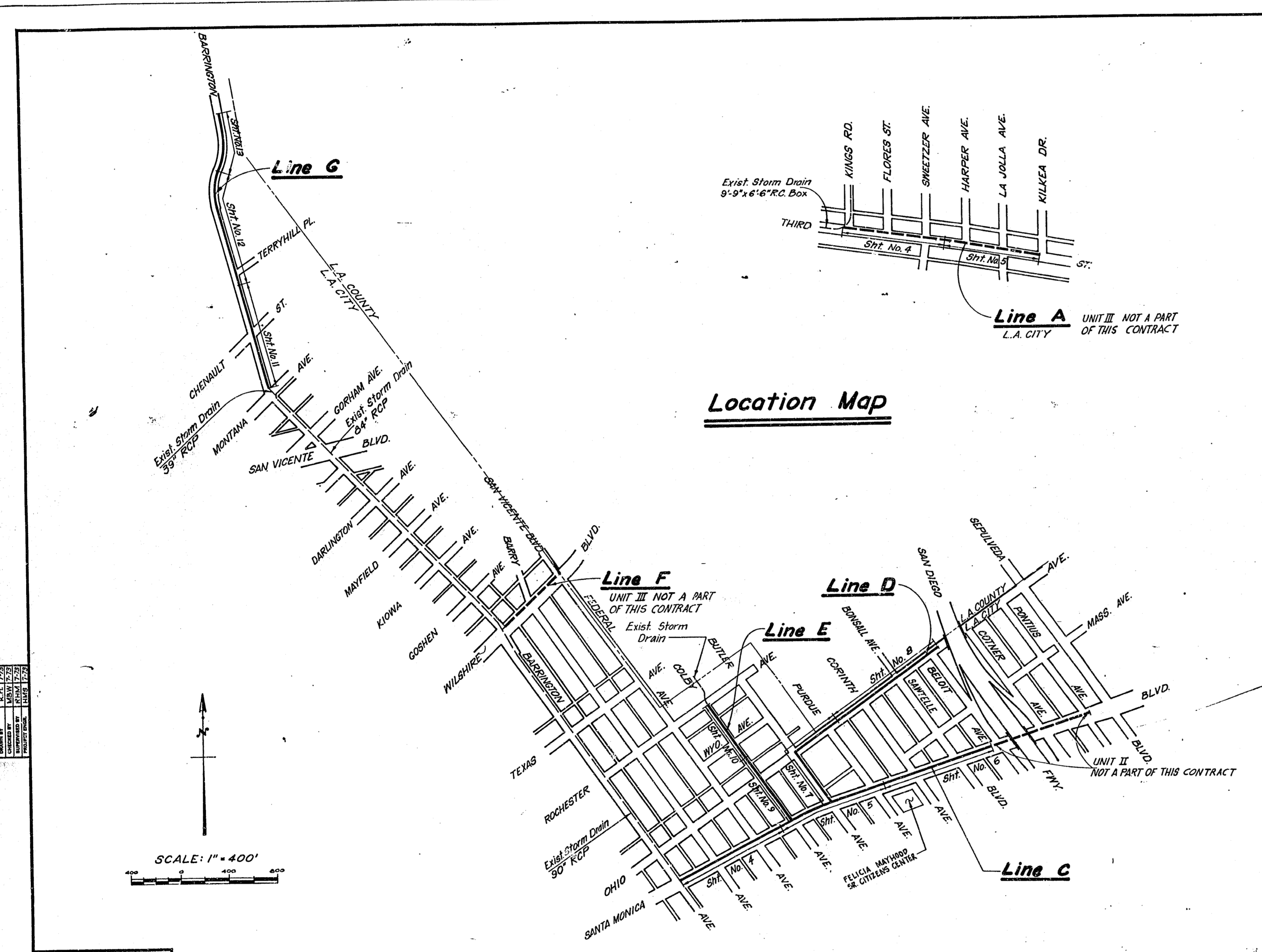
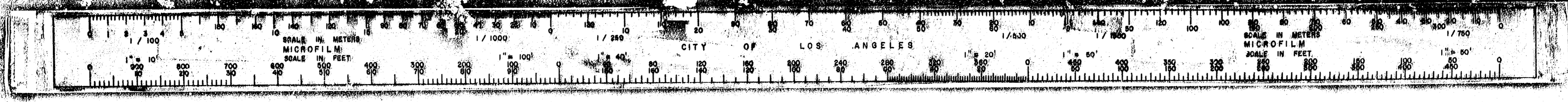
I hereby certify that this is a true and accurate copy of the official city record described there, made in accordance with Section 434 of the Charter of the City of Los Angeles and Section 34090.5 of the Government Code.

REX E. LAYTON, City Clerk

By *PC* Deputy

Date 4-15-69

D 6 4 3 4



Location Map

INDEX TO SHEETS

SHEET NO	TITLE
1	LOCATION MAP AND INDEX TO SHEETS
2	GENERAL NOTES AND DETAIL DRAWINGS
3	GENERAL NOTES, ABBREVIATION, LEGEND, STANDARD PLANS AND DRAWINGS
PORTION LINE C, RCP, PLAN, PROFILE & SECTION	
4	STA. 0+00.00 TO STA. 9+83.00
5	STA. 9+83.00 TO STA. 13+87.00
6	STA. 13+87.00 TO STA. 28+00.00
LINE D, RCP, PLAN, PROFILE & SECTION	
7	STA. 0+00.00 TO STA. 9+38.00
8	STA. 9+38.00 TO STA. 20+17.00
LINE E, RCP, PLAN, PROFILE & SECTION	
9	STA. 0+00.00 TO STA. 7+05.00
10	STA. 7+05.00 TO STA. 12+64.57
LINE G, RCP, PLAN, PROFILE & SECTION	
11	STA. 0+00.00 TO STA. 6+81.00
12	STA. 6+81.00 TO STA. 13+94.00
13	STA. 13+94.00 TO STA. 21+40.00 and SEWER RECONSTRUCTION for LINE D
LATERALS - LINE C and D, PLAN & PROFILE	
14	STREET RESURFACING PLAN
15	LOG OF BORINGS
16	LOG OF BORINGS
17	LOG OF BORINGS
18	LOG OF BORINGS
19	LOG OF BORINGS
20	TRAFFIC SIGNALIZATION, SANTA MONICA BLVD & COLBY AVE
21	TRAFFIC SIGNALIZATION, SANTA MONICA BLVD & PURDUE AVE
22	TRAFFIC SIGNALIZATION, SANTA MONICA BLVD & CORNISH AVE
23	DETOURS, SANTA MONICA BLVD & BARRINGTON AVE.
24	DETOURS, SANTA MONICA BLVD.

"AS BUILT" DWGS.

DATE	BY	DESCRIPTION
12/23/73	J. S. LIG	ISSUED FOR CONSTRUCTION
12/23/73	J. S. LIG	ISSUED FOR CONSTRUCTION
12/23/73	J. S. LIG	ISSUED FOR CONSTRUCTION

SCALE: 1" = 400'

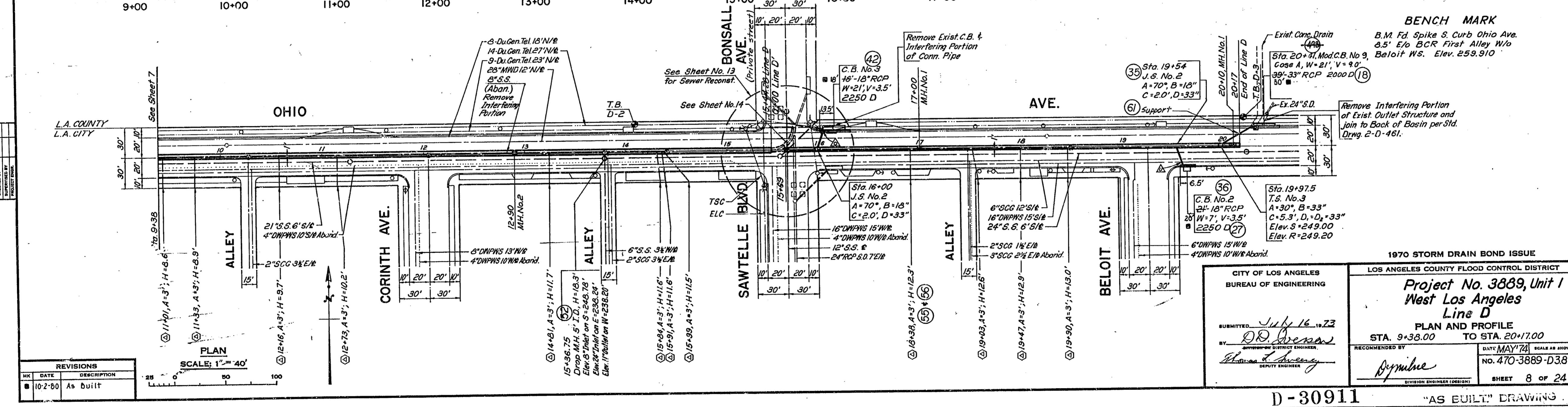
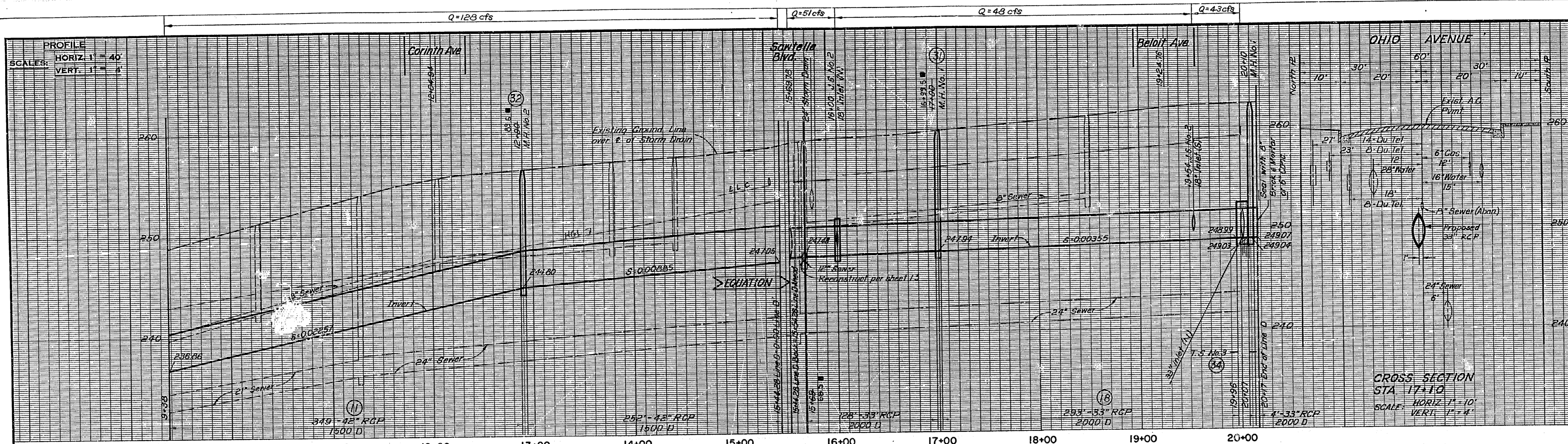
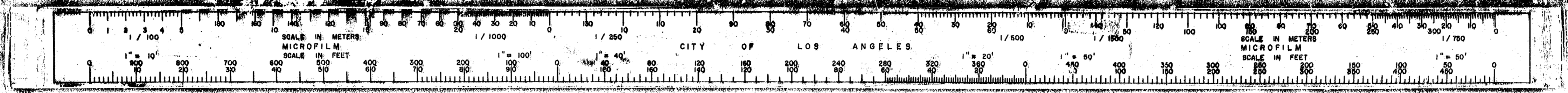
NO.	DATE	REVISIONS

COUNTY OF LOS ANGELES HARVEY T. BRANDT COUNTY ENGINEER		CITY OF LOS ANGELES BUREAU OF ENGINEERING SUBMITTED July 16, 1973 BY <i>D. D. [Signature]</i> DEPUTY ENGINEER		LOS ANGELES COUNTY FLOOD CONTROL DISTRICT Project No. 3889, Unit 1 West Los Angeles Portion Line C, Lines D, E & G Location Map and Index to Sheets	
APPROVED July 26, 1973 <i>James S. [Signature]</i> COUNTY ENGINEER		APPROVED July 26, 1973 <i>Donald C. [Signature]</i> CITY ENGINEER		RECOMMENDED BY <i>[Signature]</i> DATE May 14, 1973 NO. 470-3889-03.1 SHEET 1 OF 24	

D-30911 "AS BUILT" DRAWINGS

12-29-94 *[Signature]*

9X



NO.	DATE	DESCRIPTION
1	10-2-00	As Built

SCALE: 1" = 40'

CITY OF LOS ANGELES
BUREAU OF ENGINEERING
SUBMITTED: July 16, 1973
BY: *D.R. Brown*
Thomas J. Deane

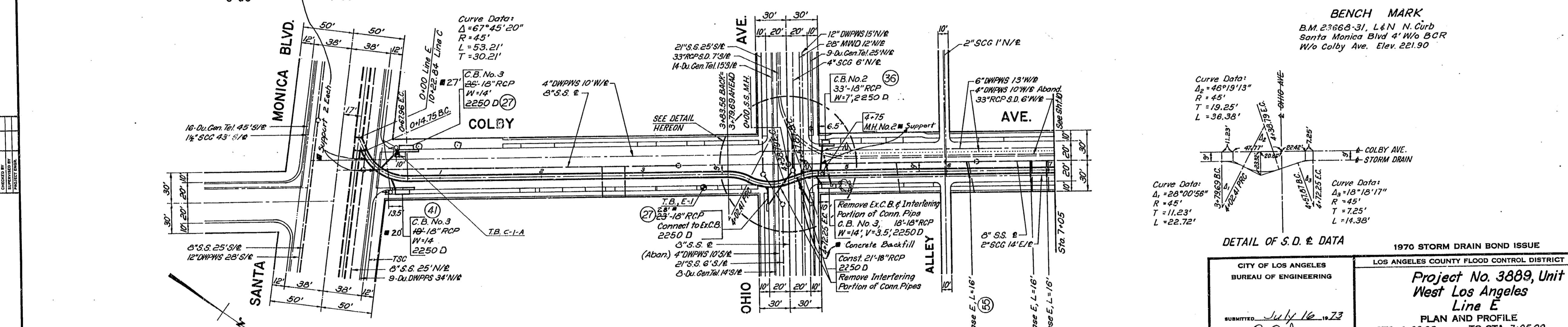
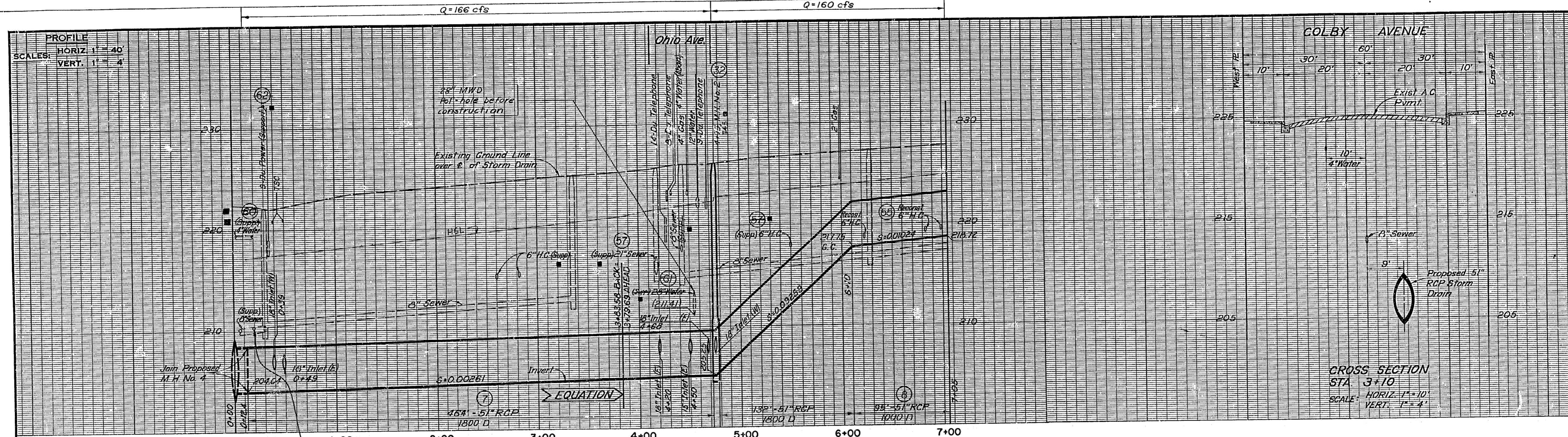
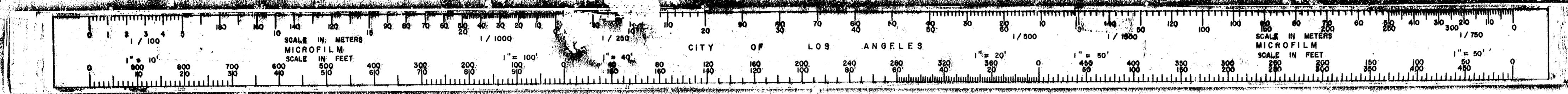
1970 STORM DRAIN BOND ISSUE
LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
Project No. 3889, Unit 1
West Los Angeles
Line D
PLAN AND PROFILE
STA. 9+38.00 TO STA. 20+7.00
RECOMMENDED BY: *Dynalco*
DATE: MAY 74
NO. 470-3889-D38
SHEET 8 OF 24

D-30911

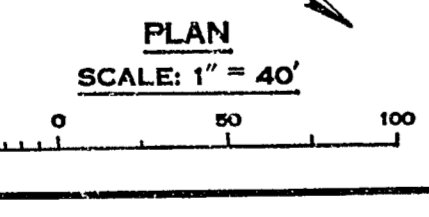
"AS BUILT" DRAWING

12-29-94 *Janice Wady*

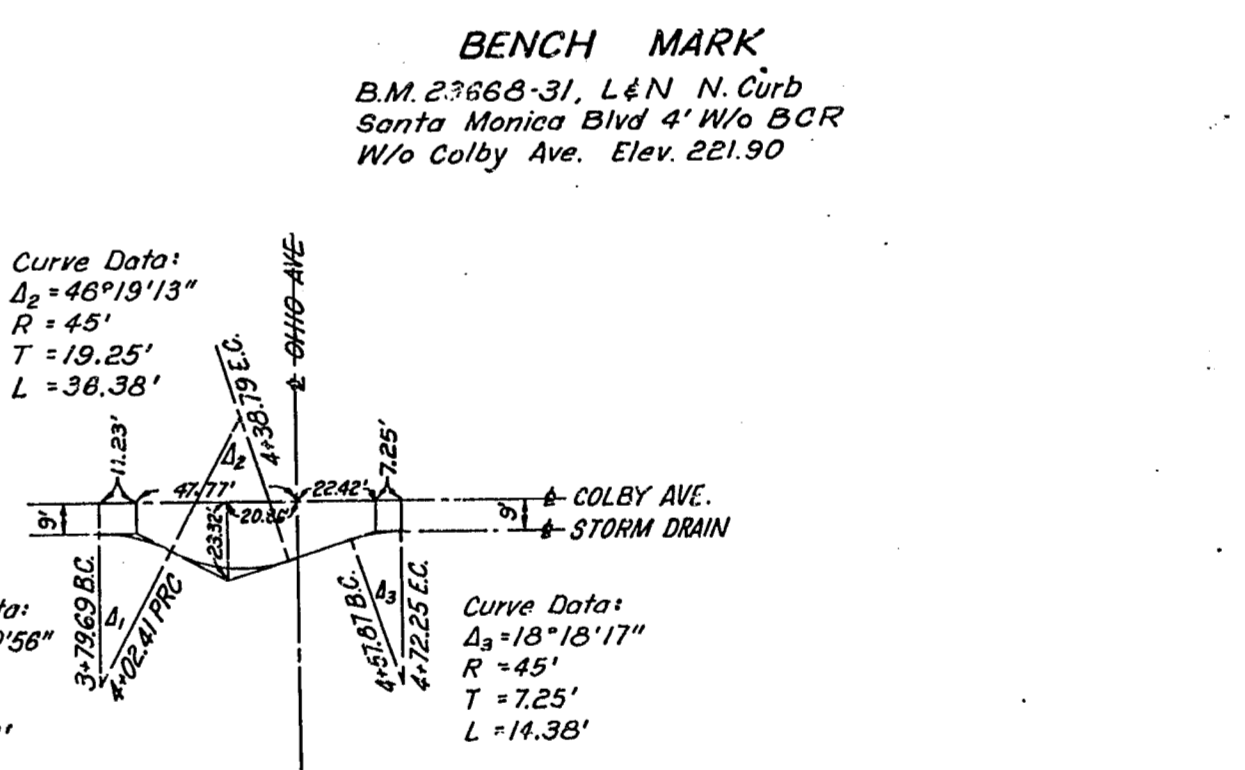
29X



NO.	DATE	DESCRIPTION
1	7-7-81	75 Builf



PLAN
SCALE: 1" = 40'



1970 STORM DRAIN BOND ISSUE

CITY OF LOS ANGELES
BUREAU OF ENGINEERING

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

Project No. 3889, Unit 1
West Los Angeles
Line E

PLAN AND PROFILE
STA. 0+00.00 TO STA. 7+05.00

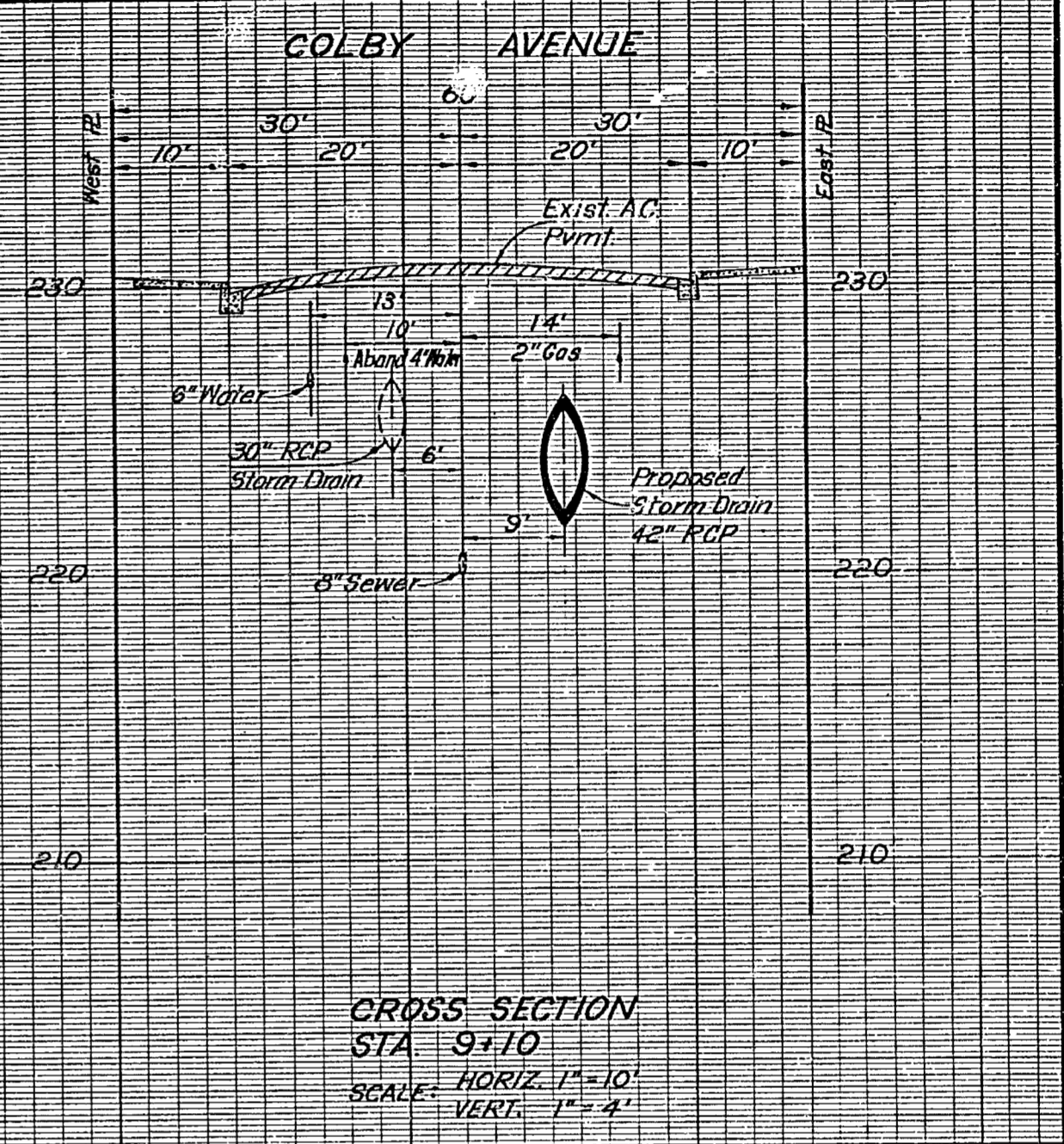
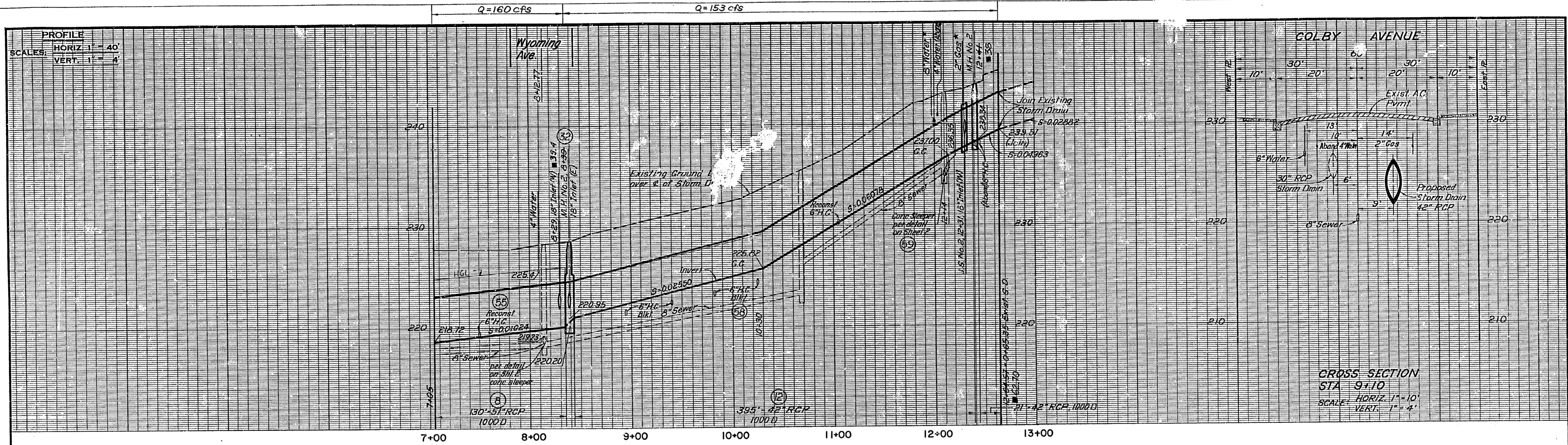
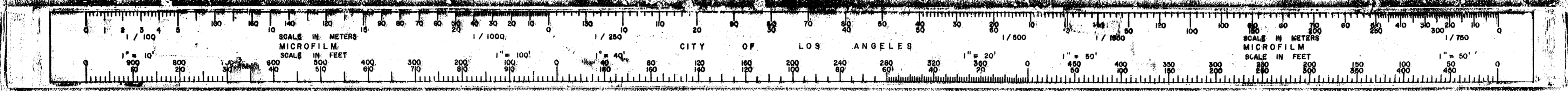
DATE: MAY 74
NO. 470-3889-D39
SHEET 9 OF 24

RECOMMENDED BY: *D. R. [Signature]*
DEPUTY ENGINEER

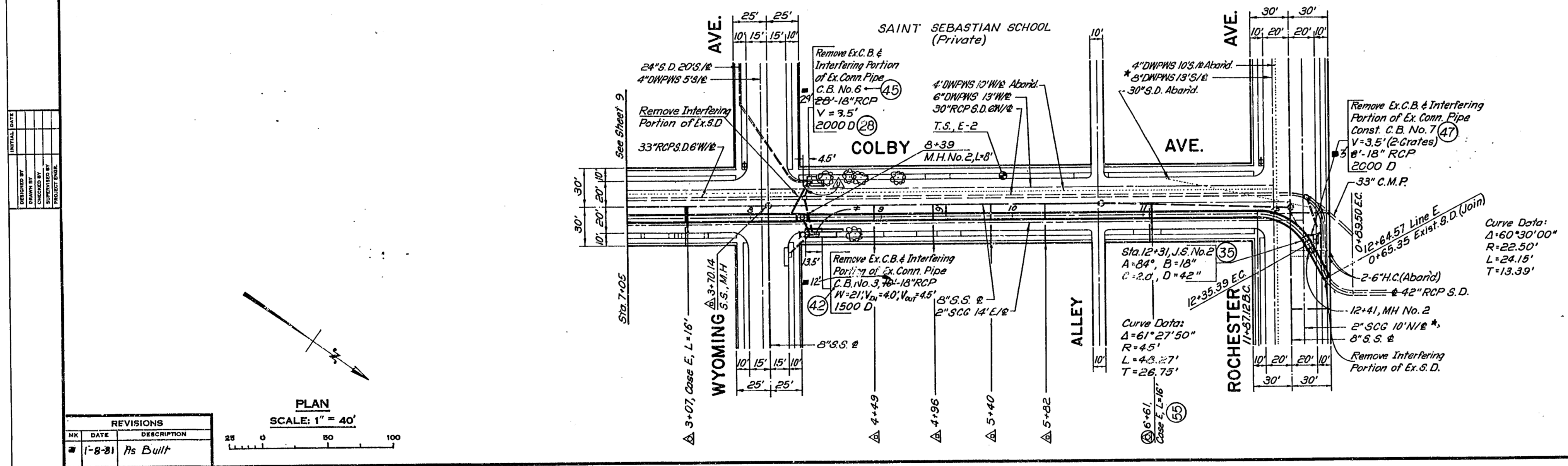
D-30911 "AS BUILT" DRAWING

12-29-94 [Signature]

29X



BENCH MARK
 B.M. 23663-31, L&N W. Curb
 Colby Ave. 2' S/o Rochester Ave.
 Elev. 242.55



NO.	DATE	DESCRIPTION
1	1-8-81	As Built

PLAN
 SCALE: 1" = 40'

CITY OF LOS ANGELES BUREAU OF ENGINEERING SUBMITTED July 16, 1973 BY <i>D. D. [Signature]</i> RECOMMENDED BY <i>[Signature]</i>	LOS ANGELES COUNTY FLOOD CONTROL DISTRICT Project No. 3889, Unit 1 West Los Angeles Line E PLAN AND PROFILE STA. 7+05.00 TO STA. 12+64.57
	DATE MAY 74 SCALE AS SHOWN NO. 470-3889-D310 SHEET 10 OF 24

D-30911 "AS BUILT" DRAWING

I certify that this map is a true and correct copy of a record of the City of Los Angeles (L&N) and has been prepared in accordance with the provisions of Section 11.4 (L&N) and Section 1090.1 of the California Government Code.
 12-29-94 *[Signature]*

19X

MEETING NOTES

Topic: 130c Working Session

Date/Time: November 14, 2018, 11:00 a.m. to 2:00 p.m. Pacific Time

Location: Veterans Affairs, Building 500, Room 6420 (6th Floor)

In Attendance:

Mary Nguyen – FTA
Charlene Lee Lorenzo – FTA
Tom Payne – Concourse Federal Group
Andrew Strain – Concourse Federal Group
Lorena Alvarez – Concourse Federal Group
Glenn Elliott – VA
Michelle DeGrandi – VA
Hector Abreu – VA
Jennifer Salerno – Booz Allen Hamilton
Katy Coyle – Row 10
Kelly Sellers Wittie – Row 10
David Mieger – Metro
Roger Martin – Metro
Maressa Sah – Metro
Matthew Crow – Metro
Kristin Carlson – WSP
Martin Ellwood – WSP

Purpose of Meeting

Real-time review and discussion of VA comments and Metro responses to a matrix dated October 2018, with a focus on comments that did not result in changes to the 130c and/or corresponding technical studies; discussion is summarized as follows:

Meeting Summary

The following describes specific comments to the October 2018 comment matrix:

- Comments 1 to Comment 43 were related to Section 106: Hector confirmed that there are no outstanding issues with the *Effects Report*, outstanding items will be addressed in the MOA amendment
- Comment 45 – example of Mitigation Measure GEO-7 – An example has been provided; VA confirmed no additional comments
- Comment 46 – Metro explained the difference in content for Sections 3.13.1 and 3.13.12 and that the requested change was not relevant to Section 3.13.2. VA had no further comments.
- Comment 47 – VA did not express concerns with Metro response shown in matrix. VA stated that during preparation of Metro's 2012 EIS/EIR –there were discussions of unknown locations of wells, whether profitable or not is unknown

- Comments 48 to 50 – VA requested that Metro revise the response to note that remediation of hazardous materials is included in an existing contract. Additionally, Metro confirmed and will note that for any of the areas where Metro is undertaking construction, remediation of hazardous materials, if present, would be Metro’s responsibility
- Comments 53 to 55 – VA requested that Metro specify that the use of electronic management boards for construction advisories, routes to avoid construction impacts, and web-based systems to coordinate would occur during construction; if this cannot be tied to an existing mitigation measure, it will be identified as a minimization measure. VA requested that this measure be specified in the environmental justice section specifically.
- Comment 57 – Air Quality Inspection and monitoring of filters associated with the VA Main Hospital (Building 500) HVAC System to be included in real estate negotiations.
- VA also requested that the environmental justice section reference mitigation measures identified elsewhere in the document in the context that these measures would avoid or minimize impacts to the Veteran community. This included measures like noise walls, signage, lighting controls and the impacts these minimize could potentially trigger PTSD in Veterans. FTA agreed that these measures could be cross referenced in the context that they “minimize, avoid, or mitigate” potential effects. The 130c will be revised accordingly.
- No specific comment: VA stated that based on analysis for the PEIS, a right turn lane from northbound Bonsall Avenue to eastbound Wilshire Boulevard is required. Metro stated that adding that lane now would require updates to the traffic analysis and approval by LADOT and Caltrans. Metro is open to meeting with these stakeholders with VA to implement the turn lane and suggested adding this coordination to the AEA. VA stated that this approach is subject to approval by the VA leadership team. VA hoped to have a response later that day. Metro stated that the next meeting with LADOT would occur on November 28, 2018 and suggested that VA attend this meeting to begin discussions of adding the lane. VA agreed that the exhibit prepared by the VA traffic consultant could be sent out for discussion.
- Comments 65 and 67 – Metro stated that VA would be unable to tie into the Caltrans infiltration basin because this basin is for use by Caltrans specifically. VA concurred.
- Comment 70 – Metro clarified that SCE is increasing the capacity of the Sawtelle substation to support Metro construction activities and when the TBM is no longer in use, there will be remaining capacity at the substation. VA said okay.
- Comment 71 – VA clarified that this comment pertained to instances in which a person may drive through the passenger drop-off area, be unable to find a parking spot, and then have to exit onto Bonsall Avenue and turn around to reenter the drop-off area. Metro confirmed that the internal circulation of the drop-off area can be tweaked to allow individuals to continue to circulate within the drop-off area without exiting onto Bonsall Avenue. Metro to provide VA updated drop-off area layout incorporating this change. VA said okay.
- Not related to a specific comment – VA stated there was a discrepancy between number of parking spaces that VA and Metro have identified for the replacement

parking structure. VA has determined that 950 spaces are required and can provide documentation to support this number. This number includes the footprint associated with the replacement parking structure as well as places displaced in Lot 42 during construction. VA stated that they cannot approve the 130c technical memorandum until there is agreement in the number of spaces that would be included in the replacement parking structure.

