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September 17, 2021

TO: DISTRIBUTION

FROM: KIMBERLY ONG *KO*  
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SUBJECT: WESTSIDE PURPLE LINE EXTENSION SECTION 3 PROJECT  
AUGUST 2021 MONTHLY PROJECT STATUS REPORT

Enclosed herewith is the Monthly Project Status Report for the Westside Purple Line Extension Section 3 Project. This report contains the Los Angeles County Metropolitan Transportation Authority's (LACMTA) representation of the Westside Purple Line Extension Section 3 Project status for the period ending August 27, 2021.

If you have any questions regarding this report or its supporting information, please contact Marvin Li, Senior Director, Program Control at (424) 551-4523.

KO: XC  
Enclosure

PURPLE (D LINE) EXTENSION PROJECT Section 3



Metro®



# Westside Purple Line Extension Section 3 Project

## MONTHLY PROJECT STATUS REPORT

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION (FTA).

**August 2021**

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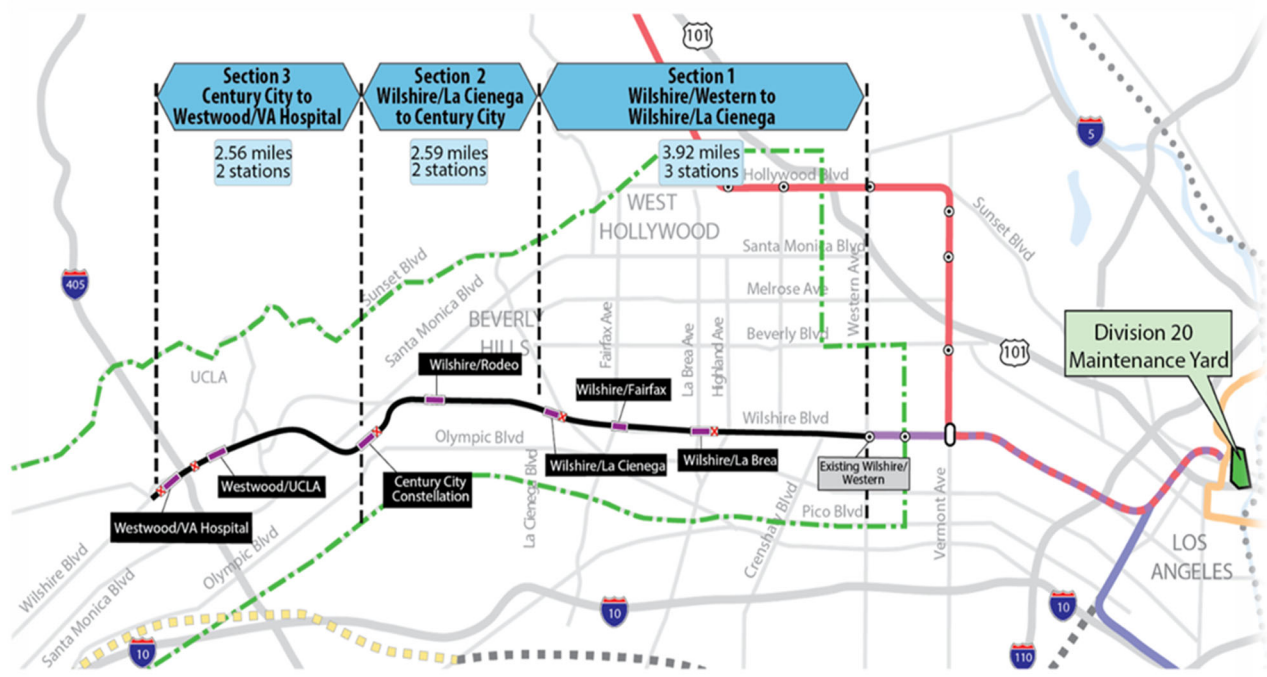
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## PROJECT OVERVIEW

### Project Background

The Westside Purple Line Extension Section 3 Project (Project) is the third of three sections to be designed and constructed as part of the Los Angeles County Metropolitan Transportation Authority's (Metro) Measure R and Measure M Programs. The Measure R and Measure M Programs were approved by Los Angeles County voters in November 2008 and in November 2016, respectively, and provide in total a one-cent sales tax to finance new transportation projects. In April 2012, the three sections of the Project were environmentally cleared and adopted by Metro Board of Directors.