- Comment 73 – VA requested that the response be revised to specifically mention that gates/controlled access will be considered. Metro agreed.
- Comment 74 – VA asked if Metro identified how construction traffic would be accommodated. Metro has not awarded the contract at this time and therefore the information is unknown. VA said okay.
- Comment 75 – Attendees discussed the number of spaces remaining in Lot 42 during construction and long term. VA stated that Metro would use the entirety of Lot 42 during construction. Metro stated that the Final EIS/EIR and 130c are based on the premise that the ADA spaces would remain in Lot 42 during construction; however, alternative parking scenarios could be examined in the future.
- Comment 76 – VA requested 12 months of monitoring for spillover parking rather than the 6 months Metro offered. Metro cannot agree at this time as the scope of monitoring is an important consideration. All agreed that the 130c would be revised to state that "6 to 12 months" of monitoring would occur and the details will be determined at a future time as part of the AEA.
- Comment 77 – VA requested that the response to be revised to clarify that the comment relates to internal circulation. Metro agreed.
- Comment 78 – VA stated that it is not uncommon for those in motorized wheelchairs to use Bonsall Avenue. Glenn Elliott of VA requested that Metro widen the sidewalk on the west side of Bonsall Avenue by 1 foot to allow more space for wheelchair usage. Metro stated that this would be challenging because the expansion would occur within the WLA VA Historic District and the *Effects Report* is currently with SHPO for approval; this expansion was not included in the evaluation. Hector Abreu of VA agreed that the report did not evaluate this activity but did not believe the widening would be an issue when evaluated in consultation in the future. Metro/FTA also stated that widening on the west side would be challenging to tie to the Westside Purple Line Extension Project because the station entrance and passenger drop-off area are on the east side of Bonsall Avenue. FTA recommended that the design of, and coordination for, the station, passenger drop-off area, and pedestrian circulation be included in the AEA. Widening of the sidewalk on either side of Bonsall Avenue could then occur based on that coordination. VA agreed. The response will be revised accordingly.
- Comment 80 – VA requested that Metro confirm signage during construction is referenced in this section. Metro agreed that this section will also cross reference mitigation identified in other sections of the memo.
- Comment 84 – Metro agreed to cross reference mitigation from other sections as applicable.
- Comment 90 – Metro confirmed that diesel vehicles would not be stored on-site within the historic district.

- Comment 93 – The team discussed the meaning of “adverse” and “significant as used in FTA NEPA documents. VA stated that from a cumulative impact standpoint, there would be adverse impacts but they would not be significant impacts. Metro agreed to update the cumulative impact section accordingly.
- Comment 96 – Metro reconfirmed that VA transit vans can access the passenger drop-off area. VA stated they did not have concerns with the traffic study because approvals of the traffic study from LADOT and Caltrans were obtained.

Meeting attendees then discussed the process for VA circulation of the 130c and Metro's Westside 2012 EIS/EIR. FTA requested that VA specify in the NOA that the document is for Section 3 of the project only. VA concurred.

VA stated that if comments are received from the public on the 130c and Metro's Final 2012 EIS/EIR, VA does not anticipate providing responses to those comments. The document will not have a public comment period. VA clarified that for other projects, they have prepared a memo to the file stating that the comments did not require responses. VA agreed to provide Metro an example of a Record of Decision and memo to file. There will be a 30-day legal challenge period for the document. FTA clarified that the limitation of claims will be specified in the Federal Register. Metro agreed to assist VA with review of the comments.

VA stated that two issues remain before they can approve the 130c: 1) incorporating the right turn lane from Bonsall Avenue into the AEA (a VA leadership decision) and 2) concurrence on the number of parking spaces to be provided in the replacement parking structure. VA will also need to see the revised 130c and comment matrix. One more draft of the 130c will be prepared that will incorporate comments from VA and FTA. VA requested that edits made to address FTA comments be highlighted accordingly. Metro agreed to provide the revised document in track changes. VA stated that they will have two environmental documents (an Environmental Assessment and a PEIS) publicly available around the same time as the 130c and requested that both teams be clear with messaging and communication, particularly in regards to the actions/projects associated with each document. FTA and Metro agreed.

Action Items:

1. VA to provide Metro with parking space estimates
2. Metro to follow up internally on questions regarding parking
3. VA to provide sample Record of Decision (ROD)
4. November 28, 2018 meeting to occur with LA County regarding right turn lane on Bonsall

The meeting concluded at 2:00 p.m. Pacific time.



**DEPARTMENT OF VETERANS AFFAIRS
Greater Los Angeles Healthcare System
11301 Wilshire Boulevard
Los Angeles, CA 90073**

In Reply Refer To: 691/00PA

December 6, 2018

Manjeet Ranu
Senior Executive Officer
LA Metro
1 Gateway Plaza
Los Angeles, CA 90012

West Los Angeles
Healthcare Center
11301 Wilshire Boulevard
Los Angeles, CA 90073
(310) 478-3711

RE: VA Acceptance of Los Angeles Metro's 130(c) Environmental Technical Memorandum

Dear Mr. Ranu,

The U.S. Department of Veterans Affairs (VA) appreciates LA Metro's continued interest in the proposed construction of a Purple Line Metro Station at VA's West Los Angeles Campus. VA has reviewed LA Metro's Final Draft Section 130(c) Environmental Technical Memorandum prepared in accordance with 23 C.F.R. §771.130(c) for the Purple Line Metro Station. The Section 130(c) Technical Memorandum satisfactorily addresses all VA concerns; thus, VA concurs with the memorandum and has no further comments.

Based on the conclusions in the Section 130(c), VA intends to adopt LA Metro's 2012 Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) pursuant to 40 C.F.R. §1506.3(b). VA plans to proceed with the following next steps:

1. Provide for publication of a Notice of Availability (NOA) for LA Metro's 2012 Final EIS/EIR and Final 130(c) Environmental Technical Memorandum pursuant to 40 C.F.R. § 1506.10, and provide documents publicly for review.
2. Issue a Record of Decision for LA Metro's 2012 Final EIS/EIR and 2018 130(c) Environmental Technical Memorandum, a minimum of thirty days after the NOA as required by 40 C.F.R. § 1506.10(b)(2).

VA will undertake these actions while continuing to negotiate the real estate agreement with LA Metro.

We very much appreciate LA Metro's continued cooperation and partnership as we address all aspects of the proposed Purple Line Metro Station.

Sincerely,

Glenn M. Elliott 689970

Digitally signed by Glenn M. Elliott
689970
Date: 2018.12.12 13:59:05 -05'00'

Glenn Elliott
Environmental Officer
VA Office of Construction & Facilities Management

Meghan Flanz
Executive Director, West LA Campus Draft Master Plan
Greater Los Angeles Healthcare System



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer

1725 23rd Street, Suite 100, Sacramento, CA 95816-7100

Telephone: (916) 445-7000 FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

December 12, 2018

Reply In Reference To: FTA090722B

Mr. Edward Carranza, Jr.
Acting Regional Administrator
Federal Transit Administration
90 Seventh Street, Suite 15-300
San Francisco, CA 94103-6701

Re: Reassessment of Effects, Westside Purple Line Extension Project, Section 3, City and County of Los Angeles, California

Dear Mr. Carranza:

The State Historic Preservation Officer (SHPO) received, on November 13, 2018, the letter continuing consultation for the above-referenced undertaking in order to comply with Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 300101) and its implementing regulations at 36 CFR § 800. Included with the Federal Transit Administration's (FTA) submittal were the following:

- *Historic Properties Reassessment of Effects Report*, prepared by WSP in October, 2018
- *Archaeological Extended Identification Report*, prepared by WSP in October, 2018
- *Arborist Reports*, prepared by Arborgate Consulting, Inc., in May, 2017 and June, 2018
- Correspondence from the Veteran's Administration

The Westside Purple Line Extension (WPLE) Project is an approximate nine-mile, seven-station extension of the existing Metro Purple Line, and will be constructed in three sections. An original finding of adverse effect for the undertaking was made in December 2011, and 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 County, California* (MOA) was executed in March, 2012.

FTA is providing an updated consultation package due to refinements in Section 3 from the Westwood/UCLA Station to the Westwood/VA Hospital Station as well as both station sites. Those refinements are discussed in detail in the consultation package, and

include the straightening of the tunnel alignment beneath the Veterans Affairs West Los Angeles (VA WLA) South Campus, relocation of a subterranean pedestrian crossover west of the Westwood/VA Hospital Station, and launching the tunnel boring machine at the western edge of the VA WLA Campus. The FTA previously expanded the Area of Potential Effect (APE) to include utility conduit locations on Ohio and Federal Avenues. The remaining refinements are within the existing APE.

The project refinements required a reassessment of effects to several previously identified historic properties:

- The Linde (Westwood) Medical Plaza
- The (Westwood) Federal Building
- The West Los Angeles Veterans Affairs Historic District (WLA VA Historic District)
- The Los Angeles National Cemetery, within the WLA VA Historic District
- The Wadsworth Chapel, within the WLA VA Historic District
- The News Stand, within the WLA VA Historic District

Supplemental archaeological research and Native American consultation were also conducted within the APE. Geotechnical borings were conducted in staging areas, locations of known utilities near the VA WLA Campus were mapped, and archaeological sensitivity established. Ground penetrating radar surveys were also conducted.

FTA has found that the project refinements will not result in additional adverse effects to known historic properties. After reviewing the information submitted with your letter, the following comments are offered:

- I agree that the changes described above will not result in additional adverse effects to known historic properties, and that the previous finding of adverse effect for the undertaking remains appropriate, per 36 CFR § 800.5(d)(2).
- As stated in the consultation letter, the MOA for the undertaking needs to be amended to reflect the project refinements and additional consulting parties. The amendment should also incorporate all of the avoidance and minimization measures discussed in the *Historic Properties Reassessment of Effects Report* as stipulations, and an unanticipated discovery plan for any unknown archaeological resources.

I look forward to continuing this consultation with the FTA. If you have any questions, please contact Kathleen Forrest, Historian, at (916) 445-7022 or Kathleen.Forrest@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Office

**APPENDIX G WLA VA HISTORIC DISTRICT NATIONAL REGISTER
NOMINATION**

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(8-86)

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 14000926

Date Listed: 11/19/2014

West Los Angeles Veterans Affairs
Historic District
Property Name

Los Angeles CA
County State

United State Second Generation Veterans Hospitals MPS
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.



Signature of the Keeper

11/19/14

Date of Action

Amended Items in Nomination:

Description:

Subarea 4 - Neuropsychiatric (N.P.) Hospital was previously *determined eligible* for listing in the National Register as the Architectural Set Historic District, not *listed* in the NR as noted on page 7.15.

These clarifications were confirmed with the VA FPO office.

DISTRIBUTION:

- National Register property file
- Nominating Authority (without nomination attachment)

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form



This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property: West Los Angeles Veterans Affairs Historic District

Historic name: National Home for Disabled Volunteer Soldiers (Old Soldier's Home), Pacific Branch

Other names/site number: Los Angeles Veterans Administration Medical Center, Los Angeles Architectural Set Historic District, Los Angeles Home Branch Historic District

Name of related multiple property listing: National Home for Disabled Volunteer Soldiers; United States Second Generation Veterans Hospitals

(Enter "N/A" if property is not part of a multiple property listing)

2. Location

Street & number: 11301 Wilshire Boulevard

City or town: Los Angeles State: California County: Los Angeles

Not For Publication: Vicinity:

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

national statewide local

Applicable National Register Criteria:

A B C D

Signature of certifying official/Title: Kathleen Schenck, FPO Date 9/27/14
 State or Federal agency/bureau or Tribal Government Dept. Veterans Affairs

In my opinion, the property meets ___ does not meet the National Register criteria.

Signature of commenting official: [Signature] Date 9/27/14
 Title: Deputy State Historic Pres. office State or Federal agency/bureau or Tribal Government

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

4. National Park Service Certification

I hereby certify that this property is:

- entered in the National Register
 determined eligible for the National Register
 determined not eligible for the National Register
 removed from the National Register
 other (explain:)


Signature of the Keeper

11/19/2014
Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

- Private:
Public – Local
Public – State
Public – Federal

Category of Property

(Check only one box.)

- Building(s)
District
Site
Structure
Object

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
<u>55</u>	<u>37</u>	buildings
<u>3</u>	<u>1</u>	sites
<u>1</u>	<u>6</u>	structures
<u>7</u>	<u>0</u>	objects
<u>66</u>	<u>44</u>	Total

Number of contributing resources previously listed in the National Register:
Two individually listed buildings: Building 20, Chapel and Building 66, News Stand
(Streetcar Depot)

6. Function or Use

Historic Functions

(Enter categories from instructions.)

HEALTH CARE/hospital

DOMESTIC/institutional housing

FUNERARY/cemetery

Current Functions

(Enter categories from instructions.)

HEALTH CARE/hospital

DOMESTIC/institutional housing

FUNERARY/cemetery

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

7. Description

Architectural Classification

(Enter categories from instructions.)

Late 19th & 20th Century Revivals/ Mediterranean Revival

Late Victorian/Queen Anne

Modern Movement/Moderne

Materials: (enter categories from instructions.)

Principal exterior materials of the property:

foundation: concrete

walls: stucco, brick, wood clapboard, reinforced concrete

roof: terra cotta tile, asphalt shingle

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

The West Los Angeles Veterans Affairs Historic District (West LA VA or campus) is located at the major intersection of Sepulveda Boulevard, Interstate 405 (I-405 also known as the San Diego Freeway) and Wilshire Boulevard in Los Angeles, California and is generally bounded by Barrington Avenue, Bringham Avenue, San Vicente Boulevard, and Federal Avenue on the west; Ohio Avenue on the south; and Veteran Avenue on the east. Located in the densely urbanized Brentwood neighborhood, the historic district encompasses approximately 400 acres (Map 12) and retains a strong sense of time and place from 1923 to 1952, when it was used as a Second Generation Veterans Hospital, incorporating buildings from the earlier National Home for Disabled Volunteer Soldiers (NHDVS) Pacific Branch and the Los Angeles National Cemetery (LANC, dedicated in 1889). Topography of the campus slopes downward from north to south. While the downward slope is generally gentle to the south (only about 200 feet), at the north end of the campus, the elevation drops more considerably and falls off to the east and west.

The original land holdings from the NHDVS period (1888-1930) are organized in four quadrants separated by Sepulveda Boulevard, which runs parallel to I-405, and Wilshire Boulevard.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

Although the campus is oriented on a 45 degree angle from true North, for ease of description, Sepulveda Boulevard and I-405 will be treated as north-south roadways and Wilshire Boulevard will be treated as an east-west roadway. The historic district is composed of four, discontinuous sections (see Map 12) that are limited to the northeast, southwest, and northwest quadrants. The northeast quadrant is located east of Sepulveda Boulevard and I-405 and north of Wilshire Boulevard and consists of Los Angeles National Cemetery. The northwest and southwest quadrants are located west of Sepulveda Boulevard and I-405 and have been further divided into seven subareas, based on historic use. Subareas have been numbered generally in chronological order of when primary buildings were constructed and follow labels noted in historic maps (Map 6-8). Bonsall Avenue, a street internal to the campus, bisects the northwest and southwest quadrants and serves as a spine of the road network.

The southeast quadrant is east of Sepulveda Boulevard and I-405 and south of Wilshire Boulevard. It consists of General Services Administration (GSA) Federal Building and Veterans Benefit Administration (VBA) Regional Office and ball fields outleased to local agencies. This quadrant was used as a regional office area prior to being leased to GSA. The southeast quadrant is not included in the historic district. Although the United States Department of Veterans Affairs (VA, formerly United States Veterans Administration) briefly maintained their regional offices in this area, it is now occupied by a federal building and post office, uses unrelated to VA functions.

In summary, the quadrants include the following functions and subareas (see Map 10):

The northeast quadrant (part of the historic district):

- Los Angeles National Cemetery

The southeast quadrant (not part of the historic district):

- General Services Administration (GSA) Federal Building and Benefit Administration (VBA) Regional Office

The southwest quadrant (part of the historic district):

- Subarea 2 - Senior Personnel Residences
- Subarea 7 - General Hospital (includes a discontinuous feature of the district)

The northwest quadrant (part of the historic district):

- Subarea 1 - Domiciliary
- Subarea 3 - Research
- Subarea 4 - Neuropsychiatric (N.P.) Hospital (also called Brentwood Hospital)
- Subarea 5 - Utility
- Subarea 6 - Recreation

West Los Angeles Veterans Affairs Historic District
 Name of Property

Los Angeles, CA
 County and State

Narrative Description

The following is a description of the three quadrants included in the historic district, the seven subareas of the southwest and northwest quadrants, and contributing and non-contributing resources in each subarea. Landscapes, open spaces, and streetscapes are described with each subarea, but are included as a single site feature in establishing the number of contributing resources.

Southwest Quadrant

The southwest quadrant is located west of Sepulveda Boulevard and I-405 and south of Wilshire Boulevard. As shown on Map 10, it includes two subareas: the Senior Personnel Residences (subarea 2) and General Hospital complex (subarea 7).

Subarea 2 – Senior Personnel Residences

This subarea includes 12 buildings, four of which contribute to the historic district (Photos 8-10 and 50-52). Subarea 2 includes examples of Shingle, Colonial Revival, and Ranch style residential buildings. Contributing buildings are from the National Home for Disabled Volunteer Soldiers (NHDVS) period (1888-1930) and Second Generation Veterans Hospital Period II (Second Generation) time (1923-1952).

Subarea 2 includes the following contributing and noncontributing resources:

Bldg. No.	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
14	1900	C	Garage
23	1900	C	Quarters
90	1927 (1995)	C	Duplex Quarters
91	1927 (1995)	C	Duplex Quarters
307	1955	NC	Single Quarters
308	1955	NC	Single Quarters
104	c.1920s	NC	Garage 2-Car
309	1955	NC	Garage
310	1955	NC	Garage
311	1994	NC	Mobile House
312	1994	NC	Mobile House
318	1994	NC	Mobile House

For a complete list of contributing and noncontributing resources to the historic district, see Appendix 1.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Subarea 2 contributing resources:

Building 14 – Garage: [Not accessible]

Building 23 – Quarters (1900): This three story Shingle style building is rectangular in plan. It has a brick foundation, and an asphalt shingle cross-gabled gambrel roof, with an overhanging third story. The building is clad in horizontal wood siding on the first story, and scalloped shingles on the second and third stories. The façade features a wood porch, supported by wood columns, that runs half the length of the façade and wraps around the east elevation. The main entry is accessed via the porch, and has a glass-paneled wood door with sidelights. The building has multiple bay windows and double hung wood sash.

Buildings 90 and 91 – Duplex Quarters (1927): These two-and-a-half story, Colonial Revival buildings are rectangular in plan. The wood-framed building is clad in stucco and has a slightly overhanging asphalt shingle hipped roof and exposed rafter tails. The façade features a one story porch that runs the length of the façade. The porch has a hipped roof that is supported by posts with a simple incised detail, with pediment at the center. The building is a duplex, which is reflected in the symmetrical façade. Fenestration consists of multi-paned, double hung wood sash windows. The attic has infilled semicircular dormers and skylights. A brick chimney is located in the middle of the building. The buildings were substantially altered in 1995.

Buildings 307 and 308 – Single Quarters (1955): These two similar one story Ranch style houses are rectangular in plan. Each wood-framed building has a concrete foundation and a side gable roof. The centered, inset entry porch has stucco clad walls and contains a glass and wood-paneled door and a diamond-paned wood sash window. The façade features both vertical, board and batten wood siding as well as stucco siding. Fenestration is generally wood sash with diamond panes. A brick chimney is located along the façade.

Contributing landscapes, open spaces, and streetscapes

A regular grid of palm trees is located in the northwest corner of this subarea near the intersection of Wilshire Boulevard and Federal Avenue. Based on historic aerial photographs (Historic Photographs, Figure 3), the grove appears to have been planted around 1930, during the historic district's period of significance. The grove consists of at least 50 mature Canary Island palm trees (*Phoenix canariensis*).

Other contributing landscape and streetscape features consist of wide expanses of lawn with mature trees fronting Building 23. Another contributing feature is a road that leads south from a gate at Wilshire Boulevard to Building 23, lined adjacent to Wilshire Boulevard by a brick sidewalk. A final contributing landscape feature is a fence consisting of stone piers supporting wood rails that runs perpendicular to the road.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Subarea 2 non-contributing resources:

Building 104 – Garage 2-car (no date): This one story, three-walled contemporary structure is rectangular in plan. It has a concrete pad foundation, corrugated metal walls, and corrugated metal gable roof with exposed steel structure.

Building 309 – Garage (1955): [Not accessible]

Building 310 – Garage (1955): [Not accessible]

Buildings 311, 312, 318 – Mobile House (1994): These one story, wood-frame, double-wide mobile homes each have a low-sloped gable roof covered in asphalt shingles. The building is clad in vertical T1-11 siding and has aluminum frame slider windows. Wood steps lead up to a wood porch that is sheltered by a shed roof.

Subarea 7 – General Hospital

This subarea consists of primarily contemporary buildings and is not included within boundaries of the historic district. This area included the Barry Hospital (built 1888-9, demolished 1927) and portions of the first Wadsworth Hospital (built 1927, demolished 1972). However, one object, the South Gate, is a discontinuous contributing resource to the historic district, along with the roadway that passes through it (Photos 25-26 and 80, Figures 98-103).

Subarea 7 contributing resources:

South Gate (c. 1892): The South Gate consists of a pair of concrete piers topped by light fixtures. The piers are located at the intersection of Bonsall Avenue (Sawtelle Boulevard) and Ohio Avenue, marking the south entrance to the West Los Angeles VA campus. A metal plaque on each pier states “National Soldier’s Home.”

Contributing landscapes, open spaces, and streetscapes

The configuration of Bonsall Avenue, including the location and width, from the South Gate to the split in the road at Dowlen Drive, is a contributing streetscape as a terminus of the main street through the west side of the campus.

Northwest Quadrant

The northwest quadrant is defined as the quadrant west of Sepulveda Boulevard and the north-south I-405 and north of Wilshire Boulevard. As shown on Map page 10, it includes five subareas: Domiciliary area (subarea 1), Research area (subarea 3), Neuropsychiatric (N.P.) Hospital area (subarea 4), Utility area (subarea 5), and Recreational area (subarea 6).

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

Subarea 1 – Domiciliary

This subarea is located in the northwest quadrant and includes 20 buildings, 16 of which contribute to the historic district (Photos 1-7 and 33-49, Figures 5-60). Two buildings in subarea 1, the Catholic and Protestant Chapel and the News Stand (Streetcar Depot), are individually listed in the National Register. They date from the National Home for Disabled Volunteer Soldiers (NHDVS) era (1888-1930), as does Building 33, a residence. The remaining contributing resources date from the Second Generation period (1923-1952).

The subarea includes the following contributing and noncontributing resources:

Bldg. No.	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Current Use (Historic Use)
20	1900	C/Individually listed	Chapel (Catholic and Protestant Chapel)
66	1890	C/Individually listed	News Stand (Streetcar Depot)
13	1929	C	Storage (Mess Hall)
33	1893 (1995)	C	Quarters
111	1936	C	Gatehouse (West Gate)
199	1932	C	Vacant (Hoover Barracks)
212	1938	C	Salvation Army/Prosthetics (Hospital)
213	1938 (1989)	C	NHCU Pod & Dialysis (Hospital)
214	1938 (1990)	C	Domiciliary (Hospital)
215	1938 (1985)	C	NHCU (Hospital)
217	1941 (1990)	C	Domiciliary
218	1941	C	Administration Building
220	1939	C	Dental/Research (Female Domiciliary Barracks)
226	1940	C	Outleased – Wadsworth Theater
236	1945	C	Police HQ
n/a	1947	C	Garden House (Memorial to Women Veterans)
12	1989	NC	Emergency Generator
301	1951	NC	AFGE Union
306	1957	NC	Cafeteria/Post Office
506	c. 1985	NC	_VA District Council

For a complete list of contributing and noncontributing resources to the historic district, see Appendix 1.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Subarea 1 contributing resources:

Building 20 – Chapel (1900) Listed on National Register: The Shingle style Chapel is roughly rectangular in plan and one-and-a-half stories tall. The wood-framed building is clad in wood siding and shingles with decorative wood ornamentation. The roof's multiple gables are clad in composition shingles. Because the building contains two separate chapels, it has two primary facades. The Protestant chapel is located at the south facade, facing Wilshire Boulevard. The entrance features an arched portico with balustrated balcony above. Left of the entrance is a large square tower with belfry. A smaller tower at right is surmounted by a pyramidal roof with platform at the base that forms an overhanging cornice. The Catholic chapel faces east. The entrance is located within a rectangular tower topped by a belfry. The apse of the Catholic chapel is located at the north end of the building.

Building 66 – News Stand (Streetcar Depot) (1890) Listed on National Register: The Shingle style News Stand is rectangular in plan and is two bays wide and six bays long. The one story, wood-framed building has a brick foundation and is capped by an asphalt shingle clad hipped roof supported by decorative brackets. The east third of the building is an open air porch with bays filled with arched openings. The remainder of the building is clad in wood siding with multi-paned arched windows above.

Building 13 – Storage (Mess Hall) (1929): This Art Deco building consists of three parallel wings running north-south connected by a perpendicular bar running east-west at the center. Each wing is rectangular in plan. All wings are clad in stucco, feature steel sash windows, and have a flat roof with a raised parapet. The outer north-south wings are two stories while the center wing is one story. The east and west facades feature a projecting entrance slightly taller than the rest of the wing. Decorative details are focused on the building's many entrances. The main entrance is centrally located at the south elevation, with secondary entrances on either side. The north elevation contains several simple doors and a loading dock. The highly decorative main entrance at the south elevation is accessed by a flight of steps. It has a stepped parapet and is adorned with fluting, shields and eagle ornamentation. Other entry points exhibit a similar decorative program.

Building 33 – Quarters (1893): This two story Shingle style/Queen Anne building is rectangular in plan and clad in horizontal wood siding at the first floor and scalloped shingles within the gable peak. It has a brick foundation and is capped by an asphalt shingle clad gable roof with a dormer on the north elevation. A one story porch wraps around the north and east elevations. The porch is supported by posts with decorative brackets and enclosed by a simple picket railing. Fenestration is generally double hung wood sash. Other notable building elements include angled bay windows and a brick chimney. The building was altered in 1995.

Building 111 – Gatehouse (West Gate) (1936): This one story structure is rectangular in plan and is clad in yellow brick with a hipped roof clad in *terra cotta* tiles. The corners of the structure feature stepped piers with concrete caps atop each step. Eight light, steel sash windows are located in the each of the elevations. An associated structure, a pier with similar decorative elements topped by a glass light fixture, is located slightly northwest of the Gatehouse.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Building 199 (Hoover Barracks) (1932): This two-story vernacular style building is rectangular in plan. The wood-framed building is clad horizontal wood siding, capped by an asphalt shingle clad gable roof. The north, primary façade is seven bays wide, while east and west elevations are three bays wide. Multi-light, wood-framed windows are located in each bay, both singly and paired. Wood awnings shield windows on the first story. Doors are wood paneled. Of dozen or so wood barracks constructed at the West LA VA camps, Building 199 is the last remaining.

Buildings 212, 213, 214, 215, 217, 218 (1938-1941): These buildings follow the same plan with only minor differences. Three or four stories high, depending on the slope of the topography, they are I-shaped in plan and designed with elements of Mission Revival style. Constructed of reinforced concrete, the buildings are finished in smooth stucco and have a hipped roof covering the center of the building topped by *terra cotta* tile. Wings are covered by flat roofs. Windows are regularly spaced on each elevation, grouped in threes, and are multi-light single hung, metal sash. Primary entrances are centrally located on the north and south elevations accessed by either a handicap accessible ramp or a flight of steps. Primary entrances generally feature engaged cast stone pilasters and pediment with inlaid tile connecting to the window above. Secondary entrances on east and west elevations resemble the main entrance in decoration.

Alterations over time distinguish one building from another. Building 213 has a contemporary entry canopy supported by simple columns along the north elevation. A new entry pavilion has been constructed along the south elevation of Building 218.

Building 220 – Dental/Research (Female Domiciliary Barracks) (1939): This Mission Revival style building is rectangular in plan. Constructed on a slope, the building is three stories high with a partial basement. It is clad in stucco and has a *terra cotta* tile gable roof. Fenestration consists of multi-light metal sash windows. The primary façade faces north and features a three story plus attic central tower with a hipped roof. The main entrance consists of a single paneled door with light that is flanked by decoratively painted ionic columns supporting a broken pediment. The window above the entrance features a decorative surround with shell pattern at the top. Above the third story windows are three octagon ornaments, with the center ornament containing a shield. The fourth story is banded by a molded cornice at the bottom and a dentil cornice at the top with large, decorative, rectangular lattice vents.

Building 226 – Wadsworth Theater (1940): This Mission Revival style theater building is rectangular in plan and clad in smooth stucco with *terra cotta* tile gable roof. Fenestration is generally multi-light, metal sash. The primary façade faces north and is five bays wide with two side bays stepping back from the three central one. The central three bays of the first story each contain paired wood doors with decorative carving and window lights. Door openings are highlighted by decorative colored tile surrounds and are sheltered by canvas awnings. All three doors are surmounted by a cornice with brackets. A shed roof tops outer doors while a molded stucco clad frieze with shield is placed above the center door. At the second story, the center bay features a window with a surround decorated with molded urns and scrolls that meet in a shell pattern above the window. At the third story, the second and fourth bays feature windows with decorative molded sills and arched frame. Decorative venting is located in the gable peak.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

Limited fenestration appears to follow interior program requirements. Emergency exit doors, sheltered by a *terra cotta* tile clad shed roof, are located on side elevations. Metal exit stairs access the upper stories. Several one story, flat roof, rectangular temporary buildings are scattered in the front courtyard and west side of the theater and house the box office, will call and concessions.

Building 236 – Police HQ (1945): This one story building is roughly cross-shaped in plan with a central courtyard. It is clad in smooth stucco and has a flat roof. The primary façade faces south and features a projecting entrance with decorative, scored horizontal banding. All elevations have a regularly spaced fenestration pattern consisting of multi-light, steel sash windows and a molding slightly below the cornice.

Garden House (Memorial to Women Veterans) (1947): This small, one story symmetrical masonry building is located within a walled rose garden south of Building 220. Set on a concrete foundation, three open segmental arches with metal gates span the front elevation of the rectangular building. The other three elevations are solid brick with only a small window opening at the center of the rear wall. The hipped roof features red tile with finials at either end of the ridge line. A contemporary wood pergola covers the entrance patio.

Contributing landscapes, open spaces, and streetscapes

The circulation pattern and relationships between buildings contribute to the landscape in this subarea. Contributing streetscape features include the triangular-shaped street grid consisting of Bonsall, and Dewey, and Eisenhower avenues, a streetscape that was established during the NHDVS period, with earlier buildings arranged parallel to the streets. A row of palm trees along the southern portion of Bonsall Avenue are evident in historic photos of the NHDVS period and are a contributing landscape feature.

Spaces between buildings are contributing open spaces in this subarea. The relationship between Building 13 and Wadsworth Theater (Building 226) is significant. The two buildings are on axis with each other and form the apex and base of the triangle formed by the street grid; they are physically connected by parallel walking paths. Also contributing to the streetscape are the arrangement of Buildings 212, 213, 214, 215, 217 and 218, which are perpendicular to the street grid and are set back from roads with substantial lawns. Walking paths parallel to the roadway north of Eisenhower Avenue connect buildings with each other and are also contributing landscape features.

Other contributing landscape features in this subarea include the allée of trees immediately south of Building 220, and open area at the northeast corner of San Vicente and Wilshire boulevards, also recently known as Los Angeles National Veterans Park, punctuated by a eucalyptus wind break.

West Los Angeles Veterans Affairs Historic District
 Name of Property

Los Angeles, CA
 County and State

Subarea 1 non-contributing resources:

Building 12 – Emergency Generator (1989): This one story building is rectangular in plan and has a concrete foundation and walls with a flat roof. The south elevation has a metal door, flanked by two metal vented openings on each side. The east elevation has a large metal vented opening. At the north end of the building is a concrete wall that encloses a large metal fuel tank.

Building 301 – AFGE Union (1951): This one story building is rectangular in plan and clad in stucco and has a flat roof. Windows are regularly spaced along each elevation and consist of aluminum, double hung sash.

Building 306 – Cafeteria/Post Office (1957): This one story building is L-shaped in plan. The building is clad in stucco with a flat roof. The building has aluminum sash windows and a north facing covered breezeway. Concrete table and benches are scattered in the area between the two wings.

Building 506 (no date): This one story, irregularly shaped building has a concrete foundation and is clad in stucco with a double-hipped roof. The lower portion of the roof is covered in *terra cotta* tile and the upper portion is concrete. Windows are regularly spaced and consist of double hung sash.

Subarea 3 – Research

This subarea includes eight buildings, five of which are contributing resources to the historic district (Photos 11-12 and 53-57, Figures 61-68). Contributing resources within this subarea are from the Second Generation Veterans Hospital era.

The subarea includes the following contributing and noncontributing resources:

Bldg. No.	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
114	1930	C	Research Lab (Research Lab Annex, Barracks Hospital Annex)
115	1930	C	Research Lab (Research Lab Annex, Barracks Hospital Annex)
116	1930 (1997)	C	Outleased – New Directions (Barracks)
117	1930	C	Research Lab (Mortuary)
264	1944	C	FBI (Annex Theater)
113	1930 (c. 1995)	NC	Animal Research (G.M. Annex, Barracks)

West Los Angeles Veterans Affairs Historic District
 Name of Property

Los Angeles, CA
 County and State

Bldg. No.	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
340	1959	NC	Human Radiation Lab
346	c. 1980	NC	Storage Waste

For a complete list of contributing and noncontributing resources to the historic district, see Appendix 1.

Subarea 3 contributing resources:

Building 114 – Research Lab (Research Lab Annex) (1930): Building 114 is roughly T-shaped, consisting of a larger (south) rectangular building joined to a smaller (north) building. Designed with elements of Romanesque Revival style, the south portion of the building is three stories high with a flat roof. Primarily clad in brick, the building envelope accommodates several exterior shear walls. Fenestration is regularly spaced on each elevation and consists of multi-light, metal sash. The main entrance is centrally located in the south elevation, accessed by a flight of stairs and handicap accessible ramp. Secondary entrances are provided at each elevation. Building 114 is connected to Buildings 113 and 115 through an elevated, enclosed, stucco clad breezeway.

Building 115 – Research Lab (Research Lab Annex) (1930): Building 115 is roughly T-shaped, consisting of a larger (west) rectangular building joined to a smaller (east) building. Designed with elements of Romanesque Revival style, the west portion of the building is three stories high with a combination flat and hipped tile roof. Primarily clad in brick, the building envelope accommodates several exterior shear walls. Fenestration is regularly spaced on each elevation and consists of multi-light, metal sash. The main entrance is centrally located in the west elevation, accessed by a flight of stairs and handicap accessible ramp. Secondary entrances are provided at each elevation. Building 115 is connected to Building 114 through an elevated, enclosed, stucco clad breezeway.

Building 116 – New Directions (1930): Building 116 is roughly T-shaped, consisting of a larger (north) rectangular building joined to a smaller (south) building. Designed with elements of Romanesque Revival style, the west portion of the building is three stories high with a flat roof. The building is entirely clad in brick and fenestration is regularly spaced on each elevation and consists of multi-light, single hung metal sash. The main entrance is centrally located in the north elevation, accessed by a flight of stairs. Secondary entrances are provided at each elevation. The building was altered in 1997.

Building 117 – Mortuary (1930): This one story, utilitarian building is L-shaped in plan. The building is clad in brick and has a flat roof with a penthouse. Building 117 is connected to Buildings 113, 114, and 115 by a one story enclosed, brick-clad breezeway.

Building 264 – FBI (Annex Theater) (1944): This two story building is T-shaped in plan. The building is clad in stucco and has an asphalt shingle gable roof. Fenestration consists of multi-light, wood sash windows. The primary entrance is located along the west elevation and is

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

sheltered by a gable roof porch supported by thin wood posts. Secondary entrances are located at north and south elevations. A one story shed roof section is located along the east elevation.

Contributing landscapes, open spaces, and streetscapes

Axial relationships and spaces between buildings in this subarea are contributing open space features and are planted with lawns. Contributing landscape features include mature Moreton Bay Fig trees planted symmetrically at the facades of Buildings 113 and 114.

Subarea 3 non-contributing resources:

Building 113 – Animal Research (G.M. Annex) (1930): Building 113 is roughly T-shaped, consisting of a larger (southeast) rectangular building joined to a smaller (northwest) building. The southeast portion of the building is three stories high with a tile-hipped roof. The building is entirely clad in concrete. Limited fenestration consists of deeply inset aluminum sash. The main entrance is centrally located in the southeast elevation, accessed by a flight of stairs and handicap accessible ramp. Secondary entrances are provided at the southwest and northwest elevations. Building 113 is connected to Building 114 through an elevated, enclosed, stucco clad breezeway. The building lacks sufficient integrity to be a contributor, due to alterations associated with seismic retrofit that occurred in c. 1995.

Building 340 – Human Radiation Lab (1959): This one story, utilitarian structure is clad in corrugated metal siding and has a corrugated metal gable roof. There are two, multi-light, metal sash windows on the north elevation.

Building 346 – Storage Waste (c. 1980): This one story, utilitarian structure is constructed of concrete block and has a flat roof. A metal door with is located on the east elevation.

Subarea 4 - Neuropsychiatric (N.P.) Hospital

This subarea includes 16 buildings, 15 of which contribute to the historic district (Photos 58-72, Figures 13-19 and 69-92). This subarea includes buildings from the National Home period as well as from the Second Generation period. This subarea was previously listed on the National Register as the Architectural Set Historic District. Collectively, buildings 205, 206, 207, 208, 209, 256, and 257 were referred to as the Brentwood Hospital from approximately the early 1960s through the 1990s.

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

The subarea includes the following contributing and noncontributing resources:

Bldg. No.	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
156	1923	C	Vacant (Hospital Building)
157	1923	C	Vacant (Hospital Building)
158	1923	C	Vacant (Evaluations/Admissions/Clinic)
205	1937	C	Mental Outpatient Psychiatry (Hospital Building)
206	1940	C	Mental Heath Homeless (Hospital Building)
207	1940	C	Outleased – Salvation Army (Hospital Building)
208	1945	C	Health/Voc Rehab Medicine (Hospital)
209	1945	C	Vacant (Hospital and Canteen)
210	1945	C	Research/MIREC (Hospital Building) (Women’s Ward)
211	1946	C	Theater (Brentwood)
256	1946	C	Day Treatment Center Mental Health
257	1946	C	Mental Health/New Directions/Methadone (Hospital Building)
258	1946	C	Administration/Mental Health
259	1945	C	Com Work Therapy
300	1952	C	Dietetics (Mess Hall)
233	c. 1960s	NC	HAZMAT Building

For a complete list of contributing and noncontributing resources to the historic district, see Appendix I.

Subarea 4 contributing resources:

Building 156 – Hospital Building (Vacant) (1923): Rectangular in plan with clipped corners, this building is three stories high with its lowest (basement) level partially below grade. The building is clad in smooth stucco and has a hipped roof. Windows are regularly spaced on each elevation, and grouped vertically within arched bays. Window sash are generally double hung, steel sash. Building 156 is connected to Building 157 by a stucco clad arcaded breezeway with multi-light arched windows and gabled *terra cotta* roof.

Building 157 – Hospital Building (1923): This two story Mission Revival style building is rectangular in plan. The building is clad in smooth stucco and has a *terra cotta* tile roof. The symmetrical, primary façade faces south and features: an arcaded loggia at the first story; a bank

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

of windows at the second story with simple, low relief, carved ornament; a shaped parapet; and bell towers. The east and west elevations are generally simple in design and ornamentation and have regularly-spaced windows grouped vertically within arched bays. The building is connected to Buildings 158 and 156 by a stucco clad arcaded breezeway with multi-light arched windows and gabled *terra cotta* roof. It is connected to Building 258 by a stucco-arcaded open breezeway with flat roof.

Building 158 – Evaluations/Admission/Clinic (1923): Rectangular in plan with clipped corners, this building is three stories high with its lowest (basement) level partially below grade. The building is clad in stucco and has a flat roof (originally hipped). Windows are regularly spaced on each elevation and grouped vertically within arched bays. Window sash are generally double hung aluminum sash. Building 158 is connected to Building 157 by a stucco clad arcaded breezeway with multi-light arched windows and gabled *terra cotta* roof.

Building 205 - Mental Outpatient Psychiatry (Hospital Building) (1937): Building 205 is generally H-shaped and designed with elements of Mission Revival style. It is three stories high with its lowest (basement) level partially below grade at two elevations. An enclosed passageway leads from the basement to adjacent Building 208. Constructed of reinforced concrete, the building is clad in smooth stucco with a cross gable roof capped in *terra cotta* tile. Windows are regularly spaced on each elevation and generally consist of aluminum single hung sash. The main entrance is centrally located in the west elevation, and accessed by a flight of stairs and a handicap accessible ramp. A secondary entrance is located at the south elevation.

Building 206 - Mental Heath Homeless (Hospital Building) (1940): Building 206 is generally H-shaped and designed with elements of Mission Revival style. It is three stories high with its lowest (basement) level partially below grade. Constructed of reinforced concrete, the building is clad in smooth stucco with a cross gable roof capped in *terra cotta* tile. Windows are regularly spaced on each elevation and consist of aluminum single hung sash. The main entrance is centrally located on the south elevation, and accessed by a flight of stairs. A secondary entrance, accessed by a handicap accessible ramp, is located on the north elevation.

Building 207 - Outleased – Salvation Army (Hospital Building) (1940): Building 207 is generally H-shaped and designed with elements of Mission Revival style. It is three stories high with its lowest (basement) level partially below grade. Constructed of reinforced concrete, the building is clad in smooth stucco with a cross gable roof capped with *terra cotta* tile. Windows are regularly spaced on each elevation and consist of aluminum single hung sash. The main entrance is centrally located in the south elevation, and accessed by a flight of stairs. A secondary entrance is located at the north elevation. Enclosed patios are located on south and east elevations.

Building 208 - Health/Voc Rehab Medicine (Hospital) (1945): Building 207 is generally H-shaped and designed with elements of Mission Revival style. It is three stories high with its lowest (basement) level partially below grade. Constructed of reinforced concrete, the building is clad in smooth stucco with a cross gable roof capped with *terra cotta* tile. Windows are regularly spaced on each elevation and consist of aluminum single hung sash. The main entrance

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

is centrally located in the south elevation, and accessed by a flight of stairs. A secondary entrance is located at the north elevation. Enclosed patios are located on south and east elevations. Enclosed passageways lead from the basement to adjacent Buildings 205 and 209.

Building 209 - Vacant (Hospital and Canteen) (1945): Designed with elements of Mission Revival style, Building 209 is three stories high with its lowest (basement) level partially below grade at two elevations. An enclosed passageway leads from the basement to adjacent Building 208. The building is constructed of reinforced concrete and finished in smooth stucco with a cross gable roof topped by *terra cotta* tile. Windows are regularly spaced on each elevation and consist of multi-light, metal, double hung sash. Building 209 is symmetrical in composition with a plan that is composed of a central rectangular bar with perpendicular wings intersecting it at the north and south ends. A shorter wing bisects the central bar. Fenestration at west ends of the north and south wings is set within wide insets that are arched on the second floor. Decorative balconets extend below first and second floor windows in these locations. The main entrance, edged by a simple, scored concrete border, is centrally located in the west façade, and is accessed by a flight of stairs as well as a handicap accessible ramp. A penthouse rises above the roof at the center of the main bar. A secondary entrance is located at the south elevation, which is accessed via a paved patio.

Building 210 - Research/MIREC (Hospital Building) (1945): This two story Mission Revival style building is three stories high, with its lowest (basement) level entirely below grade at the primary (west) façade. T-shaped in plan, the building is clad in smooth stucco with a *terra cotta* tile-hipped roof. Fenestration consists of regularly spaced multi-light, double hung, metal windows. The main entrance is centered on the west façade and is marked by a slightly projecting, two story portico. Mission-shaped parapets are centered along the roofline north and south of the main entrance.

Building 211 – Brentwood Theater (1946): This two story Mission Revival style theater building is generally T-shaped in plan. The building is clad in smooth stucco and has a *terra cotta* tile front gable roof. The entrance portico has a slightly lower roofline than the remainder of the building. The centered entrance has a heavy wood panel door and is flanked by pilasters supporting a lintel with urns and wrought iron carriage lamps. A single window above the entrance is surrounded by scrolled ornamentation. At the gable is a quatrefoil opening. Limited fenestration consists of wood double hung sash windows with wrought iron grilles at the façade. A three-story, flat roof fly tower is located at the rear (northwest) elevation.

Building 256 – Mental Health Day Treatment Center (1946): Building 256 is generally H-shaped and designed with elements of Mission Revival style. It is three stories high with its lowest (basement) level partially below grade. Constructed of reinforced concrete, the building is clad in smooth stucco with a cross gable roof capped in *terra cotta* tile. Windows are regularly spaced on each elevation and consist of aluminum single hung sash. The main entrance is centrally located on the north elevation, and accessed by a flight of stairs and a handicap accessible ramp. Secondary entrances are located on the south, east, and west elevations.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Building 257 – Mental Health/New Directions (1946): Building 257 is generally H-shaped and designed with elements of Mission Revival style. It is three stories high with its lowest (basement) level partially below grade. Constructed of reinforced concrete, the building is clad in smooth stucco with a cross gable roof capped in *terra cotta* tile. Windows are regularly spaced on each elevation and consist of aluminum single hung sash. The main entrance is centrally located on the south elevation, and accessed by a flight of stairs and a handicap accessible ramp. Enclosed patios flank the main entrance. Secondary entrances are located on the north, east, and west elevations.

Building 258 – Administration/Mental Health (1946): Building 258 is generally H-shaped and designed with elements of Mission Revival style. The central section is four stories high with east and west wings that are three stories. Constructed of reinforced concrete, the building is clad in smooth stucco and has a cross gable roof capped with *terra cotta* tile. Windows are regularly spaced on each elevation and consist of multi-light single hung metal sash. The main entrance, centrally located on the south elevation a few steps above ground level, is decorative, with engaged cast stone pillars and scrolled pediment extending to the window above. Secondary entrances are located on east and north elevations, with a handicap accessible ramp at the west entrance. A two-story arcade extends from the north elevation to Building 157.

Building 259 – Com Work Therapy (1945): This one story utilitarian building is roughly L-shaped in plan. The building is clad in smooth stucco and has a flat roof with skylights. The primary façade faces west and the entrance features a metal door with sidelights flanked by brass light fixtures. The entrance is capped by large dentil brackets and low relief Art Deco style stucco detailing. Fenestration consists of multi-light, hopper type, metal windows.

Building 300 – Dietetics (Mess Hall) (1952): Building 300 is T-shaped and designed with elements of Mission Revival style. It is two stories high with a basement level almost entirely below grade. Constructed of reinforced concrete, the building is finished in smooth stucco with a front gable roof capped in *terra cotta* tile at the center portion. Remaining areas of the roof are flat. Windows are regularly spaced on each elevation and consist of aluminum sliders and metal casements. The main entrance is centrally located in the south elevation, and accessed by a flight of stairs and handicap accessible ramp. It is flanked by two stairs providing access from an entry vestibule to the second floor interior. A secondary entrance and entrance lobby are located at the north elevation.

Contributing landscapes, open spaces, and streetscapes

This subarea is characterized by being at a slightly higher grade than the rest of the campus. As noted above, the topography drops off considerably on the east and west sides of the subarea. On the east side, a buffer of mature eucalyptus trees, a contributing landscape feature, separates this subarea from subarea 5 – Utility. On the west side, another contributing landscape, a wild, natural drainage gully, separates the campus from the adjacent residential community. Bonsall Avenue, the contributing streetscape throughout the campus, provides primary access to this subarea. Secondary streets are lined with sidewalks.

West Los Angeles Veterans Affairs Historic District
 Name of Property

Los Angeles, CA
 County and State

Contributing landscape features in subarea 4 include lawns surrounding each building, as well as relationships between buildings. Most prominently, Buildings 205, 208 and 209 are arranged around three sides of an elevated landscaped quad and are connected by an enclosed semicircular passageway that connects the basements of the buildings. The axis of the landscaped quad follows through Building 157 and terminates with Building 258. A secondary axial relationship between buildings commences with Building 300, which is balanced by Building 256. The two buildings are physically connected by a walking path. Buildings 206 and 207 are evenly spaced around the center axis between them.

Subarea 4 non-contributing resources:

Building 233 - HAZMAT Building (c. 1960s): This one story, utilitarian building is constructed of concrete block and has a flat roof. It is rectangular in plan and has a metal door on the east and west elevations. The building is windowless.

Subarea 5 – Utility

The Utility area is located on the east side of the Northwest Quadrant, between Bonsall Avenue, Sepulveda Boulevard and Interstate 405. With the exception of landscaping along Bonsall Avenue, the subarea is predominantly hardscape.

This subarea includes 18 buildings, six of which contribute to the historic district (Photos 73-78, Figures 20-21 and 93-94). Contributing resources date from the National Home for Disabled Volunteer Soldiers and Second Generation Veterans Hospital periods. Several of the contributing buildings from this later period (Buildings 222, 224 and 295) are Streamline Moderne in style.

The subarea includes the following contributing and noncontributing resources:

Bldg. No.	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
46	1922	C	Engineering Shop
222	1938	C	Mail Out Pharmacy
224	1946	C	Outleased – Laundry
292	1946	C	Water Treatment Plant
295	1947	C	Steam Plant
297	1948	C	Supply Warehouse
44	1897 (2001)	NC	Engineering Shop
63	1959	NC	Engineering M&O (Maintenance & Operation)
83	1958	NC	Welding Shop
T-84	1967	NC	Laundry Annex
299	c. 1940s (1990s)	NC	Switchgear

West Los Angeles Veterans Affairs Historic District
 Name of Property

Los Angeles, CA
 County and State

Bldg. No.	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
305	1955	NC	Transportation
315	1948 (alterations on-going)	NC	GSA Motor Pool
319	1956	NC	Supply Storage
508	1998	NC	Laundry
509	1999	NC	Recycling Center
510	2002	NC	Transportation
511	2003	NC	Storage

For a complete list of contributing and noncontributing resources to the historic district, see Appendix 1.

Subarea 5 contributing resources:

Building 46 – Engineering Shop (1922): This one story utilitarian building is rectangular in plan and is clad in smooth stucco. The front gable roof is clad in corrugated metal and features monitor skylights. A porch supported by wood posts is covered by a shed roof. Fenestration consists of continuous, multi-light, steel, hopped-type windows.

Building 222 – Mail Out Pharmacy (1938): Constructed of reinforced concrete, Building 222 is utilitarian in character, although features elements of Streamline Moderne style. It contains three stories and is square in plan. Loading docks extend from the east and west elevations and are covered in a curved concrete canopy extending from the elevations, between first and second floors. Decorative features include horizontal concrete scoring at the second floor, and a simple concrete cornice. Windows and doors are arranged at irregular intervals at the first and second floors. Windows consist of fixed contemporary aluminum sash and historic multi-light, metal hopper sash. While there are several doors on the east, south and west elevations, the main entrance is located along the east elevation and is indicated with a sign.

Building 224 – Laundry (1946): This one story Streamline Moderne style building is generally rectangular in plan. Constructed of reinforced concrete, the building has a flat roof with a parapet. Decorative features include horizontal concrete scoring at the second floor, and a simple concrete cornice. Fenestration consists of regularly spaced, multi-light, steel sash windows.

Building 292 – Water Treatment Plant (1946): This small, one story building is rectangular in plan. The reinforced concrete building has a flat roof covered with a high parapet. Windows that have not been boarded over with plywood have multi-light, metal sash.

Building 295 – Steam Plant (1947): This two story Streamline Moderne style building is generally rectangular in plan. The reinforced concrete building has a flat roof and is five bays long and three bays wide. Stepped piers terminate above the parapet and divide the bays. Multi-light, steel sash, awning type windows are located in each bay and span the first and second

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

stories. Decorative features include horizontal concrete scoring at the second floor, and a simple concrete cornice. The main entrance is located along the northeast elevation and is delineated by a simple surround.

Building 297 – Supply Warehouse (1948): This one story, utilitarian building is rectangular in plan and is characterized by its multiple front gable roofs. Walls are clad in corrugated metal and a concrete loading dock with corrugated metal canopy is located on the primary, west façade. Large loading doors are located in each gabled portion of the building. They are flanked by metal sash windows and surmounted by a metal vent.

Contributing landscapes, open spaces, and streetscapes

This subarea is characterized the widespread hardscape and minimal landscaping. It is located at a lower elevation than the adjacent Subarea 1 – Domiciliary.

Subarea 5 non-contributing resources:

Building 44 – Engineering Shop (1897): This two story, rectangular, utilitarian building is clad in metal siding and encloses an older, two story, wood building. The building was altered in 2001.

Building 63 – Engineering M&O (1959): This two story building is rectangular in plan with the lower (basement) level partly below grade. The building is clad in smooth stucco and has a flat roof with a wide fascia board. The primary façade features a centered metal door, flanked by single-light wood sash windows. Windows on the rear elevation are multi-light, metal sash, awning type.

Building 83 – Welding Shop (1958): This one story utilitarian building is rectangular in plan. It has a concrete foundation, and a steel frame covered with corrugated metal. The side gable roof with monitor sky lights is also covered with corrugated metal. The southwest elevation features a centered metal door flanked by paired, double hung wood sash windows. Metal canopies cover both the windows and door. Multi-light, steel sash windows are located on secondary elevations.

Building T84 – Laundry Annex (1967): This one story, utilitarian building is rectangular in plan. It has a concrete foundation and is clad with corrugated metal siding. The low-sloped gable roof is topped with corrugated metal. A concrete loading dock is located along the east elevation and is sheltered by a corrugated metal canopy.

Building 299 – Switchgear (c. 1940s): This one story utilitarian building is rectangular in plan. It has a steel frame with corrugated metal siding and a flat roof. The primary façade has two metal doors. A smaller one story utilitarian addition with steel frame with flat metal siding and a flat roof is located adjacent to the main building and has double metal door at the primary façade, and two metal sash windows at the secondary façade. A wind turbine vent is located on the roof of the addition. The siding on the building appears to be an alteration from c. 1990s.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Building 305 – Transportation (1955): This one story, utilitarian building is rectangular in plan. It has a concrete foundation, corrugated metal walls, and front gable roof. Fenestration is regularly spaced and consists of multi-light, steel casement windows. Concrete loading docks sheltered by corrugated metal canopies are located along the west and north elevations.

Building 315 – GSA Motor Pool (1948): This one story, utilitarian building is rectangular in plan. It has a concrete foundation, corrugated metal siding, and a shed roof, also covered in corrugated metal siding. Double wood doors are located along the east elevation. Metal vents are located near the roofline on all elevations. Siding appears layered like patchwork, suggesting corrugated metal siding has been replaced as required.

Building 319 – Supply Storage (1956): This one story, three-sided shed structure is rectangular in plan. The shed has a metal frame with corrugated metal walls and shed roof.

Building 508 – Laundry (1998): Building 508 is a contemporary one story high building, rectangular in plan. It has a concrete foundation with concrete and stucco walls. The roof is flat. Double metal and glass doors are located along the west elevation, sheltered by a curved stucco canopy.

Building 509 – Recycling Center (1999): This one story, utilitarian building is rectangular in plan. Clad with corrugated metal siding, the building has a low-sloped gable roof covered in metal siding.

Building 510 – Transportation (2002): This one story, utilitarian building is rectangular in plan. Clad with corrugated metal siding, the building has a low-sloped gable roof covered in metal siding.

Building 511 – Storage (2003): This one story, utilitarian building is rectangular in plan. Clad with corrugated metal siding, the building has a low-sloped gable roof covered in metal siding.

Subarea 6 – Recreational

This subarea runs along the eastern and northern sides of the Northwest Quadrant, north of the utility area. It includes substantial green space, including a golf course, plant nursery, nursery garden, greenhouse, and baseball field. Access is provided via Bonsall Avenue and Patton Avenue. This subarea includes 17 buildings, structures, or sites, one of which contributes to the historic district (Photos 22-24 and 79, Figures 95-97).

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

The subarea includes the following contributing and noncontributing resources:

Bldg. No.	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
None	1946	C	Golf Course
T79	unknown	NC	Plant Nursery
249	c. 1940s	NC	Greenhouse
303	No date	NC	Water Tank
319	1956	NC	Supply Storage
325	c. 1990s	NC	Horticulture Restrooms
326	c. 1990s	NC	Horticulture Office
327	c. 2013	NC	Horticulture Restrooms
329	c. 1940s	NC	Golf Club House
333	c. 1960s	NC	Horticulture Tool Shed
334	c. 1960	NC	Refreshment Stand (Golf Course Storage Building)
336	c. 1960	NC	Baseball Park Restrooms (Field House)
339	1960	NC	Bandstand
512	c. 1990s	NC	Bird Sanctuary Workshop
None	No date	NC	Baseball Field House
None	No date	NC	Baseball Lot Club
None	c. 1970s	NC	Japanese Garden

For a complete list of contributing and noncontributing resources to the historic district, see Appendix 1.

Subarea 6 contributing resources:

Golf Course (1946): This nine-hole golf course is located on seven acres. The rolling landscape is dotted with mature trees and sand bunkers at irregular intervals. The east and southwest edges of the golf course are buffered by groves of mature trees.

Contributing landscapes, open spaces, and streetscapes

A row of mature palm trees lines the north side of Constitution Avenue, backed by a row of eucalyptus trees. The trees link the cemetery with the northwest quadrant and are a contributing landscape feature.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Subarea 6 non-contributing resources:

Building T79 – Plant Nursery (unknown): This small, one story, utilitarian structure is rectangular in plan and has a gable roof. It has a wood frame structure with clad wood board and batten siding. The single window is has aluminum sliding sash.

Building 249 – Greenhouse (c.1940s): This one story utilitarian structure is rectangular in plan. The building has a brick foundation and wood is clad with corrugated metal. The gable roof is covered with standing seam metal. Several metal vents are located at the gable of the structure.

Feature 303 – Water Tank (insert date): These two water tanks are round structures with low-sloped, conical covers. The tanks are set on a concrete pad and surrounded by a chain link fence.

Building 319 – Supply Storage (1956): This one-story rectangular shed set on a concrete pad is clad in corrugated metal on three sides and completely open on its west elevation. The shed has a flat, corrugated metal roof with metal pipe frame.

Building 325 – Horticulture Restrooms (c. 1990s): This one-story, wood restroom building is square in plan. The building has a concrete foundations and a wood shed roof. A single entrance is located on the northwest elevation. A small aluminum window is located on the southwest side elevation.

Building 326 – Horticulture Office (c. 1990s): The horticulture office building is a one-story rectangular building with a shed roof. The building is set on a concrete pad. The siding of the building appears to be plastic sheeting with vertical seams. The roofing is corrugated plastic. Two vinyl windows are located on the southeast elevation.

Building 327 – Horticulture Restrooms (c. 2013): The recently completed, small, rectangular, concrete block building has a side gable roof and two restrooms accessed by doors its southwest elevation.

Feature 329 – Golf Club House (c. 1940s): This Quonset hut is clad in corrugated metal. The north elevation has one multi-light metal frame window and a door covered by a canopy. The south elevation has a small lean-to addition, also clad in corrugated metal, one multi-light metal frame window and a door.

Building 333 – Horticulture Tool Shed (c. 1960s): The tool shed is a small rectangular building with corrugated metal siding. Multiple openings on all sides are of irregular sizes and made of corrugated metal. The main entrance, on the northwest elevation, features a fixed metal shed roof awning. The building's roof is also corrugated metal.

Building 334 – Refreshment Stand (Golf Course Storage Building) (c.1960s): The small utilitarian building has a rectangular plan with wood board-and-batten siding. The building has a shallow side gable roof with sliding aluminum windows centered below the gables on the side elevations of the building.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Building 336 – Baseball Park Restrooms (c. 1960s): The small concrete block building located adjacent to the baseball bandstand is a small, square, shed-roof building with entrance on its east and west elevations. There is a single window with metal security bars on its north elevation. A vertical board fence encircles the northeast corner.

Building 339 – Bandshell (1960): This one story concrete structure is enclosed on three sides and has a curved roof with a slightly overhanging canopy.

Building 505 (c. 1990s): This one story, irregularly-shaped contemporary building has a concrete foundation, wood frame structure and is clad in stucco. The hipped roof is covered has a wide eave overhang. Fenestration consists of aluminum sash, horizontal sliding windows.

Building 512 – Bird Sanctuary Workshop (c.1990s): The bird sanctuary is a cluster of large metal birdcages oriented situated around the perimeter of the former tennis court. The cages have corrugated plastic shed roofs and metal wire siding. The site sanctuary is enclosed with a contemporary metal entrance gate and high plywood walls. .

Baseball Field House (insert date): This large, one story, recreational structure is rectangular in plan and has a concrete foundation and metal frame. The structure is entirely open on the west elevation, with the remaining three elevations are partially enclosed by nylon stretched onto metal fencing. The flat roof is covered in corrugated metal.

Baseball Lot Club (insert date): This contemporary, one-and-a-half story building is rectangular in plan. It is clad in concrete block and metal siding and has a shed roof with a large dormer. Fenestration consists of ribbon windows at the first floor and dormer.

Japanese Garden (c. 1970s): This garden is located on approximately two acres. The landscape is densely planted with mature trees and shrubs and features a series of interconnected, concrete lined pools. Two painted wood bridges cross the pools, and winding, unpaved paths provide circulation through the garden. One asphalt-paved path runs east-west at the south edge, and a small building, square in plan with a hipped roof, is located to the west.

Northeast Quadrant – Los Angeles National Cemetery

The northeast quadrant contains the Los Angeles National Cemetery (LANC). Buildings and structures of the site are not numbered. The park-like landscape encompasses 114 acres bounded by a residential neighborhood to the north, Veterans Boulevard to the east, Wilshire Boulevard to the south, and Sepulveda Boulevard to the west. The cemetery was established in 1889 as part of the National Home for Disabled Volunteer Soldiers (NHDVS) Pacific Branch. Historically, the cemetery was also known as the Sawtelle Cemetery. The topography rises from flat expanses in the south up a shallow hill to the north. The oldest interments are located in the northern portion of the cemetery. The entire property is surrounded by a contemporary steel and concrete fence. The main entrance is located on Sepulveda Boulevard. The Los Angeles National Cemetery contains over 85,000 interments of veterans and their dependents.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

The northeast quadrant includes the following contributing resources (there are no non-contributing features, Photos 27-32 and 81-95, Figures 104-123):

Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
1941 (1980)	C	Chapel (Administration Building)
1940	C	Columbarium
1940 (c. 1990)	C	Comfort Station (Rest Rooms)
1939-1941	C	Maintenance Building (1 of 2)
1940	C	Maintenance Building (2 of 2)
c. 1940	C	Fuel Storage Building
1940	C	Arcade
c. 1940 (2009)	C	Rostrum
c.1940	C	Wilshire Boulevard Gatehouses (2)
c. 1920s	C	Terraces/Overlooks (2)
c. 1937	C	U.S. Flagpole
c. 1920s	C	NHDVS Monument
1896 (moved 1942)	C	Civil War Monument
1950 (re-created 1973)	C	Spanish-American War Monument
c. 1889	C	Bivouac of the Dead Plaques (6)
c. 1889-present	C	Burial sections with headstones and markers
c. 1889-c.1975	C	Roads, curbs, and walkways

For a complete list of contributing and noncontributing resources to the historic district, see Appendix 1.

Northeast quadrant contributing resources (buildings):

Chapel (Administration Building) (1941): The non-denominational chapel is a Spanish Colonial Revival style building exhibiting typical characteristics of that style: red tile roofs, white exterior, arched entryways, cast concrete decorative grilles and ventilators, and rustic interior details like hand-hewn, painted wooden roof trusses. The building’s exterior walls are poured concrete, built with forms that mimicked the rustic appearance of stone blocks.¹ It is located at the main entrance to the cemetery, on Constitution Way, off of Sepulveda Boulevard. WPA

¹ Martin Eli Weil, Kaitlin Drisko, Mel Green, George Athans, Mel Bilow, Donna Williams, and Marla Felbert, “The Bob Hope Veterans Chapel, Los Angeles National Cemetery, Los Angeles, California,” *Historic Structure Report* (prepared for Veterans Park Conservancy, 2005), 10.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

crews constructed the chapel. Its main spaces, still extant, originally held a crematorium, personnel facilities, and viewing rooms, in addition to the main chapel area. Portions of the chapel's interior were significantly altered in 1980 for use as administrative offices and storage spaces and the chapel space itself was converted into a multi-use area. In 2002, the building was renamed the Bob Hope Veterans Chapel and a commemorative plaque was added to the main chapel entrance.

Columbarium (1940): The columbarium is an arc-shaped Spanish Colonial Revival style building with some Mission Revival elements; it has brick walls, a red tile roof, and a curving brick arcade with arches along its front (east) facade. Built by the WPA, it is the only indoor columbarium in the national cemetery system. A marble plaque over the main entrance door reads "Where Valor Proudly Sleeps." Much of the interior's light comes in through glass blocks. The interior consists of a central vestibule with rustic wood and cast-concrete or *terra cotta* decorative elements flanked by two wings of hallways leading to skylight-illuminated, marble-detailed nooks for cremated burials. The ashes of over 5,000 veterans and their dependents are interred in the columbarium. The columbarium is not known to have any additions or significant alterations.

Comfort Station (1940): The comfort station building, containing separate men's and women's toilets, is a small Spanish Colonial Revival style building located immediately west of the columbarium. Like the columbarium and cloister, it is constructed with rustic, rough-textured brick walls and a gabled, red-tile roof and two arched openings, one for each bathroom entrance. The exterior walls have open grilles of mortared brick, with timber headers. Both entrances have modern additions of concrete ramps with wood handrails to provide wheelchair access to the building (possibly installed for ADA compliance in the 1990s)

Maintenance Yard Buildings (2) and Fuel Storage Building: One maintenance building is a Spanish Colonial Revival style, one story building with rustic brick walls and a gabled, red-tile roof, constructed by the WPA between 1939 and 1941. Its facade contains two car-sized garage openings with tilt-up doors and three pedestrian doors. A small room projects from the northern end of the building, with decorative archways inset in the brick on the northern and eastern walls. The building has brick window grilles and the brick has weeping mortar. This maintenance building is still in use, and is now very closely abutted on its south side by a larger modern service building sided with light concrete stucco and roofed with red tiles. A freestanding fuel storage building sits in the maintenance yard, constructed of mortared rounded cobbles and sitting atop a low wall of the same materials; it dates to the same period as the maintenance building.

Northeast quadrant contributing resources (structures):

Arcade (1940): The arcade is an arc-shaped Spanish Colonial Revival style structure with some Mission Revival elements. Like the columbarium, it has rustic brick siding and a red tile roof. The structure has no interior space, just a broad, curving arcade with brick arches along the west-facing facade. It was built by the WPA. One wall contains a number of small metal memorial plaques. The arcade floor is brick and concrete, and timber rafters span the arcade ceiling. The

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

back (east) side of the structure is a plain, unadorned brick wall that once contained a door-sized opening, which has been infilled with brick at an unknown date. There have been no other alterations or additions.

Wilshire Boulevard Gatehouses (c. 1940): Marking a former pedestrian entrance at the south end of the cemetery are the paired gatehouses. The gatehouses consist of two small brick buildings connected by a walkway, formerly covered by a pergola. The buildings originally housed men's and women's restrooms, a powder room and a pump room, but are now used for storage. They flank a concrete path leading into the cemetery from a locked pedestrian gate. The buildings are designed in a simple Spanish Colonial Revival style, with brick walls, red tile roofs, timber window headers, and wooden window grilles. Each building is a mirror image of the other, and is angled to face the other. A wood door is located at the end of each building, opening toward the curving concrete feature (the western building's door is in its eastern facade, and the eastern building's door is in its western facade); these doors would have been the main entrances to the buildings. The eastern building has two windows in its north elevation, while the western building's north elevation has a window and an additional door. On the northern side of the gatehouses are three planting areas: a rectangular one in the center, flanked by two circular ones. Originally, these were pools with fountains. It is unclear when the function changed from water feature to garden feature.

Rostrum c. 1940 (2009): The rostrum is a circular brick and stucco structure located in the same area as the columbarium, cloister, comfort station, and flagpole. It has a low brick stage or platform with steps descending to the south, a stucco-faced podium at the south end, and a stucco-faced wall encircling its north side. The general style is complementary to the Spanish Colonial Revival style buildings with white stucco siding featuring red brick and wood accents. Plaques sit on either end of the stucco wall and on the podium. The podium plaque contains Lincoln's Gettysburg Address on a large cast-iron tablet, the eastern plaque commemorates Spanish-American War veterans, and the western plaque is a VFW Auxiliary monument commemorating all veterans. The Gettysburg Address tablet was installed in 2009 and replaced an identical plaque from ca. 1909 that was badly damaged. The rostrum's floor and back brick wall have some large cracks that have been filled in.

Terraces/Overlooks (2) c. 1920s: Two identical brick terraces are present at the top of the cemetery's hill and are identified as overlooks on some cemetery maps. Each consists of a bracket-shaped wall sitting on a concrete slab with the open end facing the north/south and running Buena Vista Road to the east. The walls are brick with weeping mortar and have low concrete-capped columns, and curve down to the ground at the open side. The northern brick overlook structure has a small rose garden to its western side, used as a scatter site for cremated remains.

Fence, Culvert, Walls: A fence and several walls are present on the property and are historic in appearance. A low fence of brick supports black-painted metal railings that sit at the southwestern side of the cemetery's hilltop, marking the site of a former pergola and comfort station. Multiple retaining walls of mortared rounded cobbles are present (most visible in the

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

area of a granite obelisk monument), and a concrete culvert with the same mortared cobble sides winds across the landscape from the northwestern base of the hill near Belleau Wood Drive.

Northeast quadrant contributing resources (objects):

Flagpole (c. 1937): The flagpole stands in a circular area in the middle of the columbarium-pergola-rostrum location. It has a white-painted concrete base and a matching metal flagpole with no visible decorations or plaques. The base was designed as part of the WPA changes at the cemetery made between 1937 and 1941.

NHDVS monument (c. 1920s): A rough-hewn granite-block obelisk honoring all U.S. military dead sits at the top of the hill off of Buena Vista Avenue at the north end of the cemetery. Set into the base is a polished granite inscription plaque.

Civil War Soldier Monument (c. 1896): A cast bronze Union soldier statue set on a boulder among grave markers near the rostrum. An identical cast zinc statue dating to c. 1896 was originally part of a drinking fountain elsewhere on the NHDVS campus; a bronze replica was moved to the cemetery in 1942.² The monument is sometimes referred to as the Sentry Monument, implying that the soldier is standing guard. This statue underwent conservation, including cleaning, seam repair, stabilization, and painting in early 2010.³

Spanish-American War Monument (1950, re-created 1973): Roger Noble Burnham sculpted the original marble United Spanish War Veterans monument in 1950, depicting “Lady Liberty” flanked by two soldiers. The monument was destroyed by a 1971 earthquake and re-created by David Wilkens in 1973, using reinforced concrete and fiberglass.⁴

Bivouac of the Dead plaques (6) (c. 1889): In front of the chapel, six cast-iron plaques set in low concrete bases display lines from Theodore O’ Hara’s poem “Bivouac of the Dead.” The plaques are original to the cemetery;⁵ although it is unknown whether this was their original location.

Integrity

West LA VA Historic District retains a high degree of integrity from the Second Generation Veterans Hospital period of significance, 1923-1952 and meets registration requirements

² Justin Kockritz and Jason Vaughan, “Los Angeles National Cemetery, Los Angeles, California,” *Civil War Era National Cemeteries: Honoring Those Who Served* (prepared by the National Preservation Institute for the National Park Service, n.d. [cited 20 October 2011]); available from http://www.nps.gov/history/nr/travel/national_cemeteries/California/Los_Angeles_National_Cemetery.html; INTERNET.

³ ARG Conservation Services, Inc., “Treatment Plan for Civil War Soldiers Monument, Los Angeles National Cemetery,” (prepared for United States Department of Veterans Affairs, 2 December 2009) and ARG Conservation Services, Inc., “Final Walk Through checklist for Civil War Soldiers Monument, Los Angeles National Cemetery,” (prepared for the United States Department of Veterans Affairs, 12 March 2010). Copies on file at Los Angeles National Cemetery.

⁴ Kockritz and Vaughan, “Los Angeles National Cemetery.”

⁵ Department of Veterans Affairs, “Bivouac of the Dead,” (prepared for the United States Department of Veterans Affairs, 2009, [cited 16 October 2011]); available from <http://www.cem.va.gov/hist/bivouac.asp>; INTERNET.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

associated with integrity described in the Second Generation Veterans Hospital MPDF for Period II (late 1920s to 1950) VA campuses. West LA VA continues to function as a VA medical facility, retaining domiciliary and general medical functions. As the West LA VA has been in continuous use, there have been many alterations over the years, including the addition and demolition of buildings. However, these alterations do not impact the historic characteristics of location, design, setting, materials, workmanship, feeling, and association. Because of its visual prominence, Building 500 and other contemporary medical buildings located in the southwest quadrant of the campus have not been included within the boundaries of the historic district. Similarly, the California State Veterans Home is also excluded from the boundaries of the historic district as the land is no longer under federal ownership. As a result of the Cranston Act, federal Congressional legislation passed in 1988 that prohibits the sale and limits the land use of specific portions of the campus, West LA VA Historic District did not experience a significant reduction of land, although there are continual threats to the borders of the site.