Section 3 will extend to Westwood from the future Century City Constellation Station that is part of the Westside Purple Line Extension Section 2 Project and currently under construction. The Project is located entirely underground, primarily following Wilshire Boulevard, and includes the design and construction of approximately 2.56 miles of double-track heavy rail, two new stations as well as the purchase of 16 heavy rail vehicles. The Westwood/UCLA Station is within the jurisdiction of the City of Los Angeles, and the Westwood/Veterans Administration (VA) Hospital Station is within the jurisdiction of the unincorporated area of Los Angeles County. The Project also includes train controls, signals, traffic controls, communications, traction power supply and distribution, fare collection systems and equipment, acquisition of right-of-way, and utility relocations.



The Westwood/UCLA Station box will be under Wilshire Boulevard beginning west of Westwood Boulevard and extending to the east of Veteran Avenue. The station will have three entrances, two full entrances on the northside of Wilshire Boulevard and one-half entrance on the southside of Wilshire Boulevard. The two full entrances will be located at Wilshire Boulevard and Gayley Avenue, and at Wilshire and Westwood Boulevards. The half entrance will be located at Wilshire and Westwood Boulevards.

The Westwood/VA Hospital Station box will be under the VA south campus, beginning west of the I-405 Freeway and extending west of Bonsall Avenue. The station will be equipped with double crossovers, one at each end of the station. The station entrance will be south of Wilshire Boulevard and east of Bonsall Avenue.

### **Major Procurements**

Contract C1151 – Tunnels: The procurement of this design/build contract utilized a competitive negotiated procurement process to select a contractor that was determined to have met all the requirements set forth in the Request for Proposals (RFP) with a technically acceptable, “Lowest Evaluated Price” selection process. In June 2018, the Board authorized to award the C1151 Tunnels contract, subject to the FTA approval of the Letter of No Prejudice (LONP). The contract was awarded to Frontier-Kemper/Tutor Perini, JV (FKTP) on November 30, 2018 after receiving the LONP from the FTA. Notice to Proceed (NTP) was issued on January 15, 2019.

The design/build contract provides for final design and construction of the twin bored tunnels, complete with cross-passages, along the 2.56-mile alignment. Contract scope includes demolition and removal of structures and clearing sites to facilitate construction operations. A tunnel boring machine (TBM) launch shaft will be constructed at the westerly end of the Westwood/VA Hospital Station. Upon substantial completion, FKTP will turn over all temporary lighting and ventilation to the follow-on contractor (Contract C1152).

Contract C1152 – Stations, Trackwork, Systems and Systems Integration Testing: The procurement of this design/build contract utilized a two-step approach with the submittal of qualification statements through a Request for Qualification (RFQ) process, prequalification of qualified proposers followed by the release of a Request for Proposals (RFP) soliciting technical and price proposals on a Best Value selection process with an option at Metro’s discretion for Best and Final Offers (BAFO). In February 2019, the Board authorized the CEO to award the C1152 Stations, Trackwork, Systems, and Systems Integration Testing contract to Tutor Perini/O&G, JV (TPOG), subject to the FTA approval of a Full Funding Grant Agreement (FFGA). After the February Board action, FTA issued an LONP on April 18, 2019 that allows contract award to occur prior to receipt of an FFGA. The Board approved award of the C1152 contract at the May 2019 Board Meeting, and the Contract was awarded on May 28, 2019. Notice to Proceed was issued on July 15, 2019 with a commencement date of July 16, 2019.

The Design/Build contract provides for final design and construction of the infrastructure along the 2.56-mile alignment. Contract scope includes demolition and removal of structures and clearing sites to facilitate construction operations. The twin bored tunnels will be complete with walkways including all mechanical, electrical, and finished work. Two underground stations are to be constructed, with the Westwood/VA Hospital Station having two double crossovers, one at each end of the station. Each station will be equipped with stairs, escalators, and elevators which meet ADA requirements. The scope of work also includes all architectural finishes, mechanical and electrical systems and equipment including train control, traction power, communications, trackwork, system tie-in at the future Century City Constellation Station, testing and commissioning.