Specifically, West LA VA Historic District is sited in its original location with the majority of buildings from the 1920s, 1930s, and 1940s constructed in Mission Revival style. The buildings of the historic district are arranged in three quadrants, sharing utility buildings and recreational facilities. While two, large hospital buildings (Building 500 and California State Veterans Home) have been constructed on the campus in the northwest quadrant, in subarea 4 after 1977, they do not interrupt the visual relationships between buildings or detract from the prominence of Building 258, the Administration Building for subarea 4 – Neuropsychiatric Hospital. The West LA VA retains its spatial design from the period of significance. As expected, there has been a growth in paved surfaces, with additional parking lots generally located outside the three subareas in the northwest quadrant that do not disrupt visual relationships between buildings. The campus retains landscape and site features from its period of significance, including its curving drives, specifically Bonsall Avenue, which continues to run through the northwest quadrant and partially through the southwest quadrant, the U-shaped drive from the NHDVS period (1888-1930), and mature trees, including eucalyptus wind breaks and the palm grove in subarea 2 – Senior Personnel Residences. Even though West LA VA Historic District includes four discontinuous portions, visual discontinuity does not factor into the district's historic significance. Furthermore, sections that are discontinuous due to the construction of the major roadways of Wilshire Boulevard and I-405 retain sufficient significance and integrity.

The majority of resources constructed within the period of significance retain a high degree of integrity of materials and workmanship. While many buildings exhibit common alterations, such as replacement windows, doors, roofing materials, ramps along the primary façade for disabled access, and infill of porches in H-plan buildings, the Second Generation Veterans Hospital MPDF notes that these alterations do not impact eligibility.

Finally, West LA VA Historic District retains a high degree of integrity of feeling and association. The campus as a whole continues to communicate a strong sense of time and place. Although several distinct hospitals have been incorporated into one campus, there is cohesion of building size, scale, building materials, and architectural style.

Cumulative effects of loss of land and buildings, modifications to individual buildings, and

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

addition of new buildings after the period of significance were considered. Despite numerous alterations to the historic district, it retains its ability to convey its historic and architectural significance and a strong sense of time and place. Most of the large, important buildings constructed within in the period of significance, as well as the overall setting, retain a high degree of integrity. West LA VA Historic District continues to be an excellent example of a Second Generation Veterans Hospital incorporated into an earlier campus.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

- A. Owned by a religious institution or used for religious purposes
- B. Removed from its original location
- C. A birthplace or grave
- D. A cemetery
- E. A reconstructed building, object, or structure
- F. A commemorative property
- G. Less than 50 years old or achieving significance within the past 50 years

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Areas of Significance

(Enter categories from instructions.)

- Politics/Government
- Healthcare/Medicine
- Architecture
- Politics/Military
- Landscape Architecture

Period of Significance

- 1923-1952
- 1888-present (National Cemetery)
- _____

Significant Dates

- 1889 (cemetery dedicated)
- _____
- _____
- _____

Significant Person

(Complete only if Criterion B is marked above.)

- _____
- _____
- _____

Cultural Affiliation

- _____
- _____
- _____

Architect/Builder

- Works Progress Administration (cemetery)
- Veterans Administration Construction Services
- Walker & Eisen
- Koerner & Gage

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

West Los Angeles Veterans Affairs (West LA VA) Historic District is significant under criterion A for its association with Second Generation Veterans Hospital national context for the period 1923-1952. Four buildings from the NHDVS period (1888-1930), two of which are separately listed in the National Register (Chapel and Streetcar Depot), as well as the National Cemetery, contribute to the historic district. West LA VA Historic District is also significant for its Mission Revival architecture under criterion C. Integrating landscapes, open spaces, and streetscapes to create a pastoral environment, the historic district conveys a strong sense of time and place from its period of significance. Encompassing approximately 400 acres, including the National Cemetery, the historic district includes 64 contributing resources and 44 non-contributing resources in four discontinuous sections caused by construction of major thoroughfares and are linked historically.

West LA VA Historic District is significant as an excellent, intact example of a Second Generation Veterans Hospital that was built on the campus of the first NHDVS branch on the West Coast. The West LA VA Historic District is significant under criterion A at the statewide level for its contribution to the “development of a national policy for veteran health care.”⁶ West LA VA Historic District is a “tangible manifestation of the federal government’s commitment to the health care of veterans of World War I, which resulted in the nation’s largest network of hospitals.”⁷ The United States Second Generation Veterans Hospital Multiple Property Documentation Form (MPDF) prepared by Cultural Resource Analysts, Inc. and completed in 2011 categorizes four types of Second Generation Veterans Hospitals: neuropsychiatric, tuberculosis, general medical and surgical hospitals, and homes/general medical hospital. These categories follow those identified in a special issue of the publication *The Federal Architect* published in 1944, which classifies the four major Second Generation hospital types as: General Medical and Surgical, Neuropsychiatric, Tubercular, and Domiciliary.⁸ Unique among Second Generation Veterans Hospitals, West LA VA Historic District incorporated all four major hospital subtypes. As the largest VA campus in the country after 1919, West LA VA Historic District epitomizes adaptation of a NHDVS facility into a Second Generation Veterans Hospital. Along with the associated National Cemetery, which began as the Pacific Branch National Home’s cemetery, the historic district retains important elements of the NHDVS facility, including the multi-denominational chapel and streetcar depot,⁹ while incorporating Second Generation Veterans Hospital buildings into the circulation pattern established during the earlier period. Although the MPDF for Second Generation Veterans Hospitals establishes a period of

⁶ Suzanne Julin, “National Home for Disabled Volunteer Soldiers: Assessment of Significance and National Historic Landmark Recommendations” (prepared for the United States Department of Veterans Affairs, 2007).

⁷ Trent Spurlock, Craig A. Potts, Karen E. Hudson, Cultural Resources Analysts, Inc., “United States Second Generation Veterans Hospitals,” *National Register of Historic Places Multiple Property Documentation Form* (prepared for the United States Department of Veteran Affairs, September 3, 2010), E1.

⁸ Spurlock, Potts, and Hudson, E 3.

⁹ As described below, both the chapel and streetcar depot are separately listed in the National Register of Historic Places.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

significance between 1919 and 1950, it is appropriate to extend this until 1952 at West LA VA Historic District to include Building 300, which was planned as part of the Second Generation campus but was not completed until 1952.

Los Angeles National Cemetery (LANC) is significant under criterion A for its association with the development of national cemeteries during the late nineteenth century. Located in the northeast quadrant of the West LA VA Historic District, LANC is representative of late nineteenth century cemeteries associated with the National Homes for Disabled Volunteer Soldiers. All of the buildings and structures in the cemetery date to the Second Generation Hospital period and were associated with projects of the Works Progress Administration (WPA). Headstones and monuments at the cemetery date from the 1880s. LANC is one of a handful of cemeteries that were operated by the VA prior to transfer of the national cemetery system to the VA by the National Cemeteries Act of 1973.

West LA VA Historic District is also significant under criterion C, “exhibiting nationally popular Colonial Revival architectural styles. The physical expression conveyed by these facilities honored ailing and injured veterans through a recognizably ‘American’ or ‘Patriotic’ language of architecture.”¹⁰ Colonial Revival style architecture, widespread on the East Coast and Midwest after the 1876 Centennial, reflected the colonial past of those regions. Architects overseeing construction of Second Generation Veterans Hospitals, the Veterans Administration Construction Services, established the propriety of Mission Revival style to reflect the colonial past of southern California. Second Generation buildings dating from the 1930s and 1940s use standardized floor plans and are designed in a simplified Mission Revival style. Buildings and structures at the cemetery constructed by the WPA reflect a more minimal interpretation of the Spanish and Mission Colonial Revival architecture of the campus.

West LA VA Historic District is not eligible under criterion D for its association with the National Home period. While a preliminary archaeological report identified areas of sensitivity,¹¹ it is unclear if documented artifacts would provide sufficient additional information not already available on the National Home period to suggest National Register eligibility for archaeology. Additional research may uncover building foundations from NHDVS period buildings and at least one institutional dump in a former gully. Given the amount of historic photographic evidence, it is unlikely that archaeological resources have the potential to yield important information about campus development and relationship of buildings to one another. Recovered artifacts may pertain to the treatment of specific medical conditions, procurement of supplies, and diet and food systems at the NHDVS Pacific branch, but the information potential of these artifacts is unclear and needs to be addressed with additional research before a determination of eligibility under criterion D can be made.

West LA VA Historic District is not significant for its association with Third Generation Veterans Hospitals that have a period of significance of 1946-1958. Building 500, the main

¹⁰ Spurlock, Potts, and Hudson, E 1.

¹¹ James Brock and Archaeogroup Inc., “Archaeological Resources Assessment of the West Los Angeles Veterans Administration Campus, Los Angeles, California (1st draft)” (prepared for the United States Department of Veterans Affairs, June 2011).

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

hospital building, shares common elements with other Third Generation Veterans Hospitals, including: “being constructed or managed by VA in response to increased patient loads following World War II”; features a building ranging from 4 to 18 stories; reflects International style architecture; is located within an urban area; and is connected with a medical school (University of California, Los Angeles). Nevertheless, Building 500 was constructed between 1974 and 1977, more than 15 years after the period of significance identified in the Third Generation Veterans Hospitals MPDF. In addition, other buildings from the Third Generation Veterans Hospital period, which are principally located in the southwest quadrant, fail to meet eligibility criteria established in the MPDF.

Period of significance justification

The period of significance begins with construction of the first Second Generation Veterans Hospital buildings in 1923, during the transition period from the National Home for Disabled Volunteer Soldiers (NHDVS) to the Veterans Administration, which formally occurred in 1930. The period of significance extends through 1952 with construction of the last Second Generation Veterans Hospital building in the district, Building 300. Even though the termination date for the period of significance stated in the United States Second Generation Veterans Hospital MPDF identifies 1948 as the termination date, it is appropriate to extend the date to 1952 at West LA VA Historic District to include Building 300, which was planned as part of the Second Generation Veterans Hospital but was not completed until 1952.

The period of significance for LANC extends from 1888, corresponding to the year that the Pacific Branch of the National Home for Disabled Veterans opened, to the present day. The cemetery and columbarium reached capacity in the early 1980s.¹² Today the cemetery is closed to new interments except for those with reserved spaces or if a reservation is cancelled. The Keeper of the National Register has clarified that the period of significance extends to the present, which “allows the recognition of the highly significant values these places have had in the recent past.”¹³

Criteria Considerations (explanation, if necessary):

Criteria Consideration D (a cemetery) applies to the evaluation of LANC. LANC meets the conditions of Criteria Consideration D as a national cemetery administered by the Veterans Administration and designated by Congress as a primary memorial to the military history of the United States.¹⁴ The cemetery also meets the eligibility requirements because it derives significance from distinctive design features, including buildings, structures, and objects designed by noted artists and the WPA. It retains the design features of its original, park-like

¹² David Larsen, “No More Room at the National Cemetery in Westwood,” *Los Angeles Times*, 11 November 1981, SD C1.

¹³ United States Department of the Interior, *National Register Eligibility of National Cemeteries – A Clarification of Policy* (United States Department of the Interior, National Park Service [cited 8 September 2011]; available from <http://www.nps.gov/nr/publications/guidance.htm>; INTERNET.

¹⁴ Rebecca H. Shrimpton, ed., *National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation*, (United States Department of the Interior, National Park Service, 1990, revised 1997 by Patrick W. Andrus [cited 18 September 2013]). This bulletin is available at the web site, <http://www.nps.gov/history/nr/publications/bulletins/nrb15/>.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

plan. Though the cemetery achieved significance more than 50 years in the past, the Keeper of the National Register extends the period of significance for national cemeteries to the present.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Criterion A: Politics and Government

West LA VA Historic District is significant under criterion A in the area of Politics and Government at the statewide level. The West LA VA was established by the federal government to provide comprehensive health care to veterans. The campus included large, landscaped grounds enjoyed by veterans, their families, and other visitors and served as a symbol of the federal government's care for veterans. By 1919, West LA VA Historic District had grown to be the largest VA campus in the country, surpassing other extensive VA campuses including Dayton, Ohio.¹⁵ The West LA VA campus made substantial contributions to the local and state economy, providing numerous jobs and serving as a tourist destination. The adjacent community of Sawtelle was established as a direct consequence of the West LA VA location. Built on land donated by two prominent Los Angeles landholders, Arcadia Bandini de Baker and John Percival Jones, the NHDVS Pacific Branch was located on a spur of the streetcar line and became a "must-see" tourist destination.¹⁶ By 1949, the campus had a population of more than 11,000 people, consisting of 6,500 veterans and 4,500 employees.¹⁷ An article appearing in the *Veterans Sentry* in 1942 reported, "Veterans of the armed forces of the United States have their Mecca, the Veterans' Administration Facility at West Los Angeles...The Facility is the largest of the approximately [sic] one hundred in the country and has almost continually a membership in Domiciliary and the Hospitals of about 6500, with an outpatient service which is accessible to about 25,000 men who have seen service."¹⁸

Criterion A: Health and Medicine

West LA VA Historic District is significant under criterion A in the areas of Health and Medicine at the state level "as the physical manifestation of the federal government's commitment to providing medical care to veterans."¹⁹ NHDVS Pacific Branch opened with 500 veterans in 1888. During the NHDVS period, which extended from 1888 until 1930, West LA VA functioned primarily as a domiciliary for veterans who were unable to live independently. In 1897, 1,605 veterans lived at West LA VA²⁰ and in 1917, at the beginning of World War I, there were approximately 2,000 veterans.²¹ A 1½ story wood frame hospital on the campus housed four doctors and 16 nurses.²² The Second Generation period of the campus began in 1923 when

¹⁵ Dayton, Ohio was the largest NHDVS branch from 1867 until 1919.

¹⁶ The original gift of land was approximately 600 acres.

¹⁷ "West Los Angeles Has World's Largest Veteran Center, Established 1887," *Los Angeles Independent*, 10 April 1949.

¹⁸ J. D. Davis, "Administration Building, Sawtelle," *Veterans Sentry*, March and May 1942.

¹⁹ Spurlock, Potts, and Hudson, F84.

²⁰ "Soldier's Home: Appropriations for the Current Quarter," *Los Angeles Times*, 1 August 1897, 29.

²¹ Edward Passaro, Jr., "Surgery at Sawtelle; A Brief History" (unpublished manuscript, 1977), 1.

²² Research did not reveal a clear program for domiciliary buildings. The term likely indicates a function similar to what we today call a "skilled nursing" facility that provided skilled nursing and supportive care to veterans in need of this type of assistance on an extended basis.

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

a tuberculosis hospital was constructed in the northwest corner of the campus. A “modern” hospital opened in 1927 and served the campus until 1974. The service area of the branch was expanded after 1930 to 250,000 veterans residing in a region that extended from San Diego County at the south, San Luis Obispo County at the north, and Clark County and Nye County in Nevada at the east. The tuberculosis hospital was converted to a neuropsychiatric hospital after 1937. By 1949, there were of 2,140 beds in the neuropsychiatric hospital, 1,405 beds in the general hospital, and 3,200 beds in the domiciliary.²³ West LA VA continues in its original function, serving veterans through medical and domiciliary care.

Criterion A: Development of the National Cemeteries

West LA VA Historic District is significant under criterion A for its association with the development of national cemeteries during the late nineteenth century. The first national cemeteries were established during the Civil War near battlefields, prisoner of war camps, hospitals, and troop concentration points. Interments were limited to soldiers who died during the war. National cemetery internment eligibility gradually expanded from 1873 through the twentieth century to include all Union veterans, and later, all honorably discharged veterans, their spouses and dependents.²⁴ When NHDVS homes were established as rehabilitation centers for disabled Civil War veterans in the 1880s, veterans who passed away were buried in adjacent cemeteries. The LANC (the northeast quadrant of the West LA VA Historic District) was associated with the development of the National Home for Disabled Volunteer Soldiers Pacific Branch and was the first national cemetery located in the western United States. The first burial took place at the cemetery in 1889. The cemetery eventually expanded from its original 20 acres to 114 acres. Cemeteries are usually not found at Second Generation Veterans Hospitals, except for those at former NHDVS branches and at three VA facilities specifically designed as VA Homes and Hospitals in the early 1930s. Though the landscape design of the cemetery took place mostly during the NHDVS period, the buildings, including the first cremation facility at a national cemetery and the only indoor columbarium at a national cemetery, were constructed by the WPA in the late 1930s. The LANC was operated by the VA prior to the transfer of the national cemetery system to the Veterans Administration by the National Cemeteries Act of 1973.

Criterion C: Architecture

West LA VA Historic District is significant under criterion C for its cohesive use of a simplified Mission Revival style architecture in the Second Generation Veterans Hospital buildings and the WPA buildings of LANC dating from the 1930s and 1940s. The style was thought to be appropriate to the region. Typical Mission Revival style elements, such as smooth stucco wall surfaces and *terra cotta* tile roofs, provide consistency to Second Generation buildings, specifically those in the neuropsychiatric and domiciliary areas (Subareas 4 and 1, respectively). Loosely based on designs of California’s earliest buildings, including missions, presidios, and

²³ “West Los Angeles Has World’s Largest Veteran Center, Established 1887,” *Los Angeles Independent*, 10 April 1949.

²⁴ Kelly Merrifield, “From Necessity to Honor: The Evolution of National Cemeteries in the United States,” *Civil War Era National Cemeteries* (prepared by the National Preservation Institute for the National Park Service, n.d. [cited 18 September 20313]); available from http://www.nps.gov/history/nr/travel/national_cemeteries/Development.html; INTERNET.

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

pueblos, Mission Revival style sought to portray a romantic myth of California's Spanish colonial heritage. The style became popular following the publication of Helen Hunt Jackson's novel, *Ramona* (1884), a tragic story of the mission system in mid-nineteenth century California. The story captured popular imagination and the actual, sometimes brutal, history of this period was ignored and exchanged for an Arcadian myth that was romanticized as part of the region's Mexican and Spanish Colonial history. Spanish and Mission Revival styles mimicked the forms and features of remaining missions, presidios, pueblos, and ranchos from the pre-statehood era in California.²⁵ In addition to smooth stucco wall surfaces, which were a dramatic departure from the wood Stick style buildings from the NHDVS period, characteristic features of Mission Revival style evident in the Second Generation buildings included arched openings, specifically in formerly open porches, and ornamental grills over the lower half of the steel sash double-hung windows that substituted for the more typical window bar restraints, and parapets on some buildings.

WPA crews constructed several buildings and structures including a chapel, a columbarium, arcade, gatehouses, and a maintenance building at LANC between 1939 and 1941.²⁶ The buildings and structures were built in a variation of the Mission Revival style. The administration building and chapel exhibit typical surface finishes of white stucco walls and a red tile roof while other buildings constructed by the WPA used materials that referenced the utilitarian Mission and rancho-era buildings and are constructed of red brick with exaggerated weeping mortar, visible wood beams in shaded arcades, and red tile roofs

Developmental history

This nomination form expands on significance to incorporate national historic contexts developed for VA for three major developmental periods of the VA nationwide. The national context for the first period, known as the National Home for Disabled Volunteer Soldiers (also known as National Military Home, colloquially as Old Soldier's Home, or referred to herein as NHDVS or National Home), was prepared in 2007 by Suzanne Julin as part of National Historic Landmark (NHL) recommendation of four of the eleven National Home properties. While West LA VA was one of the eleven NHDVS properties, it is not one of the four recommended as an NHL for its association with the NHDVS period due to the fact so few resources remain from this period. However, the Chapel and the News Stand (Streetcar Depot) from this period remain on the campus and are individually listed in the National Register. The national context for the second period is described in the United States Second Generation Veterans Hospital Multiple Property Documentation Form (MPDF), prepared by Cultural Resource Analysts, Inc. and completed in 2010. The West LA VA Historic District is eligible for listing as a Second Generation Veterans Hospital. Finally, a draft MPDF for United States Third Generation Veterans Hospitals was prepared by R. Christopher Goodwin & Associates in August 2011. The West LA VA is not eligible as a Third Generation Veterans Hospital.

²⁵ Virginia and Lee McAlester, *A Field Guide to American Houses* (New York: Alfred A. Knopf, 1991), 410, and Kevin Starr, *Inventing the Dream: California Through the Progressive Era* (New York: Oxford University Press, 1985), 62.

²⁶ Historic American Buildings Survey (HABS), "Photographs, Written Historical and Descriptive Data for Gate (Main Entrance Gate), Los Angeles National Cemetery (HABS CA-2709-B" (Washington, D.C., *Library of Congress*), 2000.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

National Home for Disabled Volunteer Soldiers (1888-1930)

Several sources have compiled comprehensive histories of the NHDVS.²⁷ Given that this history is well documented elsewhere, the following is a brief summary of NHDVS history focusing on the Pacific Branch.

NHDVS was established by Congress in 1865, in response to increasing public support for the development of a governmental institution to care for disabled volunteer soldiers of the Union Army.²⁸ The organization, charged with administering veterans' federal benefits, was overseen by a Board of Managers (Board), whose members included the President of the United States, the Secretary of War, and the Chief Justice as ex-officio members and nine members appointed by Congress.²⁹ NHDVS was founded with the understanding that Union veterans had earned the right to healthcare and housing through their service to the country during the Civil War. The nation was morally obligated to care for those who had been injured during the war, especially if these men did not have families, could not resume their prior employment, and could no longer care for themselves. Based on this principle, the Board developed NHDVS branches which strove to provide for all needs of injured or ill veterans, including healthy living quarters, medical care, employment and training programs, and recreation.³⁰

By 1870, the Board had developed four NHDVS branches providing healthcare and housing for veterans, located in Togus, Maine; Milwaukee, Wisconsin; Dayton, Ohio; and Hampton, Virginia. Branch locations were chosen based on climate, availability and quality of land, and local contributions of property or money. In general, locations appear to have been chosen based on standard recommendations for hospitals and other asylums in the nineteenth century, including locating facilities on large pieces of land in a rural setting. Ideally, this land would be close enough to a city to allow easy access to supplies, but remote enough to prevent veterans from becoming entangled in temptation. Sizeable acreage allowed for a variety of activities, including farming, gardening and exercise, all thought to be healthful means of providing labor and purpose to inhabitants. The Board emphasized productive employment, encouraging veterans to perform jobs that contributed to branch operations and developing programs to train veterans for work in specific trades. Recreation was also considered an important component of NHDVS care for veterans. Sprawling branch campuses allowed for the creation of park-like grounds with recreational buildings such as theaters and libraries.³¹ A necessary part of the

²⁷ Sources include: Suzanne Julin, "National Home for Disabled Volunteer Soldiers: Assessment of Significance and National Historic Landmark Recommendations" (prepared for the United States Department of Veterans Affairs, 2007).; Patrick J. Kelly, *Creating a National Home: Building the Veterans Welfare State, 1860-1900* (Harvard University Press, 1997); and Judith G. Cetina, "A History of Veterans' Homes in the United States: 1811-1930," (Ph.D. dissertation, Case Western Reserve University, 1977).

²⁸ Initially called the National Asylum for Disabled Volunteer Soldiers, it became the National Home for Disabled Volunteer Soldiers in 1873.

²⁹ Julin, 13.

³⁰ Julin, 20.

The NHDVS was modeled on the US Sanitary Commission's work (USSC leadership was on the NHDVS founding board), which perpetuated Florence Nightingale's work. Homeless Union soldiers unable to return to civilian life became a social concern and was considered a national disgrace even before the end of the Civil War.

³¹ Julin, 20.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

NHDVS facilities were cemeteries for the burial of home members. These components of a rural campus served as a prototype for the location and layout of all NHDVS branches, including the Pacific Branch.

Over the next 20 years, the NHDVS responded to the needs of an increasing number of veterans. In 1884, Congress passed legislation which allowed “any honorably discharged Union soldier or sailor and any volunteer soldier or sailor in the War of 1812 or the Mexican-American War who had not fought for the Confederacy”³² to enter an NHDVS branch if the veteran could no longer support himself due to disability or age. As a result, over the next 15 years the number of veterans in the NHDVS system nearly tripled, and four additional branches were established, including the Pacific Branch near Sawtelle (West Los Angeles), California, which was the first National Home located on the West Coast.

Establishment of a Pacific Branch, west of the Rocky Mountains, was approved by Congress in March 1887, and the Board began meeting to discuss potential locations for the new branch in April 1887. Several locations in California quickly emerged as front-runners for branch sites.³³ The Board visited twenty potential sites in the summer of 1887 and narrowed the choice to locations near the cities of Los Angeles, Santa Barbara, Oakland, San Diego and Monterey.³⁴ The Los Angeles site was located near the small settlement of Sawtelle, approximately fourteen miles west of the City of Los Angeles and five miles east of the town of Santa Monica.

Numerous local business organizations and land owners promoted the establishment of the Pacific Branch in Sawtelle, believing the branch would encourage economic growth in the area. In 1887, the *Los Angeles Times* wrote that the Los Angeles Board of Trade was promoting the Sawtelle location, because “the location of such an institution in this vicinity would prove not only advantageous in a business point of view, but would also prove a great attraction to the entire neighborhood in the vicinity of the home.”³⁵ As incentive to choose the Sawtelle location, the Board was offered a combined 600 acres of land from the adjacent Rancho San Vicente y Santa Monica, belonging to John Percival Jones and Arcadia Bandini de Baker³⁶ and Rancho San Jose de Buenos Ayres, owned by John Wolfskill. Wolfskill also offered \$100,000 in cash to be spent improving the grounds. Jones and Baker’s Los Angeles and Santa Monica Land and Water Company offered an additional \$50,000 for improvements to the site.³⁷ The site was promoted for its rich, fertile soil; extent of land cleared and ready for construction or cultivation; excellent drainage; healthy climate; and views of city and ocean. As an additional benefit, the Board was offered five acres of adjacent land with abundant springs with an estimated production capacity of 250,000 to 500,000 gallons of fresh water daily and space for a reservoir to serve the branch. A line of the Los Angeles County Railroad also ran through the site and offered to transport all

³² Julin, 22.

³³ “National Topics: California to Have the New Soldiers’ Home,” *Los Angeles Times*, 31 March 1887.

³⁴ “The Soldiers’ Home,” *Los Angeles Times*, 22 Nov. 1887; Julin, 23.

³⁵ “Soldiers’ Home,” *Los Angeles Times*, 13 July 1887.

³⁶ John Percival Jones (1829-1912) was a five-term U.S. Senator from Nevada and real estate developer in Santa Monica, California. He earned his fortune from silver mining in Nevada and bought a ¾ interest in Rancho San Vicente y Santa Monica then owned by Colonel Robert S. Baker and his wife Arcadia Bandini de Baker. Using this land, the Bakers and Jones laid out the City of Santa Monica in 1875.

³⁷ Luther A. Ingersoll, *Ingersoll’s Century History: Santa Monica Bay Cities* (Los Angeles, 1908), 338.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

veterans and supplies to the branch at half rates.³⁸

On December 7, 1887, the Board of Managers accepted the offer of the Sawtelle location, creating the Pacific Branch on 600 acres of donated land with cash for improvements. The Wolfskill ranch owners were unable to pay the cash and donated an additional 30 acres to the Pacific Branch instead, bringing the total area to over 600 acres.³⁹ On March 3, 1888, the land was officially granted “for the purpose of such branch Home of Disabled Volunteer Soldiers to be so located, established, constructed and permanently maintained.”⁴⁰ The Pacific Branch was the second branch located west of the Mississippi River and the second established after the broadening of admission requirements for NHDVS in 1884.

Col. Charles Treichel from Philadelphia, Pennsylvania was appointed the first governor of the Pacific Branch, arriving on site in January 1888 to oversee initial construction.⁴¹ By July 1888, the first building, the governor’s residence, was completed. The first barracks was completed in December 1888 and filled quickly, as veterans had already begun to gather on site, living in tents.⁴² Some of the first veterans to arrive walked south from the state veterans’ home in Yountville, in northern California. As a result, the earliest construction on the campus was utilitarian, providing living quarters to veterans who camped on site in anticipation of the formal branch opening. Additional early construction included a mess hall and hospital. By 1889, a cemetery had been created on 20 acres of land, providing burial space for veterans at the Pacific Branch. The first interment in the home’s cemetery was that of infantryman Abner Prather in May 1889.⁴³ Dedication of the home cemetery took place in the same year, and in 1890 the cemetery gained an additional 20 acres.⁴⁴

As the branch became more established, its architecture became less utilitarian and more decorative, transitioning from tents to wood frame buildings to the Queen Anne buildings that were in keeping with the architecture of NHDVS branches located east of the Mississippi River. Continuous construction appears to have been the norm during the first 20 years after the Pacific Branch’s founding. A list of Congressional appropriations from 1892 indicates the extent of development at the Pacific Branch. Funds were given for construction of two barracks; an additional wing for the hospital; a kitchen; residences for the treasurer, superintendent, and gardener; a guardhouse; barn and corral; two gates and a gatehouse; fences; and roads and walkways.⁴⁵

The hospital (called Barry Hospital after a former director of the Pacific Branch, General James Barry), in particular, was in a constant state of reconstruction and remodeling during this period, accommodating increasing numbers of veterans admitted under broadened admission

³⁸ “The Soldiers’ Home,” *Los Angeles Times*, 8 December 1887.

³⁹ Ingersoll, 339.

⁴⁰ Grant deed between John P. Jones and Arcadia B. de Baker and the National Home for Disabled Volunteer Soldiers, recorded 3 March 1888.

⁴¹ Ingersoll, 338.

⁴² Ingersoll, 339.

⁴³ Christine Lazaretto, *Los Angeles National Cemetery Chapel: Renovation Project*, (n.p., January 2002).

⁴⁴ Kockritz and Vaughan.

⁴⁵ “The Santa Monica Soldiers’ Home,” *Los Angeles Times*, 25 February 1892.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

requirements and requiring care following the Spanish-American War. Medical conditions treated at NHDVS branches changed as the United States became involved in additional international conflicts. Alcoholism was believed to be a recurring condition associated with veterans, and treatment methods varied from requirements for complete abstinence to moderate, supervised consumption on branch grounds. As early as 1900, veterans of the Spanish-American War were being admitted to NHDVS branches with new types of health problems. Yellow fever and tuberculosis became serious threats, and the Pacific Branch hospital was continuously remodeled to provide better care, including isolation, for patients with these diseases.⁴⁶

On-campus housing provided to veterans also increased. By 1908, 11 wood frame barracks had been constructed, each two or three stories with porches on three sides. Each barracks housed between 150 and 200 veterans, governed by a “captain.” Military order continued to be an important emphasis of the Board at NHDVS branches. The mess hall and kitchen were also frequently enlarged and by 1910 provided meals and dining facilities for nearly 1,000 veterans.⁴⁷

Historic photos of the Pacific Branch show numerous, elaborate Shingle style frame buildings connected by broad roads and walkways and surrounded by abundant, mature plantings of pines, palms and eucalyptus. The main complex consisted of a series of buildings arranged on a U-shaped drive open to the south and included barracks, a dining hall, hospital, headquarters building, residences for officers and other staff, library and assembly building, theater, streetcar depot and multi-denominational chapel. A large, open lawn on the central axis of the U shape served as a parade ground. The site slopes down from north to south, and buildings were arranged facing south to take advantage of the views and ocean breezes.⁴⁸

Several architects contributed to buildings at the Pacific Branch. Stanford White, a prominent architect and partner in the firm McKim, Mead & White in New York City, is credited with design of the Shingle style barracks.⁴⁹ It is unclear to what extent he was involved in design of additional buildings on campus. The Los Angeles firm Peters and Burns appears to have served as supervising architects for much of the construction during the NHDVS period.⁵⁰

From its founding, the Pacific Branch also had a circulating library for veterans and a theater. Recreational facilities included Ward Memorial Hall, completed in 1898 with a stage and assembly room for plays and concerts. In 1906, Markham Hall was completed, providing a permanent library and reading room on the ground floor and assembly room on the second floor (Figure 32). Additional facilities included a post office (established in 1889) and a multi-denominational chapel (designed by architect J. Lee Burton and completed in 1900, extant,

⁴⁶ Julin, 31.

⁴⁷ Ingersoll, 339.

⁴⁸ Historic photographs were compiled from Los Angeles Public Library, Security Pacific National Bank Collection; University of California, Los Angeles Library Digital Collections; and University of Southern California Digital Library.

⁴⁹ Julin, 51.

⁵⁰ Peters and Burns were Luther Peters and Silas Reese Burns. The firm began working in Dayton, Ohio and moved to Los Angeles at the beginning of the twentieth century. According to Julin, Peters and Burns designed buildings for several of the NHDVS branches, including the original buildings of the Marion Branch in Indiana (Julin, 53).

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

Building 20, Figures 36-42), providing separate worship spaces for Protestant and Catholic congregations.⁵¹

Large areas of the branch served as a working farm, supplying grains, vegetables and fruit for the kitchens. Water supply, in the seasonally arid climate, was an important factor in the abundance of the branch's farms. The Pacific Branch was first supplied by a series of reservoirs located north of the campus, but repeated dry seasons necessitated the drilling of wells on Pacific Branch land. In 1905, the West Los Angeles Water Company agreed to supply additional water, and the branch received an appropriation to build an additional reservoir to hold 1,000,000 gallons of water, providing plenty of irrigation for farming. As a result, a surplus of citrus from the orchards allowed the Pacific Branch to make a profit from selling its produce.

Water rights donated to NHDVS provided irrigation necessary to create the branch's park-like appearance planted with lawns, trees and shrubs. Veterans, their families, and other visitors used the landscaped grounds and recreational facilities as a public park, taking advantage of the mild climate.⁵² In 1904, the Pacific Branch became a stop on the Los Angeles Pacific Electric Railway "Balloon Route," which traveled in a rough circle from downtown Los Angeles to Santa Monica and Venice before returning downtown. The Balloon Route was in part a tourist route, providing visitors access to the area's prominent attractions. Stopping at the Pacific Branch reinforced public awareness of and access to NHDVS as a recreational facility. A spur off of the Westgate line of the Southern Pacific Railroad provided access to the Streetcar Depot (extant, Building 66), which was constructed circa 1904 and designed by architect J. Lee Burton.⁵³

The NHDVS road system is the result of a combination of external development and internal design. In the 1890s, the NHDVS was still located in a largely rural area with limited subdivision of land and road development. As a result, buildings on campus were laid out as designed by the branch governor and the Board with limited reference to a potential street grid. The majority of buildings were clustered along a U-shaped drive located north of Wilshire Boulevard's current location. Additional officers' quarters and barracks were located to the south. As NHDVS developed, the adjacent town of Sawtelle also grew. Veterans' families, as well as veterans themselves who were not staying on the branch campus, bought property, built or rented houses, and established a commercial center. The arrival of Southern Pacific Railroad increased development in the area, and by 1905, real estate developers were advertising sales of residential lots adjacent to the NHDVS. The result was a small, but burgeoning town connected to the NHDVS by a north-south street currently known as Bonsall Avenue (also Sawtelle Avenue), which ran from the town of Sawtelle through the campus.⁵⁴

When the NHDVS was established, Wilshire Boulevard, a major east-west thoroughfare, had not yet reached the campus. By 1912, improvements to the boulevard had reached the east edge of

⁵¹ The chapel was listed separately in the National Register of Historic Places in 1972. National Register of Historic Places nomination form, "Chapel," 1972.

⁵² Julin, 29.

⁵³ The building was listed separately in the National Register of Historic Places in 1972. "Streetcar Depot" (National Register of Historic Places nomination form, 1972).

⁵⁴ Bonsall Avenue now ends at Building 500 south of Wilshire and returns on the north side of the campus.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

the NHDVS and the Board began negotiations with Los Angeles County to continue and improve Wilshire Boulevard through land owned by NHDVS. The Board agreed to cede a portion of land for improvement of Wilshire Boulevard and San Vicente Boulevard within the campus to Los Angeles County, provided that the County placed the road to avoid improvements on campus and continued to maintain the road. One barrack was demolished as part of the improvement of the boulevard, but the majority of buildings on campus were retained. As a result, Wilshire Boulevard cuts through the campus and curves around buildings constructed prior to 1912.⁵⁵

1923-1952 (Second Generation Veterans Hospital)

The transition from the NHDVS facility to a Second Generation Veterans hospital was gradual, as evidenced by the overlapping periods of significance.⁵⁶ In 1930, the Veterans Bureau merged with the NHDVS and the Bureau of Pensions, creating the Veterans Administration. As noted in the Second Generation Veterans Hospital MPDF, “the campuses of the former NHDVS branches continued to evolve under the authority of the Veterans Administration, as new medical facilities were incorporated into the landscapes of facilities initially designed for veterans of the Civil War.”⁵⁷

Between the Spanish-American War (1898) and World War I (American entry in 1917), the total population of veterans at NHDVS branches nationwide began to decrease,⁵⁸ while the number of veterans at West LA VA increased. Public Law 19, enacted in 1917, was “the first occasion that medical care to veterans was specifically addressed by national legislation,” expanding benefits from domiciliary with minimal medical care to medical care related to military service.⁵⁹ With about 3.7 million men drafted into service for World War I, by early 1919, injured and ill soldiers were returning from Europe in numbers averaging more than 23,000 per month.⁶⁰ Due to advances in warfare, veterans suffered from gas attacks, psychological illnesses, including shell shock (also called war neurosis), shrapnel, chemical burns, bullet wounds, and wounds caused by shelling from heavy artillery and aerial bombing.⁶¹

Tuberculosis continued to be a concern through the beginning of the twentieth century until a cure was discovered in the 1940s and gained widespread use in the 1950s. After two Congressional appropriations in March 1921 and May 1922, totaling \$35.6 million combined (known as the first and second Langley Bill), an article appearing in the *Los Angeles Times* in August 1922 lauded “Los Angeles as the natural location for the new hospital in Southern California for the treatment of tubercular veterans for the World War will be specifically called to the attention of President Harding by Congressmen Osborne and Chairman Madden of the

⁵⁵ “Settle Road Controversy,” *Los Angeles Times*, 6 March 1912.

⁵⁶ National contexts for the NHDVS period and Second Generation Veterans hospital period indicate an 11 year overlap in the period of significance.

⁵⁷ Spurlock, Potts, and Hudson, E 31.

⁵⁸ Julin, 33.

⁵⁹ Spurlock, Potts, and Hudson, E 4.

⁶⁰ Julin, 34.

⁶¹ Spurlock, Potts, and Hudson, E 8.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

appropriation committee of the House tomorrow morning.”⁶² Buildings 156 and 158 were completed in 1923, with Building 157 following shortly thereafter (Figures 69-70, Maps 1-3). A fourth building (not extant) was located immediately northwest with connecting corridors to Buildings 156 and 158. Location and design of these buildings follow general characteristics of the 11 other veterans’ tuberculosis hospitals.⁶³ The buildings were sited on the campus away from other buildings, at a slightly higher elevation. Historic photos show the complex surrounded by agricultural operations (Figure 70). Concrete construction served as fireproofing. Designed in a Mission Revival style, the central building, Building 157, functioned as a focal point of the complex with an arcaded loggia at the first story and a shaped parapet flanked by bell towers above, a copy of Mission Santa Barbara. The three buildings allowed for segregation of patients according to the degree of illness: infirmary, semi-infirmary, and ambulant.⁶⁴ Connecting corridors linked buildings.⁶⁵

Other improvements at West LA VA as a result of this influx of World War I veterans included connection to the Los Angeles sewer system and widening Federal and Bonsall Avenues.⁶⁶ An article appearing in the *Los Angeles Times* on August 12, 1924, stated, “Plans for the new \$1,500,000 fireproof hospital to be erected at the Soldier’s Home at Sawtelle are nearing completion... The present buildings at Sawtelle are of wooden construction and are deemed unsafe. Due to the many veterans who have flocked to Southern California, the hospital buildings at present are sadly overcrowded, and the need of new structures has been recognized for some time.”⁶⁷ The new hospital building was constructed of reinforced concrete with brick veneer and Indiana limestone trim and had a capacity of 560 beds.⁶⁸ Completed in 1927, it was named for James W. Wadsworth (1846-1926), president of the Board of Managers NHDVS from 1907 to 1914.⁶⁹ The hospital was located south of Wilshire Boulevard along the west side of Bonsall Avenue fronted by a semi-circular driveway. Staff quarters were located along the east side of Bonsall Avenue.

Constructed in 1929, a new mess hall (Building 13, extant), was also built during the transition from a NHDVS facility to a Second Generation Veterans Hospital. Located at the north end of the parade ground, Building 13 replaced the Assembly Hall. The Assistant Secretary of the Treasury declined to have the building designed by the Office of the Supervising Architect, stating: “It is, therefore, with regret that I have to advise you that it will not be possible for the Secretary of the Office of the Supervising Architect to undertake the projects enumerated in your

⁶² “Would Local Hospital Here: Harding to Hear Findings of Committee,” *Los Angeles Times*, 25 August 1922, p. 17.

⁶³ Spurlock, Potts, and Hudson note twelve tuberculosis hospitals located in California, Arizona, New Mexico, Texas, Missouri, Kentucky, New York, and Massachusetts (E 59).

⁶⁴ Spurlock, Potts, and Hudson, E 61.

⁶⁵ Spurlock, Potts, and Hudson, E 60.

⁶⁶ Passaro, 5.

⁶⁷ “Veterans’ Debt to Fredericks; Plans New Completion for Sawtelle Hospital,” *Los Angeles Times*, 12 August 1924.

⁶⁸ National Archives, Records of the Veterans’ Administration, RG 15, Box 248, “Final Inspection Report,” 16 March 1927.

⁶⁹ National Archives, Records of the Veterans’ Administration, RG 15, Box 248, “Inscription: Main entrance,” and West LA VA archives, undated photo and caption.

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

previous letter. That office is now working to capacity and the work under the public building act will strain its resources to the utmost. Yours is not the only request that the Department has been obliged to decline.”⁷⁰ The local architectural firm Koerner & Gage designed the new mess hall.⁷¹ Henry G. Koerner (1881-1935) and William John Gage (1891-1965) maintained offices in Beverly Hills. The firm is best known for their design for Beverly Hills City Hall in 1932. They were also responsible for the designs of the Carrie Guggenheim house (1928).⁷² Henry Koerner began his practice in Pittsburgh,⁷³ while William Gage received his training at the University of Illinois and worked in Minnesota and Seattle, Washington before settling in Los Angeles in 1921.⁷⁴

The third capital improvement project undertaken between 1921 and 1930 was construction of Buildings 113, 114, 115, 116, and 117 (all extant). The site for new barracks was approved in 1929, at the west side of the campus adjacent to Federal Avenue.⁷⁵ The prominent local architectural firm of Walker & Eisen designed the buildings. In collaboration from 1919 until 1941, the firm of Albert Raymond Walker (1881-1958) and Percy Eisen (1866-1946),⁷⁶ Walker & Eisen, was among the top architectural firms in Los Angeles. Walker was later described as having had “a definite flair for the spectacular, façade-wise and even plan-wise... anything that would give... [a building] sparkle and interest.”⁷⁷ Both partners were classically trained and the office was known for the quality of their commercial and institutional building designs. Another distinguishing feature of the firm was that work was done in a collaborative manner, rather than as individuals. Walker & Eisen’s large roster of projects included: Ambassador Hotel (1938-1939), Fine Arts (Signal Oil) Building (1927), Oviatt Building (1927-1928), Texas Company Building/United Artists Theater (1927), Taft Building (Hollywood, 1923), and Torrance City Hall, Municipal Auditorium and Public Library (City Hall still extant, currently used as a bank, 1936).⁷⁸ As reported in the *Los Angeles Times* in 1930, Gen. George H. Wood, president of the National Board of Governors, announced on an inspection tour of the West LA VA with Walker

⁷⁰ National Archives, Records of the Veterans’ Administration, RG 15, Box 248, “Letter from Carl T. Schuneman, Assistant Secretary of the Treasury to General George H. Wood, President National Home for Disabled Volunteer Soldiers,” 8 March 1928.

⁷¹ “Mess Hall Sawtelle plans,” *Southwest Builder & Contractor*, 3 August 1928, 59.

⁷² “Koerner and Gage, Architect,” In Pacific Coast Architecture Database [cited 18 September 2013]; available from <https://digital.lib.washington.edu/architect/partners/290/>; INTERNET.

⁷³ Henry F. Withey, A.I.A., and Elsie Rathburn Withey, *Biographical Dictionary of American Architects (Deceased)* (Los Angeles: New Age Publishing Company, 1956. Facsimile edition, Hennessey & Ingalls, Inc., 1970).

⁷⁴ American Academy of Architects, *American Architects Directory*, 1951, 188

⁷⁵ “New Barracks Site Selected; Congressmen Notified of Sawtelle Action Location,” *Los Angeles Times*, 4 April 1929.

USGS map from 1923 shows a spur from the Westgate Line of the Pacific Electric railroad into the West LA VA campus. It appears the spur was abandoned prior to construction of Building 115. The Westgate line continued to serve Santa Monica via San Vicente Boulevard until 1940 (The Electric Railway Historical Association of Southern California, <http://www.erha.org/peww.htm>). On a map dated circa 1925, the Streetcar Depot has been renamed as “News Stand.”

⁷⁶ Henry F. Withey, A.I.A. and Elsie Rathburn Withey, *Biographical Dictionary of American Architects (Deceased)* (Los Angeles: Hennessey & Ingalls, 1956, reprinted 1970) 194.

⁷⁷ Donald J. Schippers, “Walker & Eisen: Twenty Years of Los Angeles Architecture, 1920-1940,” *Historical Society of Southern California Quarterly* 46: 378.

⁷⁸ Schippers, 379.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

and Eisen, “the work of these Los Angeles concerns on the new structures at the branch has been very fine... The newest equipment and the latest features of fireproof and enduring construction have been adopted, and the work here will serve largely in patterning new buildings at the other branches in the country.”⁷⁹ The five buildings are designed in a Romanesque Revival style and form a cohesive quadrangle. Building 114 was the focal point of the new complex with a central tower element, which has since been truncated.

Few changes were implemented at the Los Angeles National Cemetery, sometimes called the Sawtelle Cemetery, during the 1920s. Across the nation, a re-alignment of federal management of veterans’ facilities in the 1920s set the stage for future changes in the supervision of the cemeteries adjacent to NHDVS facilities. During the 1920s, Civil War-era battlefield cemeteries were transferred to the National Park Service. The American Battle Monuments Commission took over the management of domestic and international cemeteries for American veterans in 1923, though the Commission was primarily concerned with overseas burial grounds for servicemen and women killed in World War I.⁸⁰

In 1930, the Veterans Bureau merged with the National Home for Disabled Volunteer Soldiers and the Bureau of Pensions, creating the Veterans Administration. Col. John A Hadley, as governor, oversaw transition of West LA VA from a NHDVS facility to the Veterans Administration. After creation of the VA, all programs were administered from a centralized office in Washington, D.C. Standardized procedures became increasingly common, particularly in the construction of medical facilities at the branches. Most significantly, the merger represented a shift in goals – from primarily domiciliary function to returning veterans to “productive” members of society. Brigadier General Frank T. Hines, Administrator of the VA from 1923 to 1945, was paraphrased in 1944 as saying; “Our happiness and prosperity as a nation depend on how soon we get our people back to normal lives in the postwar conversion period.”⁸¹ The Second Generation Veterans Hospital MPDF notes “the demands of caring for a large number of neuropsychiatric patients also altered the original intentions of the NHDVS.”⁸² During this time, female veterans of World War I who had received care at NHDVS facilities officially became eligible for benefits. These changes in goals and the number and types of veterans transformed the landscape of West LA VA.

At the cemetery, the VA began incorporating modern buildings into the park-like grounds. The Works Progress Administration (WPA) began construction on new facilities in 1937. The WPA program included landscaping, “constructing cemetery office, comfort station, tool house, incinerator, septic tank, stable area buildings, rostrum, terraces and cloisters, landscaping grounds, resetting trees, constructing and improving walks and drives, setting headstones, and

⁷⁹ “Soldiers’ Home Unites Praised; Board of Governors Makes Thorough Inspection,” *Los Angeles Times*, 21 March 1930.

⁸⁰ Department of Veterans Affairs, National Cemetery Administration (NCA). “History and Development of the National Cemetery Administration” (prepared for Communications & Outreach Support Division, 2009 [cited 20 October 2011]), 6; available from <http://www.cem.va.gov/pdf/history.pdf>; INTERNET.

⁸¹ “Gen. Hines Outline Aid Program for Veterans; Facility here to be largest in nation,” *Los Angeles Times*, 9 June 1944, A16.

⁸² Spurlock, Potts, and Hudson, E 31.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

performing appurtenant work.”⁸³ Most extant buildings and structures at the cemetery were constructed by WPA crews between 1939 and 1941.⁸⁴ Cremation was more common in early twentieth century California than in other states. Cremation facilities had not yet become common features of national cemeteries and the WPA-era crematorium (no longer extant) at LANC may have been one of the earliest cremation facilities at a national cemetery. Columbaria, for interment of ashes, first became popular in West Coast states as the number of cremations grew. Construction of a crematorium and columbarium at LANC during the late 1930s reflects local inhumation developments and practice that pre-dated national trends.⁸⁵ Buildings constructed by the WPA include the Spanish Colonial Revival style chapel/administration building at the cemetery’s main entrance off Sepulveda Boulevard and Constitution Avenue. The columbarium, arcade, comfort stations, and gatehouses built by the WPA are red brick, Mission Revival style buildings with weeping mortar to imitate rustic outbuildings of the historic missions of California. Other alterations made by the WPA program included relocation of the Civil War (Sentry) Monument, a cast zinc figure of soldier, from atop a stone drinking fountain at the western campus to the cemetery in 1942. These alterations have taken on significance over time.

On the hospital campus (northwest and southwest quadrants) waves of new construction began in the 1930s as the new Veterans Administration began to modernize and centralize care provided to veterans. NHDVS period buildings were demolished and new, standardized care facilities were constructed in their place. Construction during this period corresponded with Period II of the Second Generation Hospital development, dating from the late 1920s through 1948 as described in the Second Generation Hospital MPDF.⁸⁶ United States Army posts and Second Generation Veterans Hospital campuses dating from the 1920s through mid-1940s follow similar models of development with standardized buildings exhibiting minimal architectural ornamentation and site plans using circular, radial, and grid formations.⁸⁷ According to the Second Generation MPDF:

The use of standardized plans was viewed as both economically efficient and as an expedient method of construction. Whereas individualized buildings would be more time consuming to design and build and would increase the likelihood of errors, standardized buildings offered uniformity of design and health care that could be utilized throughout the nation.⁸⁹

Standardized campus plans and building designs were the product of active and veteran armed forces’ shared military background that emphasized regimented routines. Both active bases and VA facilities had a shared purpose of “providing shelter, food, and recreational activities within

⁸³ Project 565-3-2-2,” T937 T935 Roll 4, Record Group 69, National Archives, College Park, MD.

⁸⁴ Historic American Buildings Survey (HABS), “Photographs, Written Historical and Descriptive Data for Gate (Main Entrance Gate), Los Angeles National Cemetery (HABS CA-2709-B” (Washington, D.C., *Library of Congress*), 2000.

⁸⁵ Stephen Prothero, “Purified by Fire; A History of Cremation in America,” (Berkeley: University of California Press, 2001) and Fred Rosen, “Cremation in America,” (Amherst, NY: Prometheus Books, 2004).

⁸⁶ Spurlock, Potts, and Hudson, E 50.

⁸⁷ Spurlock, Potts, and Hudson, E 39.

⁸⁹ Spurlock, Potts, and Hudson, E 53.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

an enclosed campus to temporary residents.”⁹⁰ Buildings at VA campuses were organized like military bases, with barracks, mess halls, and parade grounds. Though the purpose and design of the buildings was standardized for the military and the VA, the actual campus site plans and building designs of the VA hospitals of the 1920s through mid-1940s reflected the national interwar trend in landscape and architectural design of standardization and repetition more than a government-wide program of standardization.⁹¹

In 1936, the Tuberculosis Hospital was converted to a Neuropsychiatric Hospital, corresponding to Period II of the Second Generation Hospitals as described in the MPDF. Between 1937 and 1946, seven neuropsychiatric hospital buildings were constructed at the north end of the campus in the H-shape plan common to Period II neuropsychiatric veterans hospitals (Buildings 205, 206, 207, 208, 209, 256, and 257). Collectively, the neuropsychiatric buildings were known as Brentwood Hospital. Rectangular in plan and Mission Revival in style with distinctive parapets, Building 210 was constructed as a neuropsychiatric hospital for female veterans. In 1946, a 4-story Administration Building (Building 258) was constructed, also conforming to the H-shape plan, as well as Brentwood Theater (Building 211). A mess hall (Building 300), although not constructed until 1952, was planned by 1937 (Map 4). An article appearing in the *Los Angeles Times* announced,

The Veterans' Administration announced today President Roosevelt had approved six construction projects at veterans' hospitals...The approved projects include: Veterans' Administration facility at Los Angeles, \$835,000 for erection of a hospital building for 150 neuropsychiatric patients and two bunk buildings, one 350 beds and the other fifty beds.⁹²

Despite extensive construction of additional facilities, the neuropsychiatric hospital was full to capacity in 1947.⁹³ The *Los Angeles Times* reported that about 40% of medically discharged World War II veterans were neuropsychiatric patients.⁹⁴

The seven H-shaped neuropsychiatric hospital buildings exhibit typical character-defining features of the standardized Period II Neuropsychiatric Veterans Hospitals, including their close proximity to each other, three of which face a courtyard and have connecting corridors (Buildings 205, 208, and 209). The buildings are all designed in a simplified Mission Revival style, which had been adopted as the common architectural style for the campus as early as 1928. A report prepared by the Real Estate Committee of Los Angeles Federal Business Association to the Coordinator of the 9th Area in San Francisco dated May 25, 1928 established:

There appears to be no question in the mind of anyone that your Committee contacted but that the Mission type of architecture should prevail. This is, of

⁹⁰ Spurlock, Potts, and Hudson, E 38.

⁹¹ Spurlock, Potts, and Hudson, E 5 and E 40.

⁹² “Veterans’ Work Set,” *Los Angeles Times*, 15 January 1936, 2.

⁹³ “Psychiatric Facilities Limited at Sawtelle,” *Los Angeles Times*, 18 March 1947, 5.

⁹⁴ “Gen. Hines Outline Aid Program for Veterans; Facility here to be largest in nation,” *Los Angeles Times*, 9 June 1944, A16.

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

course, in keeping with the prevailing type of architecture in Southern California, and the new University of California at Los Angeles, which site lies adjacent to the reservation...It is our recommendation that Mission type be adopted, as this is the prevailing type for this vicinity, further that it is the desire of Governor Hadley, and also of the Board of Governors according to our best information.⁹⁵

Expression of Mission Revival style was restrained, identifiable by smooth stucco wall surfaces, *terra cotta* roof tiles, and ornamental grills over the lower half of the steel sash double-hung windows that substituted for the more typical window bar restraints. Other common features included porches at each end of the perpendicular wings. Like most other neuropsychiatric hospital buildings,⁹⁶ porches at West LA VA were infilled by 1964.

Domiciliary care is identified as a subtype in the 1944 issue of the publication the Federal Architect, as a fourth hospital subtype.⁹⁷ The Second Generation Veterans Hospital MPDF implies former NHDVS campuses continued to provide domiciliary care, identified as sub-type 4: homes/general medical hospitals after their merger into the Veterans Administration in 1930.⁹⁸ This is true for the West LA VA, where seven new domiciliary buildings were constructed between 1938 and 1941. Building 220, located in the southern part of the Domiciliary subarea, was specifically constructed to house female veterans. Used in conjunction with the couple remaining NHDVS period domiciliaries until 1952, the new buildings were constructed in a simplified Mission Revival style, similar to the neuropsychiatric hospital buildings, generally rectangular in plan. To provide for the growing demand, a number of temporary barracks were provided during construction of permanent buildings. Building 199, constructed in 1932 and known as the Hoover Barracks, is the sole remaining temporary barrack. The barracks were placed in groups of four around a toilet and bath building.

As described in the Second Generation Veterans Hospital MPDF, maintenance and utility buildings were grouped together, separated from the hospital areas.⁹⁹ At West LA VA, maintenance and utility buildings were constructed concurrently with hospital buildings and are located east of Bonsall Avenue, at a lower grade. Until construction of the San Diego Freeway (I-405), the utility area was served by a spur of the Pacific Electric Railway, part of Los Angeles' streetcar system. Evidence of the spur is still visible between buildings 222 and 297, which both have loading docks on two elevations to accommodate different modes of transportation. The steam plant, designed in a Streamline Moderne style in 1947 is the most visible of the utility buildings. Removable panels in sidewalks allow access to tunnels that lead from the steam plant to buildings at both the domiciliary and neuropsychiatric areas (subareas 1 and 4).

Occupational and recreational therapies were integral to the NHDVS and later VA's mission of

⁹⁵ National Archives, Records of the Veterans' Administration, RG 15, Box 248, "Report of Real Estate Committee of Los Angeles Federal Business Association," 25 May 1928.

⁹⁶ Spurlock, Potts, and Hudson, E 55.

⁹⁷ Edwin B. Morris, editor, *The Federal Architect* 13, October 1944, 17.

⁹⁸ Two other VA campuses providing domiciliary care were Bath Veterans Administration Hospital Historic District in New York and Tuskegee Veterans Administration Hospital in Alabama.

Spurlock, Potts, and Hudson, F100.

⁹⁹ Spurlock, Potts, and Hudson, 58.

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

returning veterans to productive lives.¹⁰⁰ Historic photographs show some agriculture facilities at West LA VA between subareas 1 and 4 prior to 1938, which was a common occupational therapy for neuropsychiatric hospitals. Later, occupational therapies included rug and basket weaving as well as book binding. It was not uncommon for occupational therapy to take the form of work programs on the hospital campuses. In fact, all pajamas at West LA VA were made as part of occupational therapy.¹⁰¹ In addition to the two theaters, recreational facilities included, “three libraries for book-lovers that have a heavy demand for books...During the season soft ball is played every night under the arcs by visiting teams, and on Sundays the year around. There are croquet courts and horseshoe pitching rounds for addicts to these recreations.”¹⁰² West LA VA is one of 22 VA facilities throughout the country that provided a golf course for recreational therapy.¹⁰³ Constructed in 1946 at the north end of the campus, the golf course was donated by members of the nearby Hillcrest Country Club, who also equipped the course with clubs, balls and tees.¹⁰⁴ A year earlier, “Captain Harry Smart of Santa Monica A.A.F. Redistribution Center recently told members of the Southland Publinx Association that golf was proving a great factor in remoulding nerve shattered and physically disabled war veterans.”¹⁰⁵

Third Generation Veterans Hospitals (1950-1965)

By the end of World War II, the number of veterans registered with the VA had increased more than threefold, from five million to nearly 17 million. Although the VA system had more than 65,000 employees and 100 hospital facilities, it was extremely understaffed for the task of caring for returning veterans.¹⁰⁶ In the years immediately following World War II, care for veterans was stymied by waiting lists for hospital beds and personnel shortages at existing facilities. As with earlier veterans hospital construction campaigns, third generation VA facilities represent the federal government’s response to the need to provide healthcare for rapidly increasing numbers of veterans following a war.

By 1945, the majority of hospital facilities in the VA system had been constructed during the years between World War I and World War II. These Second Generation facilities were typically semi-rural campuses containing multiple buildings spread across acres of land. At the West LA VA, facilities from the NHDVS period had been modernized and new facilities were constructed in the interwar years. Among the new facilities was the northwest quadrant, also known as the Brentwood Hospital, with the tuberculosis and later, neuropsychiatric hospital

¹⁰⁰ Spurlock, Potts, and Hudson, E 19.

¹⁰¹ J.D. Davis, “The Veterans Facilities, and National Soldiers Home, Sawtelle, California,” *Veterans Sentry*, March and May 1942.

¹⁰² J.D. Davis, “The Veterans Facilities, and National Soldiers Home, Sawtelle, California,” *Veterans Sentry*, March and May 1942.

¹⁰³ David Dahl, “Golf Courses not par for VA mission,” *St. Petersburg Times*, 20 February 1996, 1A.

¹⁰⁴ Bob Pool, “Undercutting isn’t par for the course; Fired workers at VA gold course plead guilty to stealing fees,” *Los Angeles Times*, 16 February 2010, A1.

¹⁰⁵ Jack Curnow, “Here’s How Golf Aids Morale of War Veterans,” *Los Angeles Times*, 21 January 1945, A6.

¹⁰⁶ Lindsay S. Hannah and Susan Barrett Smith, “United States Third Generation Veterans Hospitals (second draft),” *National Register of Historic Places Multiple Property Documentation Form* (prepared for the United States Department of Veteran Affairs, August 2011), 13.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

facilities. These facilities were ill-equipped to provide complex medical care required by returning World War II veterans. Medical advances, including rapid evacuations from battlefields, use of drugs, and improved surgical techniques, resulted in greater survival rates for injured combatants. As a result, injured veterans required specialized care that had not been a part of the VA's pre-World War II standard program of treatment, including rehabilitation centers for paraplegia.

Alerted to conditions by veterans and their families, the national press began investigating and publishing articles about the state of facilities at the VA. A series of Congressional hearings resulted in the resignation of Frank T. Hines as Administrator for the VA. Hines was replaced with General Omar Bradley (1893-1981), who served for only two years but had key impacts on reorganization and modernization of the VA.¹⁰⁷ Prior to Bradley's tenure at the VA, all policy decisions were centralized in VA national headquarters in Washington, D.C. Bradley reorganized to place more decision-making power at the regional level and at individual VA facilities to better respond to needs of veterans. Bradley also focused on hiring practices at the VA. Previously, VA medical staff was members of the Civil Service Commission with promotions based on seniority and salaries considerably lower than comparable private sector pay. This system prevented the VA from attracting and retaining high-quality staff. Bradley worked to establish an independent Department of Medicine and Surgery which gave the VA autonomy in hiring and promotions of staff. Authorized by Congress in 1946, the Department of Medicine and Surgery was an important shift in autonomy for the VA.

While reorganizing administration of the VA, Bradley also focused on expanding healthcare facilities. In order to respond immediately to the needs of veterans, the VA began providing two types of temporary health care outside of VA hospitals. Veterans either received health care in their local facilities paid for by the VA or the VA assumed control of existing facilities, generally surplus military hospitals. Faced with over-crowding at the West LA VA, by April 1946, the VA had established a program allowing California veterans to receive a specific set of treatments for a set fee schedule at local health care facilities.

Medical research became an important component of health care provided at West LA VA after World War II with the formation of a partnership with University of California Los Angeles (UCLA) medical school in 1947. Medical research throughout the VA grew from "pre-war hospital-based research efforts – scattered randomly at sites where local interest and initiative provided the impetus – emerged a modest new intramural VA research program."¹⁰⁸ In 1955, medical research became part of VA's mission, with an appropriation from Congress explicitly for that purpose.¹⁰⁹ By the 1960s, medical research within the VA grew rapidly.

¹⁰⁷ Bradley graduated from the United States Military Academy at West Point in 1915 and commanded forces in North Africa and Sicily during World War II, when he was promoted to major general. Bradley was still in command of troops in Europe when he was appointed to head the VA by President Harry Truman in 1945. In 1947, he was appointed U.S. Army Chief of Staff (Hannah and Smith, 14-15).

¹⁰⁸ Marguerite T. Hays, M.D., *A Historical Look at the Establishment of the Department of Veterans Affairs Research & Development Program* (Veterans Affairs Office of Research and Development, not dated), 89.

¹⁰⁹ For more information on medical research programs at the Veterans Administration, please see: Hays, *A Historical Look at the Establishment of the Department of Veterans Affairs Research & Development Program*.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

An article appearing in the *Santa Monica Outlook* in 1950 observed that “almost overnight, the Center has become a research and teaching area and all that is new for the care and rehabilitation of veterans is incorporated into the program there.”¹¹⁰ Initially, much of the research occurred in Wadsworth Hospital. Around 1950, four Quonset huts behind Building 114 were renovated to house research space for VA and UCLA doctors. The huts contained laboratory space, a walk-in cold room, and a weighing room.¹¹¹ By 1963, Building 114 was being used for research laboratories, but it cannot be determined exactly when after 1963 Buildings 113, 115 and 117 were transformed from a long term care annex for general medical to research laboratories.

Research in 1950 focused on topics such as kidney disorders, gastroenterology, cortisone, side effects of diabetes, as well as metabolic disorders like iron deficiency, renal function, and gout.¹¹² Significant research into upper extremity motion was studied in partnership with Northrup Aircraft Company and resulted in the development of new prosthetic models. A university course in prosthetics was developed at West LA VA and taught at medical schools throughout the country, eventually making prosthetics an accredited profession.¹¹³ In 1950, Benedict Cassen, a physicist at UCLA, Dr. Herbert Allen, and William E. Goodwin created the first nuclear medical scanner at Wadsworth hospital in order to study thyroid disorders.¹¹⁴ Arguably one of the most influential results of medical research at West LA VA was William H. Oldendorf’s development in neuroimaging in 1959, which was foundational for magnetic resonance imaging (MRI), positron emission tomography (PET), and Computed Tomography (CT) scanning.¹¹⁵

Building Programs during the Third Generation period

The post World War II era saw a rapid increase in the construction of hospitals and other healthcare facilities across the United States. In January 1945, Senator Lister Hill (Democrat, Alabama) and Senator Harold Burton (Republican, Ohio) introduced legislation to provide federal funds for construction of hospitals in under-served areas. Passed into law in August 1946, the Hospital Survey and Construction Act (Hill-Burton Act) distributed funds to states based on population and per capita income. This influx of \$75 million annually for hospital construction created a new focus on hospital design among architects and medical professionals.¹¹⁶ Numerous organizations published articles on critical components of hospital design, intended to improve patient outcomes and staff performance.

A key component of the modern hospital was vertical stacking of hospital functions into a single building. Earlier hospital design spread specialized health care functions across multiple buildings on a campus. With new hospital design, patient rooms, surgeries, laboratories, kitchens, laundries and other support facilities were contained in a single building with travel facilitated by elevators. The single hospital building was designed to be self-sufficient and

¹¹⁰ Gladys Thompson, “Varied Medical Research Conducted at Facility,” *Santa Monica Outlook*, 8 July 1950.

¹¹¹ Hays, 106.

¹¹² Hays, 106-108.

¹¹³ Hays, 425.

¹¹⁴ Hays, 171.

¹¹⁵ Hays, 363.

¹¹⁶ Hannah and Smith, 19.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

compact. At the same time, architects and hospital administrators rejected the use of a revival or referential architectural style as cladding for a modern hospital.

At the West LA VA, construction of post-World War II health care facilities began in 1955 with groundbreaking for a new surgical wing for Wadsworth Hospital (now Building 304). Designed by the architectural firm Pereira & Luckman, the addition provided surgical, clinical, diagnostic, and laboratory facilities, centralized in a single building. Operating rooms included large areas for patient recovery. The building was connected to the 1928 Wadsworth Hospital buildings by covered walkways, which allowed patients to be transferred from surgery and post-operative recovery in the new wing to adjacent nursing facilities in existing buildings.¹¹⁷ At two stories in height, the new building was similar in scale to the earlier Wadsworth Hospital buildings; however, the new design was clearly “modern” in style. It did not reference Period Revival architectural styles; instead building elevations feature a simple pattern of windows stacked vertically alternating with blank wall surfaces.

Three Second Generation wings of Wadsworth Hospital were modernized starting in 1958. More than 80,000 square feet of additions were incorporated into the existing 250,000 square feet of hospital space, including connecting corridors between the three buildings. New elevator towers and mechanical, electrical and plumbing systems were added throughout the buildings. The architectural firm Charles Luckman & Associates designed the additions to existing buildings.¹¹⁸

By 1962, the West LA VA was still the largest VA in the country with more than 6,000 patients and 4,500 volunteer workers.¹¹⁹ In the northwest quadrant, Brentwood Hospital, which continued to serve patients with mental illnesses, had more than 2,000 beds and served approximately 3,500 patients per year, more than half the total number of patients receiving health care from the West LA VA. The majority of patients were World War II veterans, although the campus continued to house small numbers of veterans from other conflicts.

By 1965 four supplementary research facilities were constructed north of Wilshire Boulevard in subarea 3 of the northwest quadrant, including Buildings 266 and 267, which were used for storage and equipment repair respectively, and may not have been used solely by researchers.¹²⁰ Also constructed by 1965 was Building 265, ‘Animal House’, and Building 337, ‘New Animal House’; these indicate that using animals for research purposes burgeoned between 1934¹²¹ and 1965.¹²² Building 337 was twice the size of 265, possibly indicating an increase in animal testing programs. As of 2010 two more small structures had been built within the courtyard of the research buildings that form subarea 3: Building 342, designated for flammable waste storage

¹¹⁷ “VA Hospital to Have \$3,500,000 Extension,” *Los Angeles Times*, 26 December 1954

¹¹⁸ “Large-Scale Program Set for Hospital,” *Los Angeles Times*, 14 December 1958; and “VA Hospital Work: Wadsworth Project Ends Phase One,” *Los Angeles Times*, 2 October 1960.

¹¹⁹ “VA Center Yields Vital Research,” *Los Angeles Times*, 2 December 1962.

¹²⁰ P.M. Rotast, *Master Plot Plan: Veterans Adm. Center, Los Angeles 25, Cal*, map, 22 June 1965.

¹²¹ Sawtelle, 1934, map.

¹²² P.M. Rotast, *Master Plot Plan: Veterans Adm. Center, Los Angeles 25, Cal*, map, 22 June 1965.

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

and Building 346, used for research waste storage.¹²³ After 1989, the Quonset huts and Buildings 265, 266, 267, and 337 were demolished.¹²⁴

With a new focus on consolidating health care services into compact facilities, the large campus of more than 600 acres had abundant space for other uses. In the 1960s, the VA offered use of campus land to other governmental agencies. Approximately 14 acres on the west side of campus at Wilshire Boulevard were set aside for the U.S. Air Force, U.S. Army, and California State National Guard. Expansion of Interstate 405, the San Diego Freeway, passed through a section of the southeast corner of campus. Another section east of Interstate 405 at Wilshire Boulevard was used by the General Services Administration (GSA) for construction of an office building for federal agencies. New federal office space was in high demand across the country to accommodate the expanded post-World War II federal government. In 1959, the Public Building Act was passed by Congress, allowing new federal building programs to be administered and funded through the Public Buildings Service of the GSA. This streamlined the process of appropriating funds for construction and resulted in a rapid expansion of federal building construction in the 1960s. Because the majority of buildings were designed by private architects contracting with GSA, GSA and the Ad Hoc Committee on Federal Office Space created a policy for review of architectural designs of new buildings. The policy mandated that no official federal style should be created. Rather designs should incorporate contemporary architectural thought and local or regional architectural influences. Emphasis was placed on functional space, efficient construction, and development of each building site with landscaped plazas.¹²⁵

Charles Luckman & Associates designed the federal office building in the southeast quadrant with many of these elements. The building consists of a 17-story central tower set next to low horizontal building fronting a landscaped plaza. This composition was executed for public buildings throughout the country in the 1960s, based on the plan of the United Nations Headquarters in New York City.¹²⁶ The building was completed in 1969 and housed more than 20 federal agencies, including VA administrative offices.¹²⁷ This consolidation of agencies into a single office tower was a hallmark of the GSA focus on efficiency in the 1960s.

The 1970s saw another wave of increased public attention on care provided to veterans and a corresponding expansion in health care at the VA. Overcrowding and reports of poor quality of care again resulted in national press coverage of conditions at VA facilities. By 1971, as a result of the Vietnam War, the wait list for admission to VA facilities numbered over 6,300 veterans. The VA system was also serving an increasing number of veterans with drug addictions, expanding the number of patients eligible for limited hospital space.¹²⁸

¹²³ Veterans Affairs Bureau, *VA Map Site Plan*, map, 2010.

¹²⁴ Veterans Affairs Bureau, *VA Map Site Plan*, map, 2010.

¹²⁵ Judith H. Robinson and Stephanie S. Foell, *Growth, Efficiency, and Modernism: GSA Buildings of the 1950s, 60s, and 70s* (Washington, D.C.: US General Services Administration, Office of the Chief Architect, Center for Historic Buildings, September 2003), 44.

¹²⁶ Robinson and Foell, 49.

¹²⁷ Lou Desser, "New Federal Building to be Dedicated," *Los Angeles Times*, 16 November 1969.

¹²⁸ Pat Bryant, "VA Hospital Will Admit Narcotics Users Next Year," *Los Angeles Times*, 8 November 1970.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

In 1970, the Senate Subcommittee on Veterans Affairs, led by Senator Alan Cranston (Democrat, California), began a series of hearings on quality of care provided to soldiers wounded in the Vietnam War. The West LA VA was called out as particularly lacking in quality staff, facilities, and equipment.¹²⁹ As a result, administration of health care at the West LA VA, as well as VA hospitals in San Fernando, Sepulveda, Long Beach and San Diego, was reorganized under a single regional director. Ties with UCLA Medical Center were strengthened as additional VA hospitals in southern California were staffed with UCLA medical students and faculty. Emergency funds were also supplied to the West LA VA for immediate improvements to Wadsworth Hospital.¹³⁰

While the Senate Subcommittee on Veterans Affairs continued to debate appropriate responses to increasing needs for health care for veterans, a natural disaster precipitated a comprehensive overhaul of VA facilities in southern California. On February 9, 1971, a magnitude 6.0 earthquake struck the San Fernando Valley near Sylmar. The Los Angeles County Olive View hospital in Sylmar was heavily damaged, causing the deaths of 44 people. As a result, emergency seismic evaluations were conducted at all southern California VA facilities. At the West LA VA, 30 buildings were deemed potentially hazardous and approximately 2,000 patients were transferred to other VA facilities or private nursing homes. While Brentwood Hospital, the Neuropsychiatric buildings of the northwest quadrant, was determined to be safe, three buildings comprising the 1928 Wadsworth Hospital complex were scheduled for immediate demolition as a result of the seismic evaluation.¹³¹ At the cemetery, "The Spirit of '98," a white marble statue designed by Roger Noble Burnham and installed in 1950 outside the gates in the southeast corner at Veteran Avenue and Wilshire Boulevard, crumbled in the earthquake. It was replaced in 1973 with a reinforced concrete and plaster replica fabricated by David Wilkins.