Contract C1153 – Advanced Utility Relocations: The work scope of this firm fixed price contract included the relocation of existing LADWP power and water utilities within the construction limits of the Westwood/UCLA Station. Metro issued Notice of Intent (NOI) to award to Steve Bubalo Construction Company (SBCC) on October 2, 2017 and NTP on January 2, 2018. SBCC was responsible for working in streets, procuring materials, and coordinating with the utility owner. SBCC constructed new facilities in accordance with the utility plans and specifications, provided traffic control, restored streets, and supported utility crews installing cabling and during cut-over of the existing utilities. SBCC achieved contract substantial completion on June 30, 2019 and Contract Final Acceptance was issued by Metro on April 13, 2020.

Contract C1204 - Shuttle and Valet Services During Construction of the Westwood/VA Station: The work scope for this firm fixed price contract includes providing shuttle and valet services to the West Los Angeles Veterans Affairs (VA) Medical Center during the decommission of Parking Lot 42 and buildout of the replacement parking structure. The Request for Proposal (RFP) was issued on January 15, 2021. *Proposals were received, evaluated, and currently finalizing award.*

#### Metro Furnished Equipment

Metro has procured a contract to provide 16 Heavy Rail Vehicles (HRV) necessary to operate the extension of the Purple Line. The scope of the HRV contract includes design, manufacturing, testing and delivery of the vehicles. An additional contract will be procured for the Universal Fare System (UFS). The scope of the UFS contract will include design, fabrication, and installation of equipment at the two new stations and system testing.

#### **Program Management**

The Westside Purple Line Extension Section 3 Project is being managed under the direction of an Integrated Project Management Office (IPMO). WSP Global (WSP) provides engineering and design support services, while MPPC Partners, a Joint Venture provides construction management support services. The on-site program management team is also supported by Metro headquarters' resources and includes, but not limited to,



engineering, risk management, environmental, quality management, operations, and creative services departments.

Project Schedule and Budget: The Revenue Service Date (RSD) is planned for 2027.

In June 2018, the Board authorized to establish the Life of Project (LOP) Budget for the Tunnels portion of the Project. In February 2019, the Board amended the LOP Budget to include the Stations portion of the Project. The LOP Budget for the Westside Purple Line Extension Section 3 Project is \$3.2 billion excluding Finance Charges of \$387.4 million. A detailed LOP Budget forecast is included under the Budget and Cost Forecast section of this report.

Funding is projected from a variety of sources to include:

- Federal - Section 5309 New Starts
- Federal - Section 5309 New Starts (ARPA-CIG)
- Federal - Surface Transportation Block Grant Program
- Federal - CMAQ (Congestion Mitigation & Air Quality)
- Local Agency Contributions
- TCRP
- Measure R 35%
- Measure M 35%
- State RIP

Start Up: The commencement of pre-revenue operations will be determined by Metro. Generally, all systems integration testing will have been completed and passed. All testing will be required to include and pass a “stress test” of maximum operational service levels to be acceptable. Pre-Revenue Operations include train runs, especially those involving multiple trains on the integrated and fully operational extension; rehearsal of expected revenue operations scenarios; abnormal and emergency scenarios in which random combinations of system interactions are tested and equipment “burned-in”; and training of emergency services as well as Metro personnel who will operate and maintain the extension. Activities occurring during Pre-Revenue Operations are carried out by a designated Metro Project Rail Activation Group.

## EXECUTIVE SUMMARY

*In August 2021, the Project achieved 28% completion to-date based on earned value measurements for the overall Project.* The current focus of the Project is advancing third party utility relocations, initial TBM drive to fully assemble the gantries for full production, continuing final design for Contract C1151 (Tunnels) and for Contract C1152 (Stations, Trackwork, Systems and Systems Integration Testing).