Wadsworth Hospital was demolished in 1972 and groundbreaking for the new facility (later Building 500) took place in July 1973. The new hospital, designed by Charles Luckman & Associates, contained 900,000 square feet of space in six stories. The \$83.7 million building was designed to be an earthquake-resistant, self-contained facility, capable of functioning independently for four days with back-up water, electrical, and sewage systems. The back-up systems included four water tanks, each containing 41,000 gallons, and two generators. The 832-bed hospital was the largest single building in the VA system west of the Mississippi and described as one of the most advanced, with nuclear medical facilities and innovative equipment for brain surgery.¹³²

The hospital was designed for functionality, without the ornamental Period Revival style characteristic of earlier VA health care facilities. Flexibility was a key component of the design. A seven foot tall interstitial space was located between each floor to house all electrical,

¹²⁹ "2 Doctors Hit Care at Veteran Hospital Here," *Los Angeles Times*, 29 April 1970; and "VA Hospitals Struggle to Meet Patient Load," *Los Angeles Times*, 4 October 1971.

¹³⁰ Robert L. Jackson, "Cleanup at VA Hospital Started, Official Says," *Los Angeles Times*, 26 May 1970.

¹³¹ Harry Nelson, "30 VA Units Called Unsafe," *Los Angeles Times*, 15 January 1972.

¹³² Dorothy Townsend, "Model of Earthquake-Proof Veterans Hospital Displayed," *Los Angeles Times*, 21 October 1975.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

plumbing, and air conditioning lines and other mechanical systems. This design allowed mechanical systems to be updated periodically without disrupting patient care. The building contained 10 surgical suites, 21 X-ray rooms, 12 dialysis beds, 4 specialized intensive care units, outpatient clinics, and 25 radiographic suites. When fully occupied, the hospital had over 3,000 employees.¹³³

In 1974, frustrated with the slow pace of reforms in the VA system, a group of veterans organized as the American Veterans Movement occupied Senator Alan Cranston's office in the GSA's federal office building at Wilshire Boulevard and Veteran Avenue. Eight veterans occupied the Senator's offices for 19 days, garnering national media attention. Spokesman for the veterans, Ron Kovic, demanded a meeting with Veterans Administrator Donald M. Johnson. After several failed attempts, the veterans met with Johnson, resulting in an end to the protest and promises of greater scrutiny of VA health care facilities.¹³⁴ Protests of quality of care at the West LA VA were led by veterans of the Vietnam War throughout the 1970s, typically resulting in periodic, minor changes to the VA system and facilities.

When the new Wadsworth Hospital (now Building 500) opened in 1977, the self-contained health care facility represented another step away from the National Home for Disabled Volunteer Soldiers model, which consisted of a complex of buildings serving specialized health care functions on a large campus. Although the West LA VA retains buildings from the NHDVS and Second Generation periods, the majority of health care services are concentrated in Building 500. This shift away from a campus-wide health care system to a single, concentrated medical facility is the result of a post-World War II shift in hospital design.

The Los Angeles National Cemetery reached capacity in the early 1980s.¹³⁵ In total, the cemetery has over 85,000 interments of veterans and their dependents, with over 5,000 them inurned in the columbarium. Fourteen Medal of Honor recipients are buried at the cemetery. Cambrai Avenue, an open storm drain and road running diagonally and bisecting the allées of the southern half of the cemetery, was removed in the mid-to-late 1970s. The gatehouse at Constitution Avenue was demolished in 2000. Few other changes to the landscape and buildings of the cemetery have occurred since the 1980s.

Current threats to West LA VA Historic District

Since 1888, borders of West LA VA have eroded on all sides. From the original approximately 600 acres, the VA now owns, or outleases approximately 506 acres, including the cemetery. In addition to the southeast quadrant, which is given over to the Federal Building and ball fields, portions of the original NHDVS site no longer owned by the VA are located along Federal Avenue and used by the Air Force, Army, and California National Guard. In the northwest quadrant, historic maps show a section of land now located on the northwest corner of Wilshire and San Vicente boulevards included in the original land grant. In addition, a United States Post Office is located along South Barrington Avenue on land that once belonged to the VA.

¹³³ Ray Kovitz, "New Veterans Hospital to Open," *Los Angeles Times*, 13 March 1977.

¹³⁴ Tendayi Kumbula, "Veterans Halt Protest After Talks with VA Chief Johnson," *Los Angeles Times*, 3 March 1974.

¹³⁵ Larsen, SD C1.

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

Recently, the State of California acquired land on the VA campus to construct a State Veterans Home. Most significantly, construction of the Interstate 405 freeway and its current expansion continue to erode the boundary along the west side of the northwest quadrant. Other threats to the site include planned construction of a subway under the site. The exact locations of tunnels for the subway are unknown, but vibrations may impact contributing resources to the West LA VA Historic District. The West LA VA is located in a densely populated environment and development continues to pressure existing boundaries.

Current and Proposed Improvements and Modifications at Los Angeles National Cemetery

The cemetery is undergoing continual maintenance and repair of facilities, with the most visible activities including re-sodding of burial sections, re-alignment of grave markers, and replacement of drainage systems in the main road (Constitution Avenue). After drainage repairs, the roads will be improved and re-paved and curbs will be replaced. These improvements are based on the 2002 *Study on Improvements to Veterans Cemeteries* calling for these and other corrections.¹³⁶

In 2009, Los Angeles National Cemetery received approval to construct new columbaria and other structures on approximately 20 acres of land on the west side of Interstate 405. This expansion will provide additional cremation-only burial capacity for area veterans for the next 50 years.¹³⁷ Included in the expansion plan are improvements to the existing historic cemetery, including renovation of the former pedestrian entrance area from Wilshire Boulevard and “corrections to the historic Administration Building, Maintenance Area, and Public Restroom Facility.”¹³⁸ Documentation available at the cemetery office does not specify what these corrections are, although they may be based on the same 2002 study noted above. This document calls for, in addition to other things (including the improvements currently being made), the following items.¹³⁹

- Renovation of the administration building (chapel), details of which are not specified in the materials available at the cemetery office.
- Floor replacement (tile for linoleum), roof resealing, and wall repainting (in areas where tile has been removed) in the columbarium.
- Repainting brick overlook wall at scatter garden.
- Replacing architecturally inappropriate metal railings, replacing tiles, repainting, replacing doors and windows, roof resealing, and ceiling joist replacement in the bathroom.

¹³⁶ Logistics Management Institute, “Chapter 6: Los Angeles National Cemetery,” *Los Angeles National Cemetery General Condition Assessment* (prepared for Los Angeles National Cemetery). Hereafter cited LMI, “General Condition.”

¹³⁷ Logistics Management Institute, “Columbarium Expansion, A,” *Los Angeles National Cemetery General Condition Assessment* (prepared for Los Angeles National Cemetery). Hereafter cited: LMI, “Columbarium Expansion.”

¹³⁸ LMI, “Columbarium Expansion.”

¹³⁹ LMI, “General Condition,” 5-6-13 to 5-6-25.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

- Determining cause of the rostrum cracking and making appropriate repairs.

Specifics of these proposed improvements are not known.

Additionally, sections of the northwest quadrant have been outleased. These sections are currently used as the Barrington Dog Park, a public park of the City of Los Angeles, and the Brentwood Upper School, a private middle and high school.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

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West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

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Los Angeles, CA

Name of Property

County and State

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West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

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Name of Property

Los Angeles, CA

County and State

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West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

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Name of Property

Los Angeles, CA

County and State

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West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Pacific Coast Architecture Database, <<https://digital.lib.washington.edu/architect/partners/290/>>.

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
 previously listed in the National Register
 previously determined eligible by the National Register
 designated a National Historic Landmark
 recorded by Historic American Buildings Survey # HABS CAL-335, HABS CAL-336, HABS CA-2709, HABS CA-2709-a, HABS CA-2709-b
 recorded by Historic American Engineering Record # _____
 recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- State Historic Preservation Office
 Other State agency
 Federal agency
 Local government
 University
 Other
Name of repository: National Archives and Records Administration

Historic Resources Survey Number (if assigned): _____

Previous Evaluations

National Register District Nomination

Three separate districts at the West LA VA were formally determined eligible for listing in the National Register of Historic Places (National Register) in 1981 by the Keeper of the National Register. The nomination, dated July 31, 1981 and written by Veterans Administration Historic Preservation Officer Gjore J. Mollenhoff and Architect Karen R. Tupek, was a single nomination compiled for two separate historic districts in the area roughly bounded by the San Diego (Interstate 405) Freeway to the east, Ohio Avenue to the south, Federal Avenue to the west and Sunset Boulevard to the north. Included with the nomination was a National Cemetery Data VA Form for the Los Angeles National Cemetery. Describing multiple discrete historic districts in a single nomination is not currently accepted methodology for historic district nominations; rather, when resources are grouped together and share a common theme, they would be evaluated as one district. This nomination addresses the three identified districts of the previous evaluations. The three historic districts are described below as they were identified in the previous nomination:

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

1. Los Angeles Architectural Set Historic District: Also called Brentwood Division and Brentwood Hospital, this historic district consisted of 14 contributing buildings constructed from 1921 through 1952 and was located in the northwest section of the West LA VA. The Brentwood Hospital derived primary significance from its architecture. In the West LA VA Historic District, Subarea 4 - Neuropsychiatric (N.P.) Hospital includes the Architectural Set Historic District.

2. Los Angeles National Home Branch Historic District: Also called Wadsworth Division, this historic district consisted of 39 contributing buildings constructed from 1890 through 1959 and was located southeast of Brentwood Division, spanning Wilshire Boulevard. The Wadsworth Division was found to be significant for its association with the National Home period. In the West LA VA Historic District, Subarea 1 – Domiciliary, Subarea 2 – Senior Personnel, Subarea 3 – Research, and parts of Subarea 5 - Utility encompass the Los Angeles National Home Branch Historic District.

3. Los Angeles National Cemetery: A National Cemetery Data VA Form (40-4972) was prepared for Los Angeles National Cemetery, dated September 30, 1980 and was included with the 1981 nomination for all three districts. The cemetery is geographically bounded by Wilshire Boulevard on the south, Sepulveda Boulevard on the west, Veteran Avenue on the east and private residences on the north, with Constitution Avenue running east-west through the cemetery. At time of its evaluation, there were 70,931 total interments, with 68,993 gravesites used, 695 gravesites reserved and 367 gravesites available. The cemetery was originally dedicated on May 22, 1889. In the West LA VA Historic District nomination, the cemetery comprises the northeast quadrant.

Separate Listings in the National Register

In addition to the three separate historic districts formally determined eligible for listing in the National Register in 1981, the West LA VA contains two properties separately listed in the National Register, the Chapel (Building 20) and the Streetcar Depot/News Stand (Building 66):

Chapel

Also referred to as “Double Chapel” and “Catholic-Protestant Chapels,” the Chapel was designed by J. Lee Burton and constructed circa 1900. It contained separate Catholic and Protestant chapels under one roof. A National Register Inventory Nomination Form was prepared by Cliff M. Bisbee, State Park Historian with State Department of Parks and Recreation, in July 1971. The property was listed in the National Register at the state level of significance on February 11, 1972 for its architecture. It was identified in 1981 as a contributor to the West LA VA Home Branch historic district.

Streetcar Depot/News Stand

Originally designed as a Streetcar Depot and later serving as a News Stand, the building located at Pershing and Dewey avenues was designed by architects Peters and Burns and constructed circa 1900. It is currently vacant. The property was listed in the National Register at the local level of significance on February 23, 1972, at which time it was in use as a refreshment stand. It was also identified in 1981 as a contributor to the Los Angeles National Home Branch Historic

West Los Angeles Veterans Affairs Historic District
Name of Property
District.

Los Angeles, CA
County and State

Historic American Buildings Survey (HABS) Documentation

HABS documentation has been prepared for five buildings, as described below.

Chapels (Catholic-Protestant); Veterans Administration Center #12, HABS CAL-335
20 black-and-white photographs; 8 data pages; 2 photo caption pages (not digitized); 3 color transparencies (not digitized); 1 page supplemental material Structural detail drawings.

Domiciliary #6 (Sawtelle); Veterans Administration Center #12, HABS CAL-336
2 black-and-white photographs; 9 data pages; 1 sheet of supplemental material

Los Angeles National Cemetery, HABS CA-2709
34 black-and-white photos (Clayton B. Fraser); 1 data page; 3 photo caption pages

Los Angeles National Cemetery, Gatehouse (or Pumphouse), HABS CA-2709-a
9 photos (Tom Zimmerman); 12 data pages; 1 photo caption page

Los Angeles National Cemetery, Gate, HABS CA-2709-b
2 black-and-white photographs (Tom Zimmerman); 3 data pages; 1 photo caption

10. Geographical Data

Acreage of Property approximately 506 acres

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates

Datum if other than WGS84: _____

(enter coordinates to 6 decimal places)

- | | |
|-------------------------|------------------------|
| 1. Latitude: 34.066362 | Longitude: -118.465093 |
| 2. Latitude: 34.060373 | Longitude: -118.460078 |
| 3. Latitude: 34.061831 | Longitude: -118.457631 |
| 4. Latitude: 34.065457 | Longitude: -118.459477 |
| 5. Latitude: 34.066684 | Longitude: -118.454799 |
| 6. Latitude: 34.057779 | Longitude: -118.447807 |
| 7. Latitude: 34.056565 | Longitude: -118.451894 |
| 8. Latitude: 34.055298 | Longitude: -118.453522 |
| 9. Latitude: 34.048380 | Longitude: -118.450050 |
| 10. Latitude: 34.066499 | Longitude: -118.455341 |
| 11. Latitude: 34.060976 | Longitude: -118.467969 |

Or

UTM References

Datum (indicated on USGS map):

NAD 1927 or NAD 1983

- | | | |
|----------|-----------|-----------|
| 1. Zone: | Easting: | Northing: |
| 2. Zone: | Easting: | Northing: |
| 3. Zone: | Easting: | Northing: |
| 4. Zone: | Easting : | Northing: |

Verbal Boundary Description (Describe the boundaries of the property.)

The West Los Angeles Veterans Affairs Historic District (West LA VA or campus) is located at the major intersection of Sepulveda Boulevard, Interstate 405 (I-405 also known as the San

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Diego Freeway) and Wilshire Boulevard in Los Angeles, California. The district is generally bounded by Veteran Avenue on the east; Ohio Avenue on the south; and Barrington Avenue, Bringham Avenue, San Vicente Boulevard, and Federal Avenue on the west. An unnamed road curving between Barrington Place to the west and Beloit Avenue to the east, around the Heroes Golf Course, forms the northern boundary on the west. The northern boundary on the east is a curvilinear residential neighborhood abutting the northern boundary of the Los Angeles National Cemetery. See Map 4 for more information.

Boundary Justification (Explain why the boundaries were selected.)

West Los Angeles Veterans Affairs historic district consists of four discontinuous sections and encompasses approximately 506 acres. The boundaries in the northwest and northeast sections was drawn to include the all of the property owned by the VA, excluding outleases. In the southwest section, the boundary incorporates Subarea 2 – Senior Personnel Residences and the portion of Subarea 7 – General Hospital that includes the south gates and the roadway that runs between them, the portions of the southwest quadrant that retain sufficient integrity to convey their significance. The Los Angeles National Cemetery is included as the northeast quadrant of the historic district.

11. Form Prepared By

name/title: Robert Chattel, Jenna Snow, Susan O'Carroll, Shannon Ferguson, Kathryn McGee, Marissa Moshier, Shane Swerdlow, Sally Stokes, Allison Lyons

organization: Chattel, Inc.

street & number: 13417 Ventura Boulevard

city or town: Sherman Oaks state: California zip code: 91423

e-mail: jenna@chattel.us

telephone: (818) 788-7954

date: September 13, 2013

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: West Los Angeles Veterans Affairs Historic District
(West LA VA)
City or Vicinity: Brentwood (Los Angeles)
County: Los Angeles County
State: CA
Name of Photographer: Chattel, Inc.
Date of Photographs: March 2011-September 2013
Location of Original Digital Files: 13417 Ventura Blvd., Sherman Oaks, CA 91423

Description of Photograph(s) and number, include description of view indicating direction of camera:

Photo #1 of 95 (CA_LosAngelesCounty_WestLAVA_0001)
Subarea 1, Eisenhower Avenue, camera facing east

Photo #2 of 95 (CA_LosAngelesCounty_WestLAVA_0002)
Subarea 1, Eisenhower Avenue, camera facing north

Photo #3 of 95 (CA_LosAngelesCounty_WestLAVA_0003)
Subarea 1, Bonsall Avenue, camera facing northwest

Photo #4 of 95 (CA_LosAngelesCounty_WestLAVA_0004)
Subarea 1, Bonsall Avenue, Building 215 in distance on left, camera facing northwest

Photo #5 of 95 (CA_LosAngelesCounty_WestLAVA_0005)
Subarea 1, Railroad spur landscape, camera facing southeast

Photo #6 of 95 (CA_LosAngelesCounty_WestLAVA_0006)
Subarea 1, Spur landscape, view northwest, camera facing northwest

Photo #7 of 95 (CA_LosAngelesCounty_WestLAVA_0007)
Subarea 1, Building 212, east elevation (right), Grant Avenue in distance, camera facing southeast

Photo #8 of 95 (CA_LosAngelesCounty_WestLAVA_0008)

West Los Angeles Veterans Affairs Historic District
Name of Property

Los Angeles, CA
County and State

Subarea 2, Building 91, northwest elevation, camera facing southeast

Photo #9 of 95 (CA_LosAngelesCounty_WestLAVA_0009)

Subarea 2, grid of palm trees from Wilshire Boulevard, camera facing southeast

Photo #10 of 95 (CA_LosAngelesCounty_WestLAVA_0010)

Subarea 2, landscape from Bonsall Avenue, camera facing southwest

Photo #11 of 95 (CA_LosAngelesCounty_WestLAVA_0011)

Subarea 3, Building 264, northwest elevation on right, camera facing south

Photo #12 of 95 (CA_LosAngelesCounty_WestLAVA_0012)

Subarea 3, Building 116, north elevation in distance on right, camera facing southwest

Photo #13 of 95 (CA_LosAngelesCounty_WestLAVA_0013)

Subarea 4, Bonsall Avenue, Building 300, north elevation on left, camera facing northwest

Photo #14 of 95 (CA_LosAngelesCounty_WestLAVA_0014)

Subarea 4, Arnold Avenue, Building 207, northwest elevation in left foreground, Building 206, northwest elevation in left distance, camera facing west

Photo #15 of 95 (CA_LosAngelesCounty_WestLAVA_0015)

Subarea 4, Building 206, northeast elevation on right, camera facing southeast

Photo #16 of 95 (CA_LosAngelesCounty_WestLAVA_0016)

Subarea 4, Vandergrift Avenue, Building 257, south elevation on left, camera facing east

Photo #17 of 95 (CA_LosAngelesCounty_WestLAVA_0017)

Subarea 4, Nimitz Avenue, Building 258, south elevation on left, camera facing east

Photo #18 of 95 (CA_LosAngelesCounty_WestLAVA_0018)

Subarea 4, Building 258, south elevation, camera facing north

Photo #19 of 95 (CA_LosAngelesCounty_WestLAVA_0019)

Subarea 4, Building 158, north elevation in distance, camera facing south

Photo #20 of 95 (CA_LosAngelesCounty_WestLAVA_0020)

Subarea 5, Building 305, northeast elevation on left, camera facing northwest

Photo #21 of 95 (CA_LosAngelesCounty_WestLAVA_0021)

Subarea 5, Building 305, northwest elevation on right in distance, camera facing east

Photo #22 of 95 (CA_LosAngelesCounty_WestLAVA_0022)

Subarea 6, camera facing northwest

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

Photo #23 of 95 (CA_LosAngelesCounty_WestLAVA_0023)

Subarea 6, Building 300 in center distance, camera facing southeast

Photo #24 of 95 (CA_LosAngelesCounty_WestLAVA_0024)

Subarea 6, Japanese Garden, camera facing northeast

Photo #25 of 95 (CA_LosAngelesCounty_WestLAVA_0025)

Subarea 7, South gates, camera facing southeast

Photo #26 of 95 (CA_LosAngelesCounty_WestLAVA_0026)

Subarea 7, South gates, camera facing northeast

Photo #27 of 95 (CA_LosAngelesCounty_WestLAVA_0027)

LANC, Burial sections north of Constitution Avenue, camera facing northeast

Photo #28 of 95 (CA_LosAngelesCounty_WestLAVA_0028)

LANC, Bench and tree at Constitution Avenue, camera facing southeast

Photo #29 of 95 (CA_LosAngelesCounty_WestLAVA_0029)

LANC, Gatehouses, northwest elevations, camera facing southeast

Photo #30 of 95 (CA_LosAngelesCounty_WestLAVA_0030)

LANC, Maintenance yard, fuel storage building west elevation, camera facing southwest

Photo #31 of 95 (CA_LosAngelesCounty_WestLAVA_0031)

LANC, Burial sections, Lookout Drive, camera facing east

Photo #32 of 95 (CA_LosAngelesCounty_WestLAVA_0032)

LANC, Burial sections, Marne Avenue, camera facing northwest

Photo #33 of 95 (CA_LosAngelesCounty_WestLAVA_0033)

Subarea 1, Building 20, southeast elevation, camera facing northwest

Photo #34 of 95 (CA_LosAngelesCounty_WestLAVA_0034)

Subarea 1, Building 66, south and east elevations, camera facing northwest

Photo #35 of 95 (CA_LosAngelesCounty_WestLAVA_0035)

Subarea 1, Building 13, south elevation, camera facing northwest

Photo #36 of 95 (CA_LosAngelesCounty_WestLAVA_0036)

Subarea 1, Building 13, east elevation (loading dock), camera facing west

Photo #37 of 95 (CA_LosAngelesCounty_WestLAVA_0037)

Subarea 1, Building 33, northwest and southwest elevations, camera facing east

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA
County and State

Name of Property

Photo #38 of 95 (CA_LosAngelesCounty_WestLAVA_38)
Subarea 1, Building 111, north elevation, camera facing south

Photo #39 of 95 (CA_LosAngelesCounty_WestLAVA_39)
Subarea 1, Building 199, south and east elevations, camera facing northwest

Photo #40 of 95 (CA_LosAngelesCounty_WestLAVA_0040)
Subarea 1, Building 212, north elevation, camera facing southeast

Photo #41 of 95 (CA_LosAngelesCounty_WestLAVA_0041)
Subarea 1, Building 213, north elevation, camera facing southwest

Photo #42 of 95 (CA_LosAngelesCounty_WestLAVA_0042)
Subarea 1, Building 214, north elevation, camera facing southeast

Photo #43 of 95 (CA_LosAngelesCounty_WestLAVA_0043)
Subarea 1, Building 215, south elevation, camera facing northeast

Photo #44 of 95 (CA_LosAngelesCounty_WestLAVA_0044)
Subarea 1, Building 217, south elevation, camera facing north

Photo #45 of 95 (CA_LosAngelesCounty_WestLAVA_0045)
Subarea 1, Building 218, south elevation, camera facing north

Photo #46 of 95 (CA_LosAngelesCounty_WestLAVA_0046)
Subarea 1, Building 220, north elevation, camera facing southeast

Photo #47 of 95 (CA_LosAngelesCounty_WestLAVA_0047)
Subarea 1, Building 226 (Wadsworth Theater), north elevation, camera facing south

Photo #48 of 95 (CA_LosAngelesCounty_WestLAVA_0048)
Subarea 1, Building 236, south elevation, camera facing north

Photo #49 of 95 (CA_LosAngelesCounty_WestLAVA_0049)
Subarea 1, Garden House, north elevation, camera facing southeast

Photo #50 of 95 (CA_LosAngelesCounty_WestLAVA_0050)
Subarea 2, Building 23, northwest elevation in distance, camera facing southeast

Photo #51 of 95 (CA_LosAngelesCounty_WestLAVA_0051)
Subarea 2, Building 90, west elevation, camera facing east

Photo #52 of 95 (CA_LosAngelesCounty_WestLAVA_0052)
Subarea 2, Building 91, west elevation, camera facing east

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA
County and State

Name of Property

Photo #53 of 95 (CA_LosAngelesCounty_WestLAVA_0053)
Subarea 3, Building 114, south elevation, camera facing north

Photo #54 of 95 (CA_LosAngelesCounty_WestLAVA_0054)
Subarea 3, Building 115, southwest elevation, camera facing north

Photo #55 of 95 (CA_LosAngelesCounty_WestLAVA_0055)
Subarea 3, Building 116, north elevation, camera facing south

Photo #56 of 95 (CA_LosAngelesCounty_WestLAVA_0056)
Subarea 3, Building 117, north elevation, camera facing south

Photo #57 of 95 (CA_LosAngelesCounty_WestLAVA_0057)
Subarea 3, Building 264, southwest elevation, camera facing southeast

Photo #58 of 95 (CA_LosAngelesCounty_WestLAVA_0058)
Subarea 4, Building 156, southwest corner, camera facing northeast

Photo #59 of 95 (CA_LosAngelesCounty_WestLAVA_0059)
Subarea 4, Building 157, south and east elevations, camera facing northwest

Photo #60 of 95 (CA_LosAngelesCounty_WestLAVA_0060)
Subarea 4, Building 158, south and east elevations, camera facing northwest

Photo #61 of 95 (CA_LosAngelesCounty_WestLAVA_0061)
Subarea 4, Building 205, east elevation, camera facing southwest

Photo #62 of 95 (CA_LosAngelesCounty_WestLAVA_0062)
Subarea 4, Building 206, south elevation, camera facing northeast

Photo #63 of 95 (CA_LosAngelesCounty_WestLAVA_0063)
Subarea 4, Building 207, south elevation, camera facing northwest

Photo #64 of 95 (CA_LosAngelesCounty_WestLAVA_0064)
Subarea 4, Building 208, south elevation, camera facing north

Photo #65 of 95 (CA_LosAngelesCounty_WestLAVA_0065)
Subarea 4, Building 209, west elevation, camera facing east

Photo #66 of 95 (CA_LosAngelesCounty_WestLAVA_0066)
Subarea 4, Building 210, southwest elevation, camera facing southeast

Photo #67 of 95 (CA_LosAngelesCounty_WestLAVA_0067)
Subarea 4, Building 211 (Brentwood Theater), southeast elevation, camera facing west

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

Photo #68 of 95 (CA_LosAngelesCounty_WestLAVA_0068)

Subarea 4, Building 256, north elevation, camera facing southwest

Photo #69 of 95 (CA_LosAngelesCounty_WestLAVA_0069)

Subarea 4, Building 257, west and north elevation, camera facing southeast

Photo #70 of 95 (CA_LosAngelesCounty_WestLAVA_0070)

Subarea 4, Building 258, southwest elevation, camera facing northeast

Photo #71 of 95 (CA_LosAngelesCounty_WestLAVA_0071)

Subarea 4, Building 259, west elevation, camera facing northeast

Photo #72 of 95 (CA_LosAngelesCounty_WestLAVA_0072)

Subarea 4, Building 300, south elevation, camera facing northeast

Photo #73 of 95 (CA_LosAngelesCounty_WestLAVA_0073)

Subarea 5, Building 46, northeast and southeast elevations, camera facing west

Photo #74 of 95 (CA_LosAngelesCounty_WestLAVA_0074)

Subarea 5, Building 222, southeast and northeast elevations, camera facing northwest

Photo #75 of 95 (CA_LosAngelesCounty_WestLAVA_0075)

Subarea 5, Building 224, northwest and southwest elevations, camera facing east

Photo #76 of 95 (CA_LosAngelesCounty_WestLAVA_0076)

Subarea 5, Building 292, southwest elevation, camera facing east

Photo #77 of 95 (CA_LosAngelesCounty_WestLAVA_0077)

Subarea 5, Building 295, northeast elevation, camera facing northwest

Photo #78 of 95 (CA_LosAngelesCounty_WestLAVA_0078)

Subarea 5, Building 297, northeast elevation, camera facing south

Photo #79 of 95 (CA_LosAngelesCounty_WestLAVA_0079)

Subarea 6, Golf course, camera facing northwest

Photo #80 of 95 (CA_LosAngelesCounty_WestLAVA_0080)

Subarea 7, South Gates at Ohio Avenue, west gatepost, camera facing southeast

Photo #81 of 95 (CA_LosAngelesCounty_WestLAVA_0081)

LANC, Chapel and Administration Building, south elevation, camera facing northeast

Photo #82 of 95 (CA_LosAngelesCounty_WestLAVA_0082)

LANC, Columbarium, east elevation, camera facing west

West Los Angeles Veterans Affairs Historic District

Los Angeles, CA

Name of Property

County and State

Photo #83 of 95 (CA_LosAngelesCounty_WestLAVA_0083)

LANC, Comfort station and restrooms, northeast elevation, camera facing southwest

Photo #84 of 95 (CA_LosAngelesCounty_WestLAVA_0084)

LANC, Maintenance Building 1, west elevation, camera facing northeast

Photo #85 of 95 (CA_LosAngelesCounty_WestLAVA_0085)

LANC, Maintenance Building 2, west elevation, camera facing northeast

Photo #86 of 95 (CA_LosAngelesCounty_WestLAVA_0086)

LANC, Arcade, southwest elevation, camera facing north

Photo #87 of 95 (CA_LosAngelesCounty_WestLAVA_0087)

LANC, Rostrum, south side, camera facing northeast

Photo #88 of 95 (CA_LosAngelesCounty_WestLAVA_0088)

LANC, Gatehouses, northwest elevations, camera facing southeast

Photo #89 of 95 (CA_LosAngelesCounty_WestLAVA_0089)

LANC, South overlook, camera facing northwest

Photo #90 of 95 (CA_LosAngelesCounty_WestLAVA_0090)

LANC, North overlook, camera facing southwest

Photo #91 of 95 (CA_LosAngelesCounty_WestLAVA_0091)

LANC, Flagpole, camera facing north

Photo #92 of 95 (CA_LosAngelesCounty_WestLAVA_00921)

LANC, NHDVS Monument, camera facing west

Photo #93 of 95 (CA_LosAngelesCounty_WestLAVA_0093)

LANC, Civil War Monument, camera facing northeast

Photo #94 of 95 (CA_LosAngelesCounty_WestLAVA_0094)

LANC, Spanish American War Monument, camera facing northwest from Veteran Avenue and Wilshire Boulevard

Photo #95 of 95 (CA_LosAngelesCounty_WestLAVA_0095)

LANC, Bivouac of the Dead Plaques, camera facing northeast

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section Appendix 1 Page 1

Appendix 1: West Los Angeles Veterans Affairs Historic District contributing and non-contributing resources

Subarea	Building Number	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
Subarea 1 - Domiciliary	13	1929	C	Storage (Mess Hall)
Subarea 1 - Domiciliary	33	1893 (1995)	C	Quarters
Subarea 1 - Domiciliary	111	1936	C	Gate House (West Gate)
Subarea 1 - Domiciliary	199	1932	C	Vacant (Hoover Barracks)
Subarea 1 - Domiciliary	212	1938	C	Salvation Army/Prosthetics (Hospital)
Subarea 1 - Domiciliary	213	1938 (1989)	C	NHCU Pod & Dialysis (Hospital)
Subarea 1 - Domiciliary	214	1938 (1990)	C	Domiciliary (Hospital)
Subarea 1 - Domiciliary	215	1938 (1985)	C	NHCU (Hospital)
Subarea 1 - Domiciliary	217	1941 (1990)	C	Domiciliary
Subarea 1 - Domiciliary	218	1941	C	Administration Building
Subarea 1 - Domiciliary	220	1939	C	Dental/Research (Female Domiciliary Barracks)
Subarea 1 - Domiciliary	226	1940	C	Outleased – Wadsworth Theater
Subarea 1 - Domiciliary	236	1945	C	Police HQ
Subarea 1 - Domiciliary	n/a	1947	C	Garden House (Memorial to Women Veterans)
Subarea 1 - Domiciliary	20	1900	C/Individually listed	Chapel (Catholic and Protestant Chapel)
Subarea 1 - Domiciliary	66	1890	C/Individually listed	News Stand (Streetcar Depot)
Subarea 1 - Domiciliary	12	1989	NC	Emergency Generator
Subarea 1 - Domiciliary	301	1951	NC	AFGE Union
Subarea 1 - Domiciliary	306	1957	NC	Cafeteria/Post Office
Subarea 1 - Domiciliary	506	c. 1985	NC	VA District Council

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic
District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section Appendix 1 Page 2

Subarea	Building Number	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
Subarea 2 - Senior Personnel Residences	14	1900	C	Garage
Subarea 2 - Senior Personnel Residences	23	1900	C	Quarters
Subarea 2 - Senior Personnel Residences	90	1927 (1995)	C	Duplex Quarters
Subarea 2 - Senior Personnel Residences	91	1927 (1995)	C	Duplex Quarters
Subarea 2 - Senior Personnel Residences	104	c.1920s	NC	Garage 2-Car
Subarea 2 - Senior Personnel Residences	307	1955	NC	Single Quarters
Subarea 2 - Senior Personnel Residences	308	1955	NC	Single Quarters
Subarea 2 - Senior Personnel Residences	309	1955	NC	Garage
Subarea 2 - Senior Personnel Residences	310	1955	NC	Garage
Subarea 2 - Senior Personnel Residences	311	1994	NC	Mobile House
Subarea 2 - Senior Personnel Residences	312	1994	NC	Mobile House
Subarea 2 - Senior Personnel Residences	318	1994	NC	Mobile House
Subarea 3 - Research	114	1930	C	Research Lab (Research Lab Annex, Barracks Hospital Annex)
Subarea 3 - Research	115	1930	C	Research Lab (Research Lab Annex, Barracks Hospital Annex)
Subarea 3 - Research	116	1930 (1997)	C	Outleased – New Directions (Barracks)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic
District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section Appendix 1 Page 3

Subarea	Building Number	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
Subarea 3 - Research	117	1930	C	Research Lab (Mortuary)
Subarea 3 - Research	264	1944	C	FBI (Annex Theater)
Subarea 3 - Research	113	1930 (c. 1995)	NC	Animal Research (G.M. Annex, Barracks)
Subarea 3 - Research	340	1959	NC	Human Radiation Lab
Subarea 3 - Research	346	No date	NC	Storage Waste
Subarea 4 - Neuropsychiatric	156	1923	C	Vacant (Hospital Building)
Subarea 4 - Neuropsychiatric	157	1923	C	Vacant (Hospital Building)
Subarea 4 - Neuropsychiatric	158	1923	C	Vacant (Evaluations/Admissions/Clinic)
Subarea 4 - Neuropsychiatric	205	1937	C	Mental Outpatient Psychiatry (Hospital Building)
Subarea 4 - Neuropsychiatric	206	1940	C	Mental Health Homeless (Hospital Building)
Subarea 4 - Neuropsychiatric	207	1940	C	Outleased – Salvation Army (Hospital Building)
Subarea 4 - Neuropsychiatric	208	1945	C	Health/Voc Rehab Medicine (Hospital)
Subarea 4 - Neuropsychiatric	209	1945	C	Vacant (Hospital and Canteen)
Subarea 4 - Neuropsychiatric	210	1945	C	Research/MIREC (Hospital Building) (Women's Ward)
Subarea 4 - Neuropsychiatric	211	1946	C	Theater (Brentwood)
Subarea 4 - Neuropsychiatric	256	1946	C	Day Treatment Center Mental Health
Subarea 4 - Neuropsychiatric	257	1946	C	Mental Health/New Directions/Methadone (Hospital Building)
Subarea 4 - Neuropsychiatric	258	1946	C	Administration/Mental Health

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic
District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section Appendix 1 Page 4

Subarea	Building Number	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
Subarea 4 - Neuropsychiatric	259	1945	C	Com Work Therapy
Subarea 4 - Neuropsychiatric	300	1952	C	Dietetics (Mess Hall)
Subarea 4 - Neuropsychiatric	233	c. 1960s	NC	HAZMAT Building
Subarea 5 - Utility	46	1922	C	Engineering Shop
Subarea 5 - Utility	222	1938	C	Mail Out Pharmacy
Subarea 5 - Utility	224	1946	C	Outleased – Laundry
Subarea 5 - Utility	292	1946	C	Water Treatment Plant
Subarea 5 - Utility	295	1947	C	Steam Plant
Subarea 5 - Utility	297	1948	C	Supply Warehouse
Subarea 5 - Utility	44	1897 (2001)	NC	Engineering Shop
Subarea 5 - Utility	63	1959	NC	Engineering M&O (Maintenance & Operation)
Subarea 5 - Utility	83	1958	NC	Welding Shop
Subarea 5 - Utility	299	c. 1940s (1990s)	NC	Switchgear
Subarea 5 - Utility	305	1955	NC	Transportation
Subarea 5 - Utility	315	1948 (continuous alterations)	NC	GSA Motor Pool
Subarea 5 - Utility	319	1956	NC	Supply Storage
Subarea 5 - Utility	508	1998	NC	Laundry
Subarea 5 - Utility	509	1999	NC	Recycling Center
Subarea 5 - Utility	510	2002	NC	Transportation
Subarea 5 - Utility	511	2003	NC	Storage
Subarea 5 - Utility	T-84	1967	NC	Laundry Annex

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic
District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section Appendix 1 Page 5

Subarea	Building Number	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
Subarea 6 – Recreational	n/a	1946	C	Golf Course
Subarea 6 – Recreational	249	c. 1940s	NC	Greenhouse
Subarea 6 – Recreational	303	No date	NC	Water Tank
Subarea 6 – Recreational	319	1956	NC	Supply Storage
Subarea 6 – Recreational	326	c. 1990s	NC	Horticulture Office
Subarea 6 – Recreational	327	c. 2013	NC	Horticulture Restrooms
Subarea 6 – Recreational	329	c. 1940s	NC	Golf Club House
Subarea 6 – Recreational	333	c. 1960s	NC	Horticulture Tool Shed
Subarea 6 – Recreational	334	c. 1960s	NC	Refreshment Stand (Golf Course Storage Building)
Subarea 6 – Recreational	336	c. 1960	NC	Baseball Park Restrooms (Field House)
Subarea 6 – Recreational	339	1960	NC	Bandstand
Subarea 6 – Recreational	512	c. 1990s	NC	Bird Sanctuary Workshop
Subarea 6 – Recreational	325	c. 1990s	NC	Horticulture Restrooms
Subarea 6 – Recreational	n/a	No date	NC	Baseball Field House
Subarea 6 – Recreational	n/a	No date	NC	Baseball Lot Club
Subarea 6 – Recreational	n/a	c. 1970s	NC	Japanese Garden
Subarea 6 – Recreational	T79	unknown	NC	Plant Nursery
Subarea 7 - General Hospital	n/a	c. 1892	C	South Gate
Northeast Quadrant/LANC	n/a	1941 (1980)	C	Chapel (Administration Building)
Northeast Quadrant/LANC	n/a	1940	C	Columbarium
Northeast Quadrant/LANC	n/a	1940 (c. 1990)	C	Comfort Station (Rest Rooms)
Northeast	n/a	1939-1941	C	Maintenance Building (1 of

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section Appendix 1 Page 6

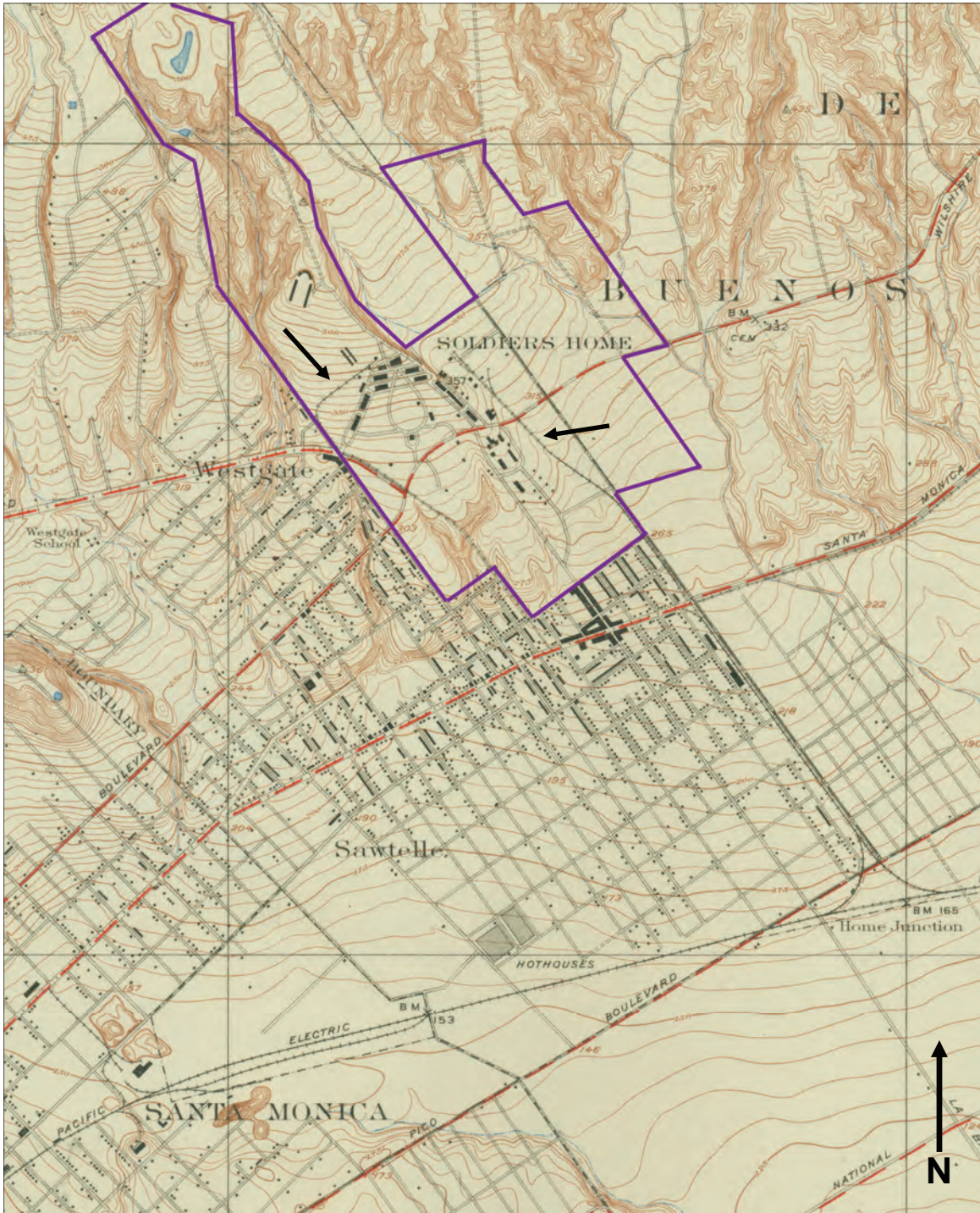
Subarea	Building Number	Date of Construction (Year Altered)	Contributing (C) / Noncontributing (NC)	Bldg. Name/Function (Historic Name/Function)
Quadrant/LANC				2)
Northeast Quadrant/LANC	n/a	1940	C	Maintenance Building (2 of 2)
Northeast Quadrant/LANC	n/a	c. 1940	C	Fuel Storage Building (1940)
Northeast Quadrant/LANC	n/a	1940	C	Arcade
Northeast Quadrant/LANC	n/a	c. 1940 (2009)	C	Rostrum
Northeast Quadrant/LANC	n/a	c.1940	C	Gate houses
Northeast Quadrant/LANC	n/a	c. 1920s	C	Terraces/Overlooks (2)
Northeast Quadrant/LANC	n/a	c. 1937	C	U.S. Flagpole
Northeast Quadrant/LANC	n/a	c. 1920s	C	NHDVS Monument
Northeast Quadrant/LANC	n/a	1896 (moved 1942)	C	Civil War Monument
Northeast Quadrant/LANC	n/a	1950 (re-created 1973)	C	Spanish-American War Monument
Northeast Quadrant/LANC	n/a	c. 1889	C	Bivouac of the Dead Plaques (6)
Northeast Quadrant/LANC	n/a	c. 1889-present	C	Burial sections with headstones and markers
Northeast Quadrant/LANC	n/a	c. 1889-c.1975	C	Roads, curbs, and walkways
Multiple Subareas	n/a	c. 1890s-1952	C	Landscape plan, roads, curbs, walkways, and plantings

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 64



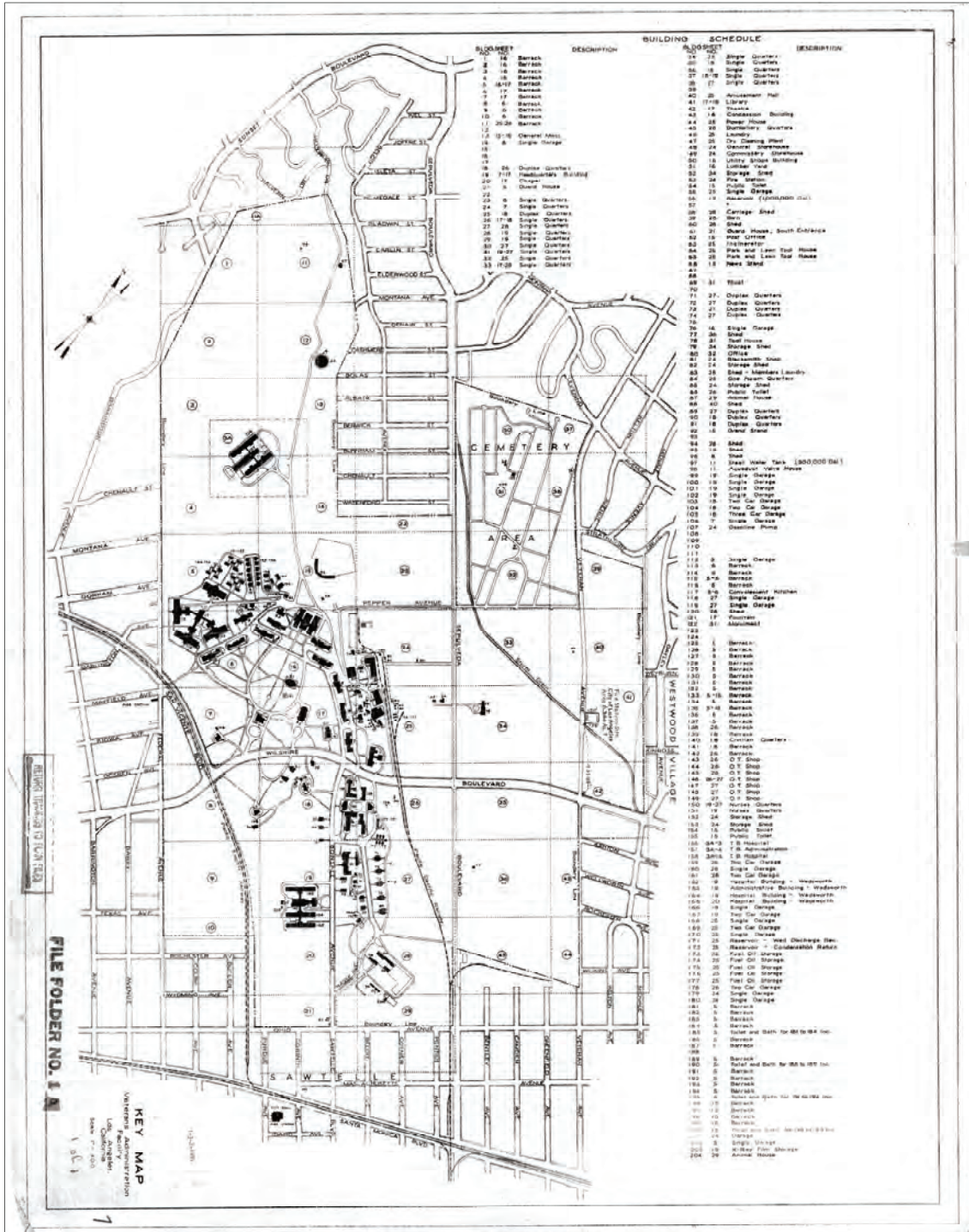
Map 1: United States Geological Survey map, West LA VA landholdings outlined in purple (dashed line on original map), note streetcar spurs into campus, 1925

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
 Name of Property
 Los Angeles, CA
 County and State
 U.S. Second Generation Veterans Hospital
 Name of multiple listing (if applicable)

Section: Additional Documentation Page 65



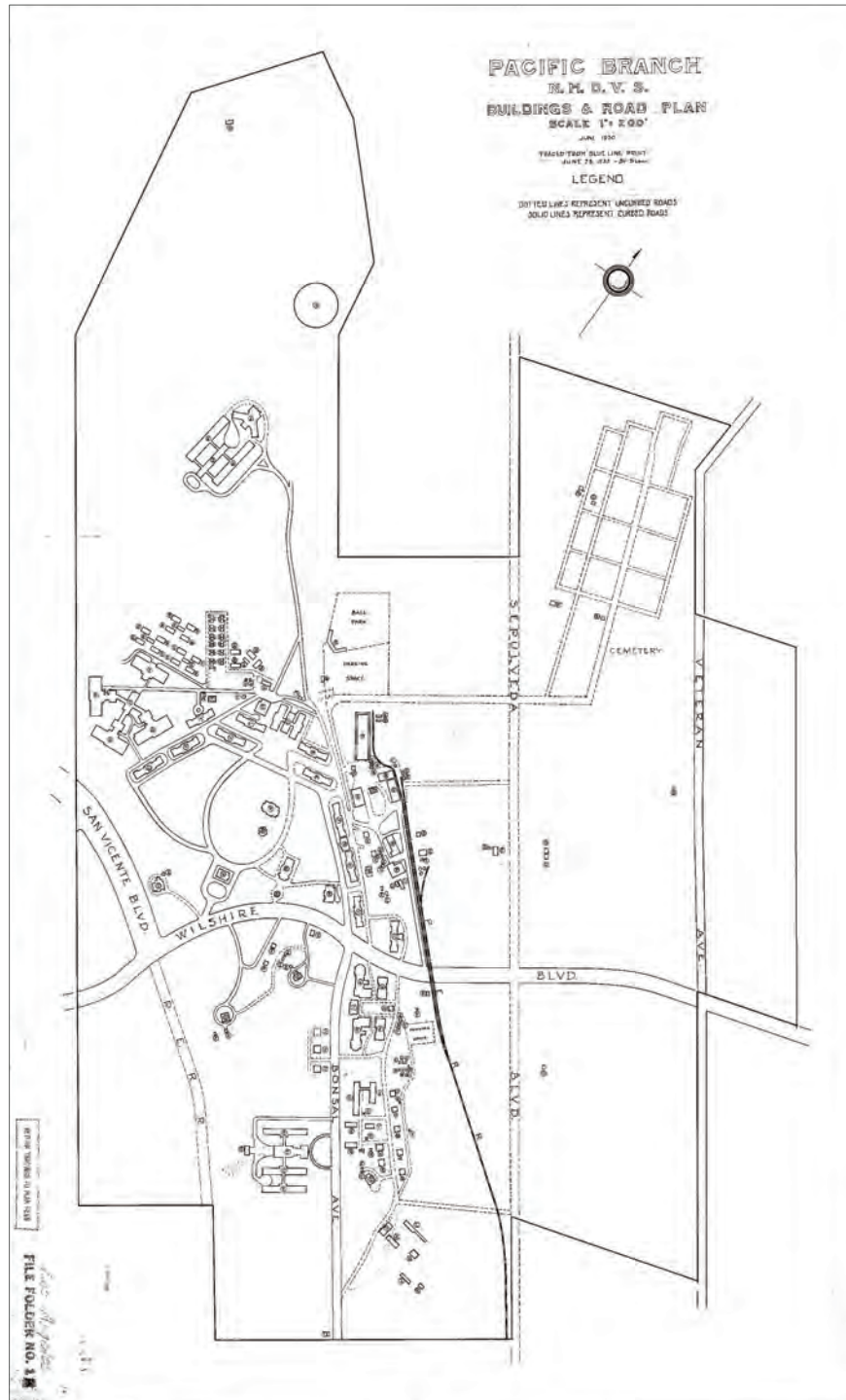
Map 2: West Los Angeles Veterans Affairs campus, circa 1930 (VA Archives)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 66



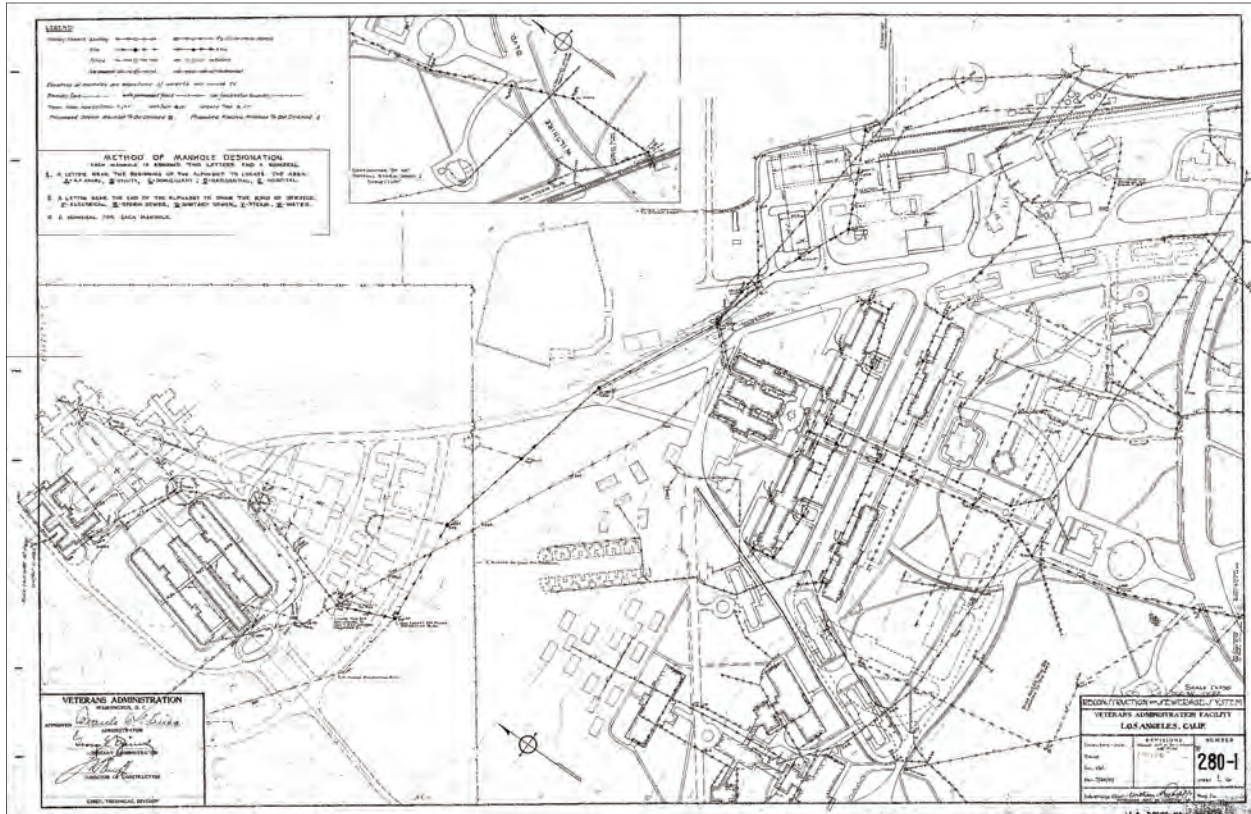
Map 3: West Los Angeles Veterans Affairs campus, circa 1930 (VA Archives)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 67



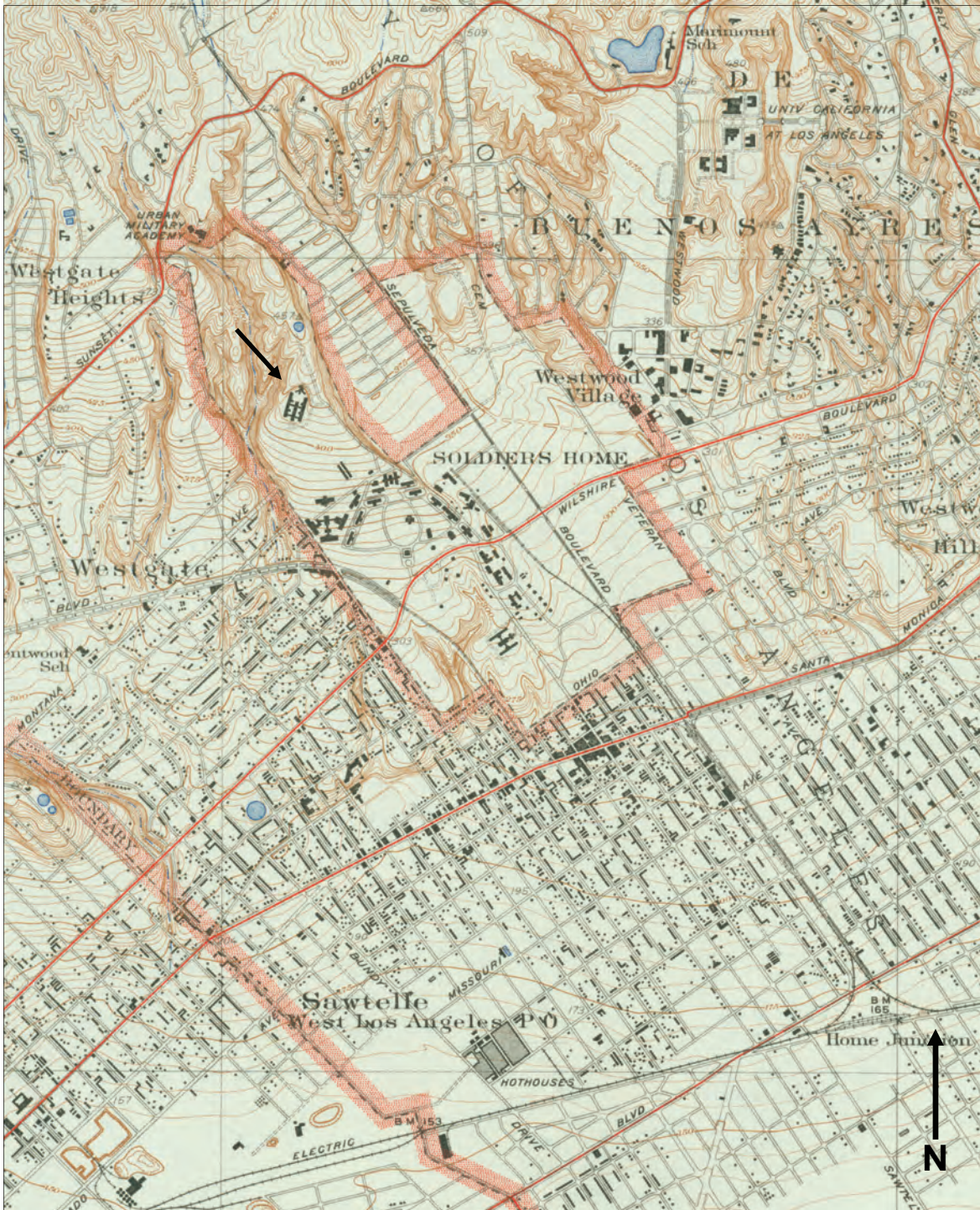
Map 4: Subarea 1—Domiciliary and Subarea 4—Neuropsychiatric, note buildings yet to be constructed in dotted lines, 1937 (VA Archives)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 68



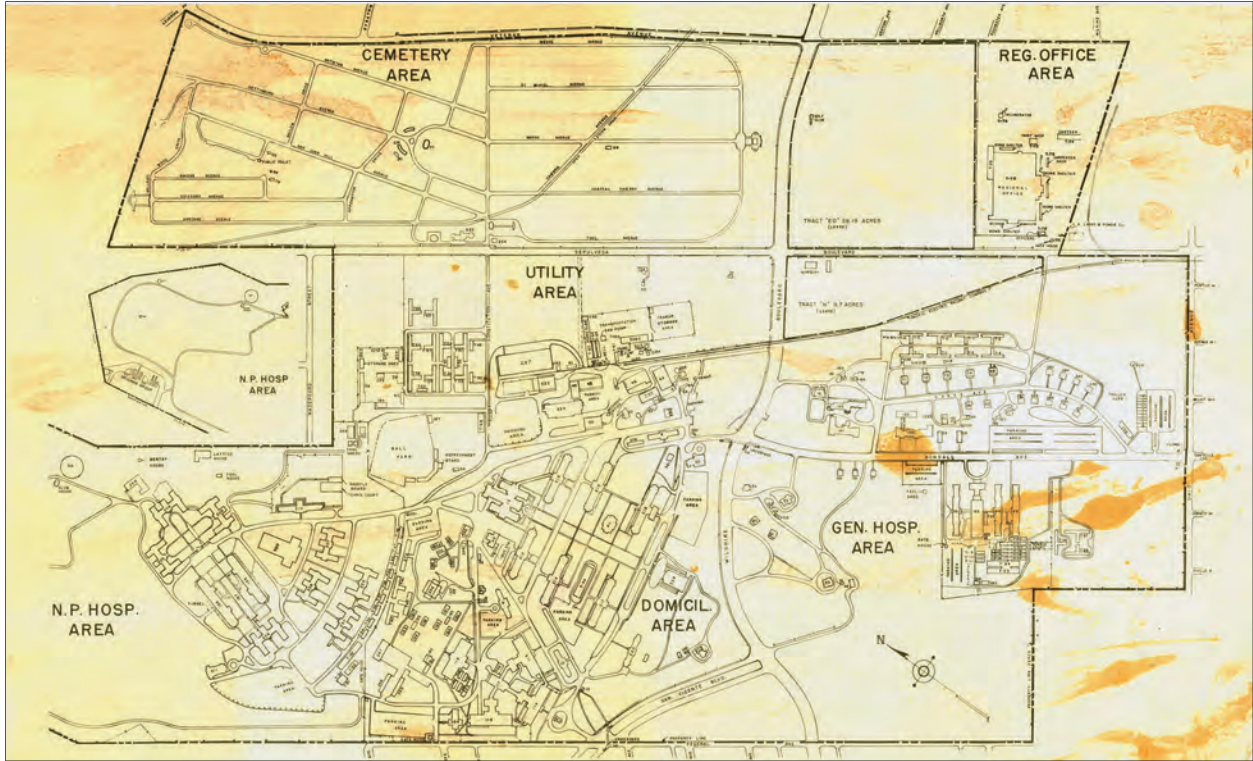
Map 5: United States Geological Survey, West LA VA landholdings outlined in red, note tuberculosis hospital at north end of campus, 1934

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 69



Map 6: West Los Angeles Veterans Affairs campus, note area labels, 1952 (VA Archives)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

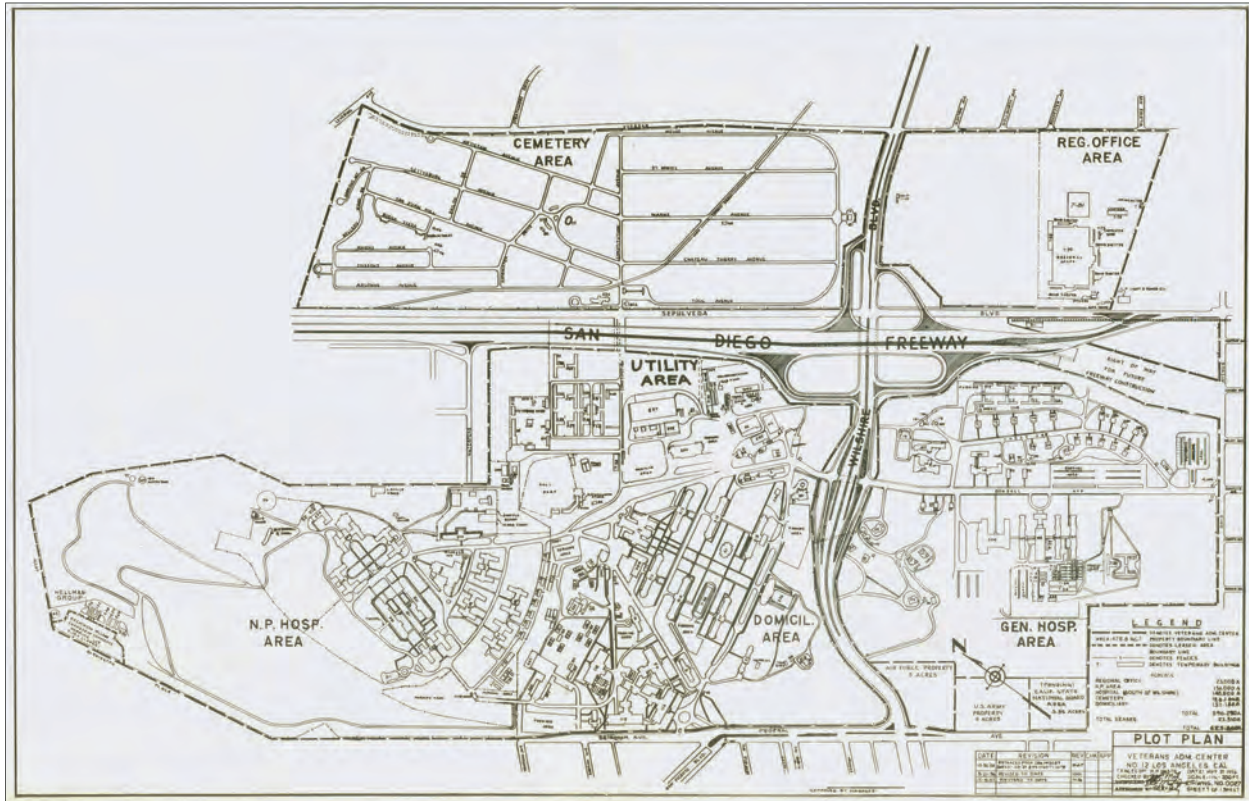
County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 70



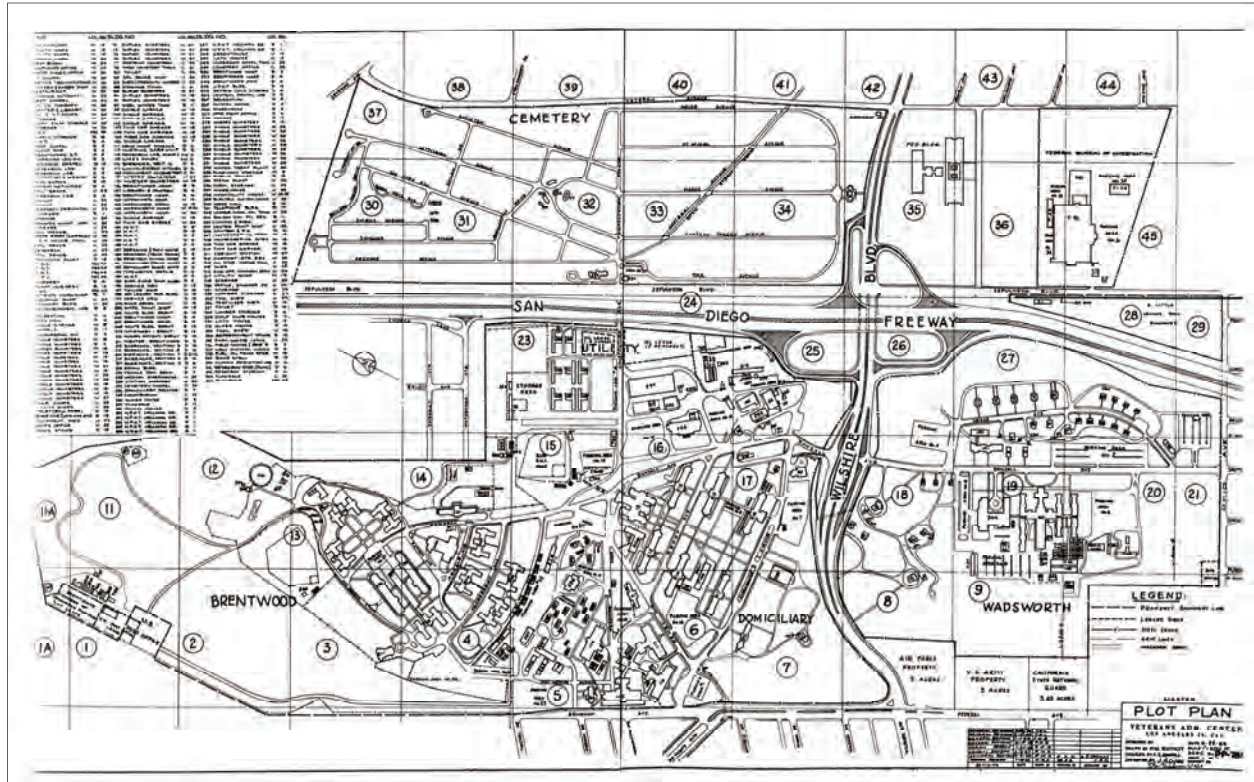
Map 7: West Los Angeles Veterans Affairs campus, note area construction of San Diego Freeway, 1957 (VA Archives)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 71



Map 8: West Los Angeles Veterans Affairs campus, note Wadsworth Hospital still extant south of Wilshire Boulevard, 1970 (VA Archives)

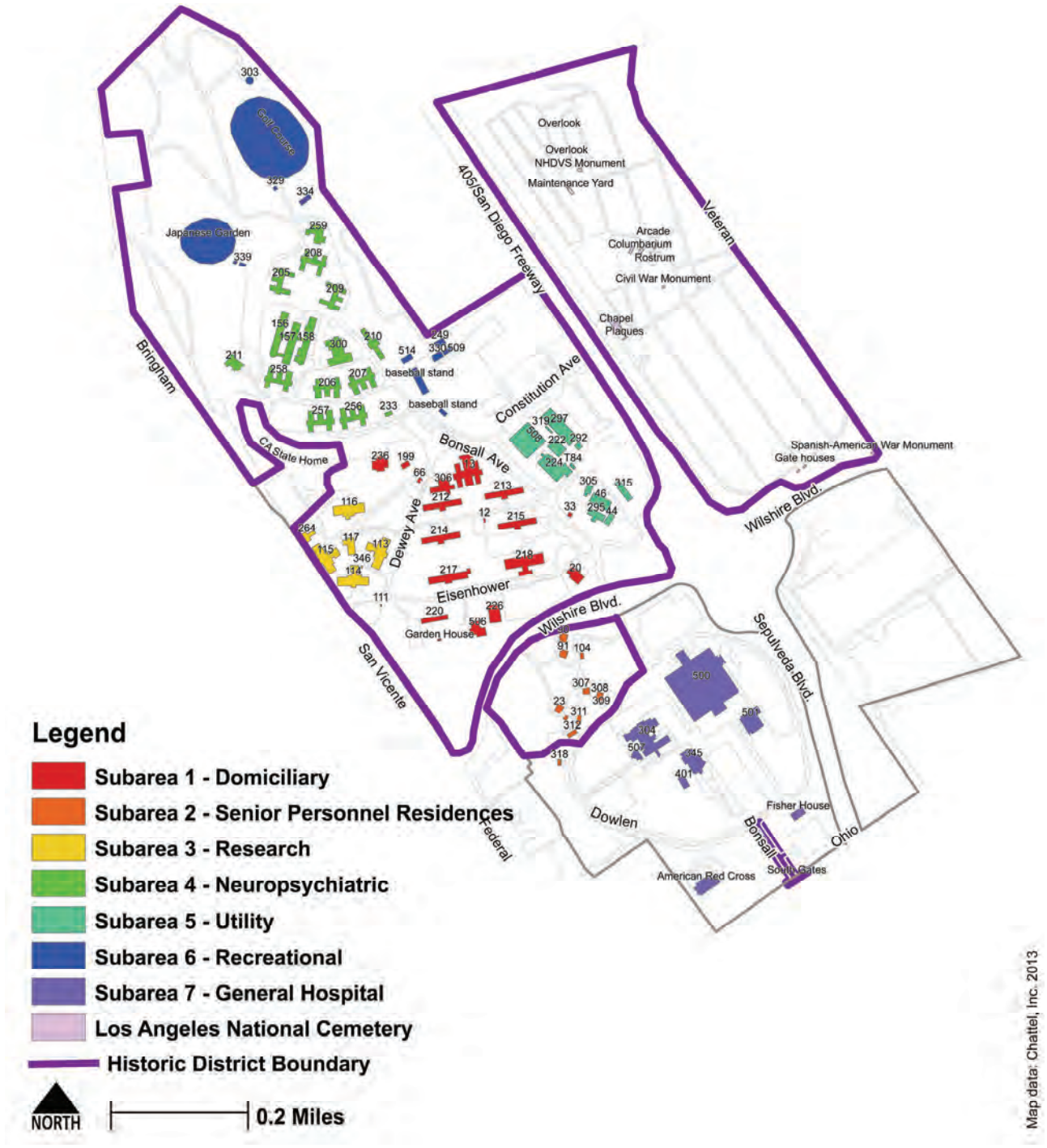
United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation

Page 73



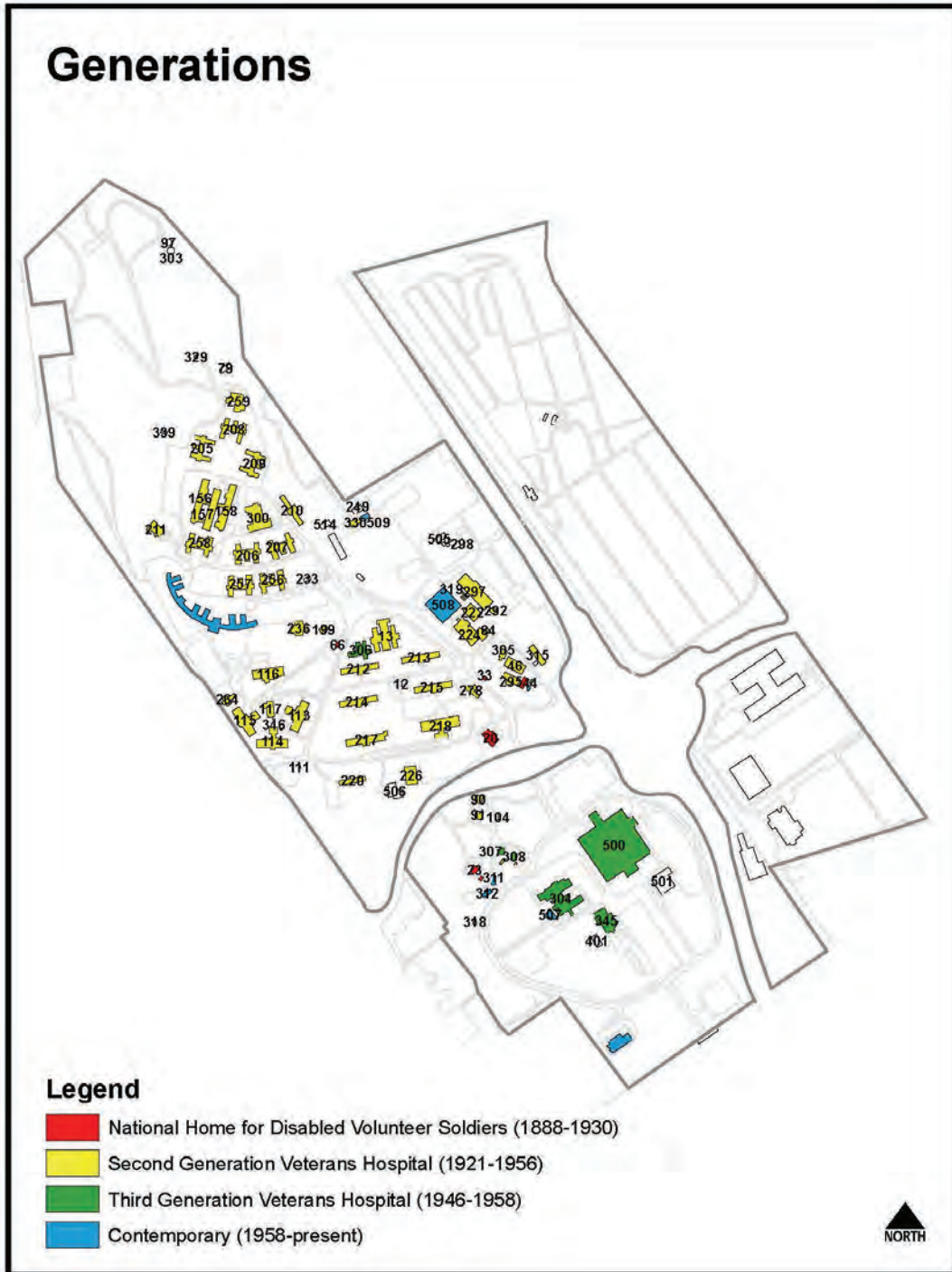
Map 10: West Los Angeles Veterans Affairs campus showing four quadrants and

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 74



United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

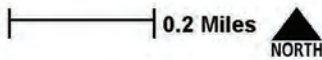
West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation

Page 75



— Historic District Boundary



Map 12: West Los Angeles Veterans Affairs campus showing boundaries of historic district

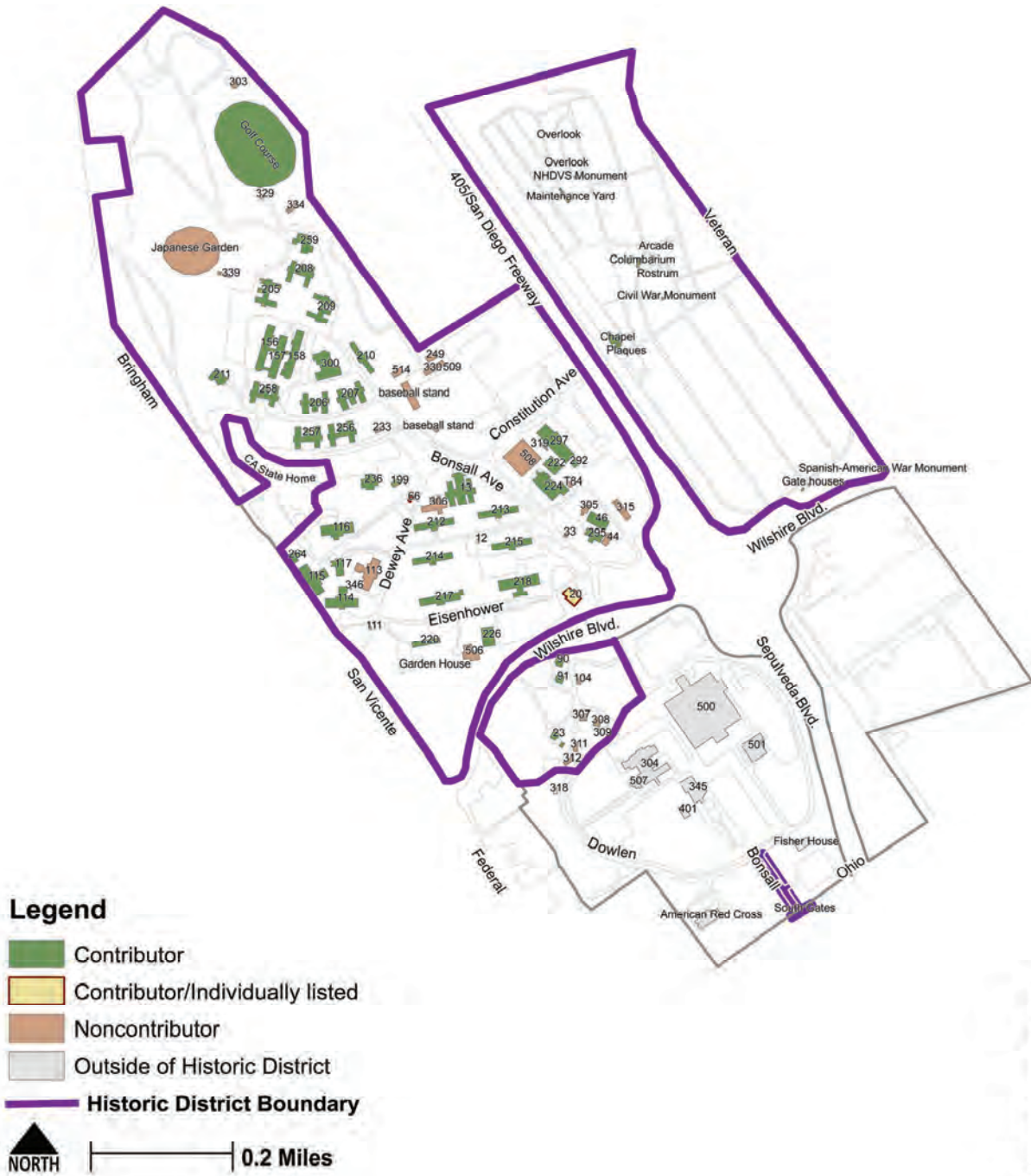
United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation

Page 76



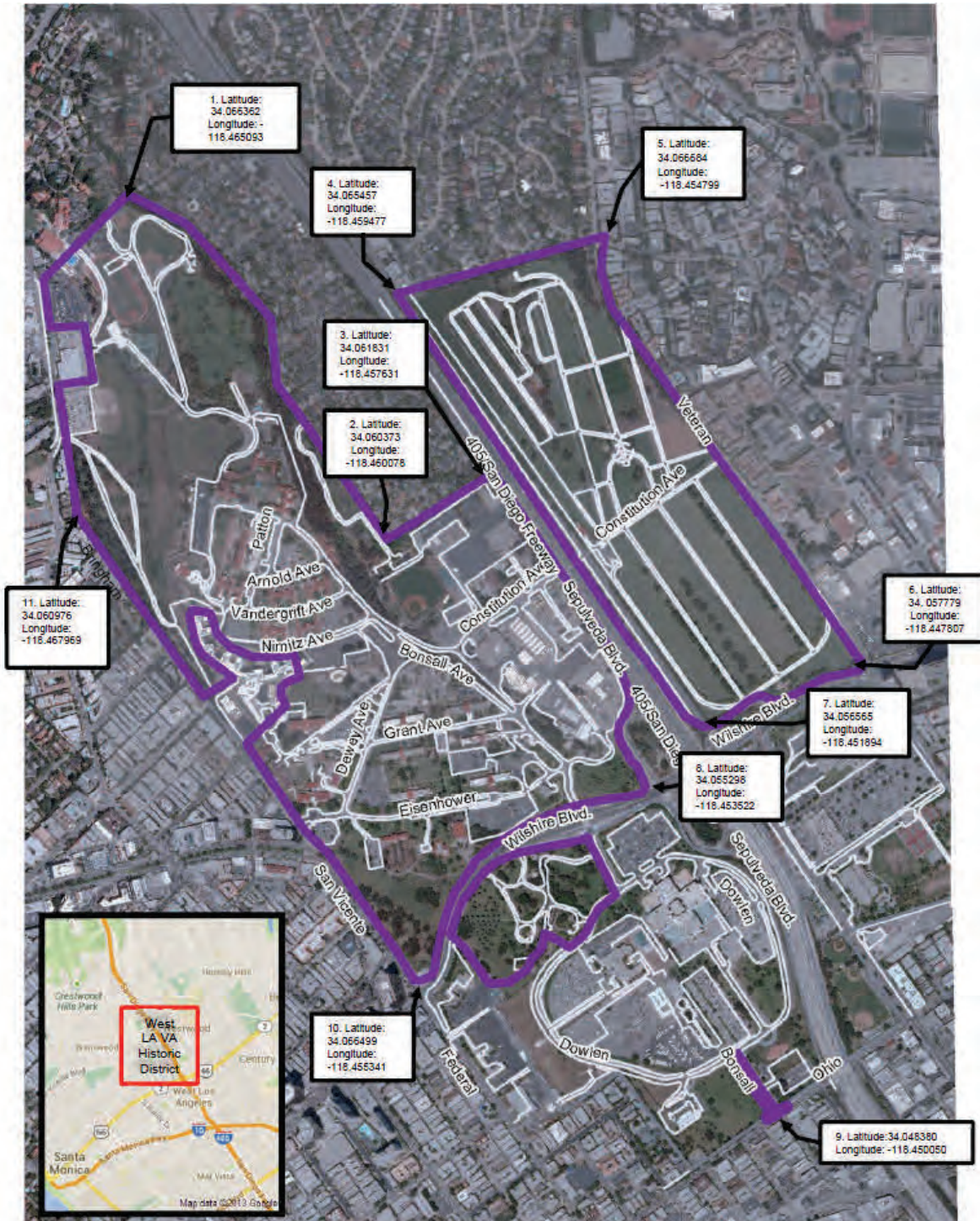
Map 13: West Los Angeles Veterans Affairs Historic District showing contributing and noncontributing resources

**United States Department of the Interior
National Park Service**

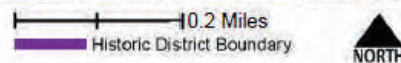
**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 77



Map 14: Latitude/Longitude Coordinates Map (see National Register Nomination Form, Section 9, page 72)



**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 1



Figure 1: Aerial view of campus, view north, note Bonsall Ave at center and Federal Avenue at left (VA Archives, 1924)



Figure 2: Aerial photo of campus, view northwest (Los Angeles Public library, circa 1920s)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 2



Figure 3: Aerial view of campus, view north, note Wadsworth Hospital (no longer extant) at center (University of California Los Angeles Air Photo Archives, Spence Collection, 1931)



Figure 4: Aerial view of campus, view southeast (University of California Los Angeles Air Photo Archives, Spence Collection, 1938)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 3



Figure 5: Subarea 1—Domiciliary, view northwest along Bonsall Avenue (HABS CAL,19-LOSAN,12B-1, 1902, reprinted 1963)



Figure 6: Subarea 1—Domiciliary, view northwest along Bonsall Avenue (Los Angeles Public Library, circa 1900)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 4



Figure 7: Subarea 1—Domiciliary, Barracks #4 (left, not extant) and #5 (right, not extant), view northeast (Santa Monica Public Library, 1890)



Figure 8: Subarea 1—Domiciliary, Barrack #1 (right, not extant) and #9 (left, not extant), view west (Santa Monica Public Library, 1890)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 5



Figure 9: Subarea 1—Domiciliary, Barracks #3 (left) and #8(right), view northeast (Santa Monica Public Library, 1890)



Figure 10: Subarea 1—Domiciliary, Barracks #2 (left), #4 (center), #5 and #6 (right), view east (Santa Monica Public Library, 1890)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 6



Figure 11: Subarea 1—Domiciliary, Assembly Hall (left, not extant) and Barrack #2 (right, not extant, view northwest (Santa Monica Public Library, 1890)



Figure 12: Subarea 1—Domiciliary, Assembly Hall (not extant), visit from President McKinley, view north (Los Angeles Public Library, 1901)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 7



Figure 13: Subarea 1—Domiciliary, Barrack #3 (left, not extant), #1(center, not extant), and Assembly Hall (right, not extant), view north (Los Angeles Public Library, 1892)



Figure 14: Subarea 1—Domiciliary, Barracks #8 (left, not extant) and #3 (right, not extant), view west (Santa Monica Public Library, 1890)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 8



Figure 15: Subarea 1—Domiciliary, Assembly Hall (right, not extant), view west (Los Angeles Public Library, 1892)



Figure 16: Subarea 1—Domiciliary, Barrack #3, view west (Los Angeles Public Library, 1892)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 9



Figure 17: Subarea 1: Domiciliary, Barrack #3 (left, not extant) and #1 (right, not extant), view northwest (Los Angeles Public Library, 1895)



Figure 18: Subarea 1—Domiciliary, view west, note Barrack #1 (not extant) at right (Los Angeles Public Library, circa 1915)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 10



Figure 19: Subarea 1—Domiciliary, Bonsall Avenue view north (Los Angeles Public Library, circa 1930)



Figure 20: Subarea 1—Domiciliary, Bonsall Avenue, view north (Los Angeles Public Library, circa 1900)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 11



Figure 21: Subarea 1—Domiciliary, Bonsall Avenue, view south (Los Angeles Public Library, circa 1900)



Figure 22: Subarea 1—Domiciliary, Bonsall Avenue, view south, note Chapel (Building 20, extant) at right (Los Angeles Public Library, circa 1915)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 12



Figure 23: Subarea 1—Domiciliary area, view south, note Bonsall Avenue at left (Los Angeles Public Library, circa 1920s)



Figure 24: Subarea 1—Domiciliary area, view east, note Wilshire Boulevard at top right corner (Los Angeles Public Library, circa 1920s)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 13



Figure 25: Subarea 1—Domiciliary, Guard House (no longer extant), view northwest (VA Archives, nd)



Figure 26: Subarea 1—Domiciliary, Headquarters Building (Building 19, no longer extant), view southwest (VA Archives, 1935)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 14



Figure 27: Subarea 1—Domiciliary, Barrack #6 (not extant), view east (Los Angeles Public Library, circa 1923)



Figure 28: Subarea 1—Domiciliary, Barrack #6 (not extant), view north-east (Los Angeles Public Library, 1939)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 15



Figure 29: Subarea 1—Domiciliary, unknown building (not extant) (Los Angeles Public Library, 1939)



Figure 30: Subarea 1—Domiciliary, unknown building (not extant) (Los Angeles Public Library, 1939)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 16



Figure 31: Subarea 1—Domiciliary, unknown building (not extant) (Los Angeles Public Library, 1939)

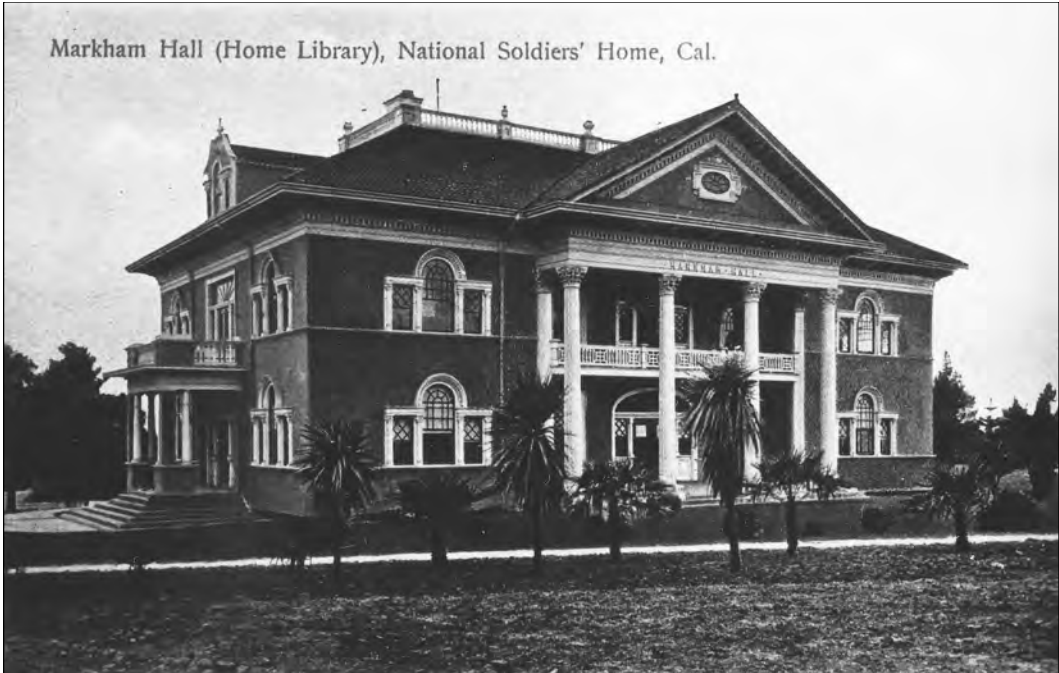


Figure 32: Subarea 1—Domiciliary, Markham Hall (Building 41, no longer extant), view northeast (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 17



Figure 33: Subarea 1—Domiciliary, Headquarters Building in background (not extant), view south (VA Archive, nd)



Figure 34: Subarea 1—Domiciliary, Memorial Hall (not extant), view south (VA Archive, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 18



Figure 35: Subarea 1—Domiciliary, Governor's Residence (not extant) (VA Archive, nd)



Figure 36: Subarea 1—Domiciliary, Chapel, view northwest (Los Angeles Public Library, 1941)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 19



Figure 37: Subarea 1—Domiciliary, Chapel, view northwest (VA archives, nd)



Figure 38: Subarea 1—Domiciliary, Chapel, view west (HABS CAL,19-LOSAN,12A-1, 1960)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 20



Figure 39: Subarea 1—Domiciliary, Chapel, view west (HABS CAL,19-LOSAN,12A-1, 1960)



Figure 40: Subarea 1—Domiciliary, Chapel, view north (HABS CAL,19-LOSAN,12A-1, 1960)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 21



Figure 41: Subarea 1: Domiciliary, Chapel, Protestant Chapel (HABS CAL,19-LOSAN,12A-1, 1960)



Figure 42: Subarea 1: Domiciliary, Chapel, Catholic Chapel (HABS CAL,19-LOSAN,12A-1, 1960)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 22



Figure 43: Subarea 1—Domiciliary, Second generation domiciliary building (VA Archives, nd)



Figure 44: Subarea 1—Domiciliary, Second generation domiciliary building (extant), view northeast (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 23



Figure 45: Subarea 1—Domiciliary, Second generation domiciliary building (VA Archives, nd)



Figure 46: Subarea 1—Domiciliary, Building 13, General Mess Hall (extant), view northwest (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 24



Figure 47: Subarea 1—Domiciliary, Building 220, Women's Cottage (extant), view south (VA Archives, nd)



Figure 48: Subarea 1—Domiciliary, Building 66, Trolley House (extant), view north (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 25



Figure 49: Subarea 1—Domiciliary area, view north (VA Archives, circa 1950)



Figure 50: Subarea 1—Domiciliary area, view northeast (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 26



Figure 51: Subarea 1—Domiciliary (top) and subarea 3: Research, view southeast (VA Archives, circa 1984)



Figure 52: Subarea 1—Domiciliary, view west (VA Archives, circa 1984)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 27



Figure 53: Subarea 1—Domiciliary , view northeast (VA Archives, circa 1984)



Figure 54: Subarea 1—Domiciliary, view northeast (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 28



Figure 55: Subarea 1—Domiciliary, view northwest (VA Archives, circa 1984)



Figure 56: Subarea 1—Domiciliary, view north (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 29



Figure 57: Subarea 1—Domiciliary (bottom) and subarea 4—Neuropsychiatric (N.P.) Hospital (top), view northwest (VA Archives, circa 1984)



Figure 58: Subarea 1: Domiciliary (bottom right) and subarea 4—Neuropsychiatric (N.P.) Hospital (top left), view northwest (VA Archives, circa 1984)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 30



Figure 59: Subarea 1—Domiciliary, view north (VA Archives, circa 1984)



Figure 60: Subarea 1—Domiciliary, view northeast (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 31



Figure 61: Subarea 3—Research, gate at San Vicente Boulevard, view east, note railroad crossing in background (Los Angeles Public Library, circa 1915)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 32



Figure 62: Subarea 3—Research, Building 114, view northeast (VA Archives, nd)



Figure 63: Subarea 3—Research, Building 114, view northeast (VA Archives, nd)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 33



Figure 64: Subarea 3—Research, Building 114, view northeast (VA Archives, nd)



Figure 65: Subarea 3—Research, Building 116, view northwest (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 34



Figure 66: Subarea 3—Research, Building 113, view northeast (VA Archives, nd)



Figure 67: Subarea 3—Research, Building 115, view south (VA Archives, nd)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

<u>West Los Angeles Veterans Affairs Historic District</u>
Name of Property
<u>Los Angeles, CA</u>
County and State
<u>U.S. Second Generation Veterans Hospital</u>
Name of multiple listing (if applicable)

Section: Additional Documentation Page 35



Figure 68: Subarea 3—Research, view north (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 36



Figure 69: Subarea 4—Neuropsychiatric (N.P.) Hospital, Buildings 156, 157, and 158 (extant), view northwest (VA Archives, circa 1930)



Figure 70: Subarea 4—Neuropsychiatric (N.P.) Hospital, Buildings 156, 157, and 158 (extant), view north (VA Archives, circa 1930)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 37



Figure 71: Subarea 4—Neuropsychiatric (N.P.) Hospital, Building 158 (extant), view southwest (VA Archives, nd)



Figure 72: Subarea 4—Neuropsychiatric (N.P.) Hospital, Building 156 (extant), view southwest (VA Archives, 1972)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 38



Figure 73: Subarea 4—Neuropsychiatric (N.P.) Hospital, Building 211, Brentwood Theater (extant), view southwest (VA Archives, nd)



Figure 74: Subarea 4—Neuropsychiatric (N.P.) Hospital, Building 300 (extant), view northwest (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 39



Figure 75: Subarea 4—Neuropsychiatric (N.P.) Hospital, Building 258 (extant), view northwest (VA Archives, circa 1950s)



Figure 76: Subarea 4—Neuropsychiatric (N.P.) Hospital, Building 258 (extant), view north (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 40



Figure 77: Subarea 4—Neuropsychiatric (N.P.) Hospital, Building 258 (extant), view northwest (VA Archives, circa 1980s)



Figure 78: Subarea 4—Neuropsychiatric (N.P.) Hospital, Building 258 (extant), view northwest (VA Archives, circa 1980s)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 41



Figure 79: Subarea 4—Neuropsychiatric (N.P.) Hospital, Buildings 206 (left) and 207 (right, extant), view southeast (VA Archives, nd)



Figure 80: Subarea 4—Neuropsychiatric (N.P.) Hospital, Buildings 256 (right) and 257 (left, extant), view southwest (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 42



Figure 81: Subarea 4—Neuropsychiatric (N.P.) Hospital, view north-east (VA Archives, circa 1984)



Figure 82: Subarea 4—Neuropsychiatric (N.P.) Hospital, view north-east (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 43



Figure 83: Subarea 4—Neuropsychiatric (N.P.) Hospital, view north-west (VA Archives, circa 1984)



Figure 84: Subarea 4: Neuropsychiatric (N.P.) Hospital, view south (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 44



Figure 85: Subarea 4—Neuropsychiatric (N.P.) Hospital, view west (VA Archives, circa 1984)



Figure 86: Subarea 4—Neuropsychiatric (N.P.) Hospital, view south-east (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 45



Figure 87: Subarea 4—Neuropsychiatric (N.P.) Hospital at right, view northeast (VA Archives, circa 1984)



Figure 88: Subarea 4—Neuropsychiatric (N.P.) Hospital, view northwest (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 46

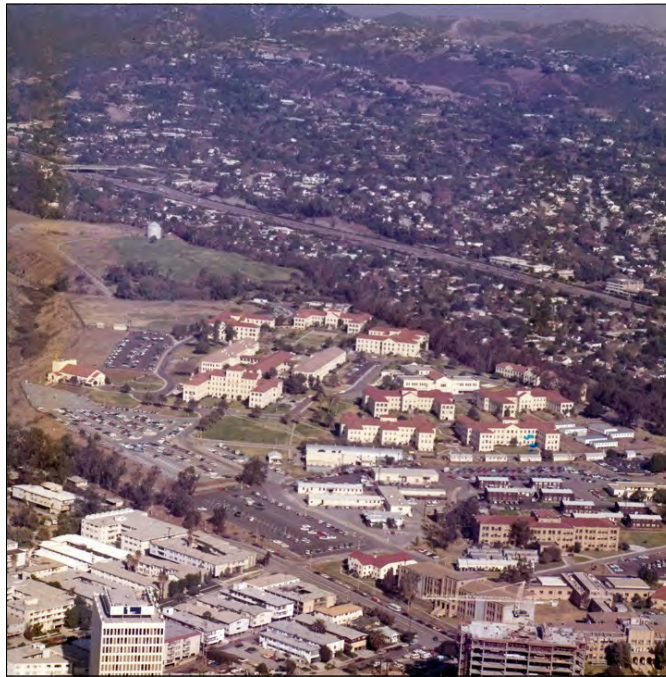


Figure 89: Subarea 4—Neuropsychiatric (N.P.) Hospital (center), view northeast (VA Archives, circa 1984)



Figure 90: Subarea 4—Neuropsychiatric (N.P.) Hospital (center), view northeast (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 47

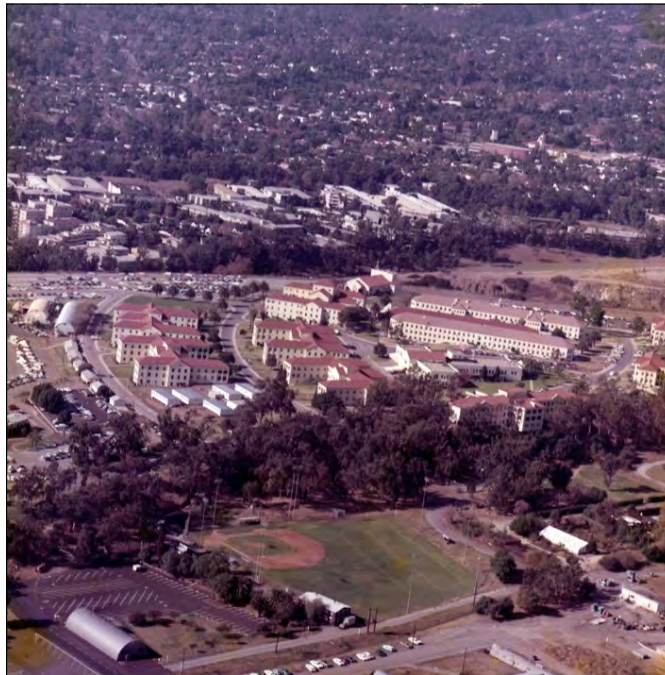


Figure 91: Subarea 4—Neuropsychiatric (N.P.) Hospital, view northwest (VA Archives, circa 1984)



Figure 92: Subarea 4—Neuropsychiatric (N.P.) Hospital, view north-west (VA Archives, circa 1984)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 48



Figure 93: Subarea 5—Utility, view southeast (VA Archives, circa 1984)



Figure 94: Subarea 5—Utility, view north (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 49



Figure 95: Subarea 6—Recreation, Japanese Garden at north of campus, view east (VA Archives, circa 1973)



Figure 96: Subarea 6—Recreation, golf course at north of campus (center), view east (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 50



Figure 97: Subarea 6—Recreation, baseball field (center), view east (VA Archives, circa 1984)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 51



Figure 98: Subarea 7—General Hospital, Wadsworth Hospital (not extant) under construction, view west (Los Angeles Public Library, circa 1925)



Figure 99: Subarea 7—General Hospital, Wadsworth Hospital (not extant), view southwest (Los Angeles Public Library, 1937)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 52



Figure 100: Subarea 7—General Hospital, Wadsworth Hospital (not extant), view west (VA Archives, circa 1940)

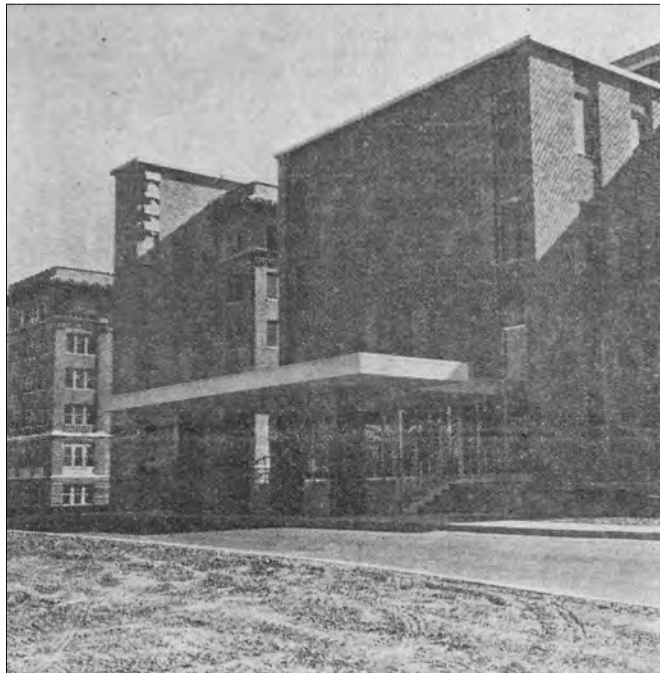


Figure 101: Subarea 7—General Hospital, Wadsworth Hospital (not extant), note entry designed by William L. Pereira & Associates, view west (VA Archives, 1960)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District

Name of Property

Los Angeles, CA

County and State

U.S. Second Generation Veterans Hospital

Name of multiple listing (if applicable)

Section: Additional Documentation

Page 53



Figure 102: Subarea 7—General Hospital, Wadsworth Hospital (not extant), view northeast (VA Archives, circa 1965)



Figure 103: Subarea 7—General Hospital, Building 304 (bottom), and Building 500 under construction, view northeast (VA Archives, circa 1975)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 54



Figure 104: Cemetery, Memorial Day (VA Archives, c.1905)



Figure 105: Cemetery, Memorial Day (Los Angeles Public Library, 1935)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 55



Figure 106: Cemetery, looking north with I-405 (USC digital archives, 1968)



Figure 107: Cemetery, view east (VA Archives, circa 1984)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 56



Figure 108: Cemetery, gate (not extant, VA Archives, nd)



Figure 109: Cemetery, entrance gate with gatehouse (not extant, HABS No CA-2709-B-2, 1949)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 57



Figure 110: Northeast Quadrant, Cemetery: Chapel (Administration Building) (HABS No. CA-2709-11, 2000)



Figure 111: Cemetery, Chapel (Administration Building) interior (HABS No. CA-2709-16, 2000)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 58



Figure 112: Cemetery, Chapel and parking at Constitution Avenue and Sepulveda Boulevard entrance (HABS No. CA-2709-A-1, 2000)



Figure 113: Northeast Quadrant, Cemetery: Bivouac of the Dead Plaques (HABS No. CA-2709-A-3, 2000)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 59



Figure 114: Cemetery, front of gatehouse at Constitution Avenue and Sepulveda Boulevard (HABS No. CA-2709-A-3, 2000)



Figure 115: Cemetery, maintenance yard (HABS No. CA-2709-27, 2000)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 60



Figure 116: Cemetery, view west towards NHDVS Monument on San Juan Avenue and Buena Vista Avenue (HABS No. CA-2709-3, 2000)



Figure 117: Cemetery, Columbarium (VA Archives, nd)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 61



Figure 118: Cemetery, gate Houses, view south (HABS No. CA: 2709-9, 2000)



Figure 119: Cemetery, view northwest from Taul Avenue (HABS No. CA: 2709-7, 2000)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 62



Figure 120: Cemetery, Civil War Soldier Monument, (HABS No. CA: 2709-32, 2000)



Figure 121: Cemetery, Spanish-American War Monument, (HABS No. CA: 2709-34, 2000)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

West Los Angeles Veterans Affairs Historic District
Name of Property
Los Angeles, CA
County and State
U.S. Second Generation Veterans Hospital
Name of multiple listing (if applicable)

Section: Additional Documentation Page 63



Figure 122: Cemetery, Rostrum (HABS no. CA 2709-29, 2000)



Figure 123: Cemetery, Comfort Station (restrooms, HABS No. CA 2709-26, 2000)







SPEED
LIMIT
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33
P. 814-113-115, 200-208, 500
T. 814-113-115, 200-215, 218-220, 300, 500

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Blue street sign



SPEED
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PREPARED
TO STOP









ESTATE 11100













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300







258



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ACCESSIBLE
ROUTE

UNIVERSITY OF CALIFORNIA
MEDICAL CENTER
SAN DIEGO

49





CITY AND
TRANSPORTATION
SECTION











FACILITY GATES CLOSED
UNTIL FURTHER NOTICE
FOR INCREASED
SECURITY MEASURES
PLEASE USE MAIN ENTRANCE
AT WILSHIRE BLVD

SCHOOL BUS

WILSHIRE



Ohio Av

ALL VEHICLES MUST STOP HERE.
NO THROUGH TRAFFIC.
ALL VEHICLES MUST BE INSPECTED BY SECURITY PERSONNEL.
ALL VEHICLES MUST BE INSPECTED BY SECURITY PERSONNEL.









NOTICE
AUTHORIZED
PERSONNEL
ONLY



CHARLES
YOUNG
MAY 10 1892
MAY 10 1968







66

STOP















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PORTABLE TOILETS
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NATIONAL
PORTABLE TOILETS
1-800-355-1471



20







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AMERICAN COLLEGE



220
East Washington
Berkeley, CA 94704



WADSWORTH

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WADSWORTH

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226



POLICE HEADQUARTERS

236

















RESERVED
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117

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NOTICE



**NO FIREARMS
OR WEAPONS
ALLOWED ON
THIS PROPERTY**

16 USC § 930









206

↑ Bldgs. 206, 207, 208
Shelburne Theatre
No Left Turn









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BRENTWOOD

BOY SCOUTS



BILL GARD PHOTO



NO PARKING



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INPATIENT AND OUTPATIENT
MENTAL HEALTH ADMINISTRATION

INPATIENT AND OUTPATIENT
MENTAL HEALTH ADMINISTRATION

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MENTAL HEALTH ADMINISTRATION

INPATIENT AND OUTPATIENT
MENTAL HEALTH ADMINISTRATION

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Vet Industries

Compensated Work
Therapy





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NOTICE
NO FIREARMS
OR WEAPONS
ALLOWED ON
THE PREMISES





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PERGOLA

PERGOLA



1501

1884

EDWARD
KENTON

1884

ALICE
KENTON







PERGOLA

















Veteran

LOS ANGELES NATIONAL CEMETERY

1918 TO HONOR THOSE WHO VOLUNTARILY AND FEARLESSLY GAVE THEIR LIVES TO CLEAR THE AIR OF THE SPANISH INFLUENZA PANDEMIC. UNITED STATES OF AMERICA. UNITED STATES OF AMERICA. THE NATIONAL CEMETERY. LOS ANGELES, CALIFORNIA.

9388

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Wichita