Contract C1151 has a substantial completion date of February 2023 and scheduled to demobilize by May 2023, per Contract Modification 2. Contract C1152 has a substantial completion date of June 2026 and scheduled to demobilize by December 2026 in support of Revenue Service in 2027.

The following is an overview of current design and construction activities.

### Design Status

- The Engineering Management Services team continues to provide engineering services during construction, real estate support services, supporting Metro in reviewing the C1151 Tunnels and C1152 Stations final design submittals, responding to RFIs, and assisting in the preparation of change notices.
  
- C1151 – Tunnels Contract:  
The design work has been identified into distinct design unit packages:
  - DU 1.1 – Tunnels and Cross Passages
    - DU 1.1A - Revised Tunnel Alignment (Drawings and Reports associated with revised tunnel profiles only)
    - DU 1.1B - Sump Pump Connection
    - DU 1.1 Permeation Grouting at Westfield Mall
  - DU 1.3 – Westfield Mall Compensation Grouting Access Shaft(s) (See Note 1)
  - DU 2.1 – VA Hospital West End Wall
  - DU 2.2 – VA Hospital East End Wall
  - DU 2.3 – UCLA East and West End Walls
  - DU 3.1 – Tail Track Exit Shaft
  - DU 3.2A – SCE Power Connection within County of LA
  - DU 3.2B – SCE Power Connection within City of LA
  - DU 3.3A – Tail Track Exit Shaft Staging Area
  - DU 3.3B – Temporary Water and Sewer for Tail Track Exit Shaft Staging Area

Notes:

1. FKTP plans to suspend DU 1.3. This design unit will remain on the list until a revised Design Work Plan is received from FKTP. The permeation grouting design at Westfield Mall is submitted under DU 1.1.

Design unit packages will be submitted and evaluated at each of the following phases: 60%, 85%, 100%, Approved for Construction (AFC), and Issued for Construction (IFC).

- IFC is on-going for DU 1.1A and DU1.1B. FKTP will submit a consolidated package for DU 1.1. After Metro confirmed completeness of the package, Metro will sign off on the AFC set and IFC can be issued.

Deliverables submitted during this reporting period are as follows:

- *DU 1.1 Tunnel Vertical Alignment Drawings and Calculations, AFC Rev 2*
- C1152 – Stations Contract:  
Final design for the various design packages is on-going. Design progress is being discussed and presented at recurring workshops for various DUs/APDUs and at third party coordination meetings.

The design work has been identified into distinct design unit packages:

- DU 40: VA Station Temporary Works
  - APDU 41 (41A, 41B, 41D)
  - APDU 42
  - APDU 43 (43A)
  - APDU 44 (44A, 44B)
  - APDU 45
  - APDU 46

Note: APDU 41C has been deleted; work associated with this APDU will be included in APDU 43 and DU 60.

- DU 50: UCLA Station Temporary Works
  - APDU 51 (51A, 51B, 51C)
  - APDU 52, 52A, 52B
  - APDU 53
  - APDU 54
  - APDU 55

Note: Smaller packages have been submitted for APDU 54, such as Part 1 and Part 2

- DU 60: VA Station
  - APDU 61 (61A, 61B)
  - DU 60 (60, 60A, 60B)
- DU 70: UCLA Station
  - DU 70 (70, 70A, 70B, 70C, 70D)
- DU 80: Tunnels/Cross Passages, Track & Systems
  - DU 81
  - DU 82

- DU 90: Tail Track Exit Shaft and Western VA Staging Area
  - APDU 90 (90A, 90B)

Design unit packages will be submitted and evaluated at each of the following phases:

- DUs 60, 70, 81, 82: 60%, 85%, 100%, AFC and IFC
  - 85% design is on-going for DUs 60A, 60B, 81
  - 100% design is on-going for DUs 60, 70A, 70B, 70C, 82
  - AFC design is on-going for DU 70D
- DU 90: OTS, 85%, 100%, AFC and IFC
  - *AFC design is on-going for DU 90*
- APDU 61: 60%, OTS, 100%, AFC and IFC
  - AFC design is on-going for APDU 61
- APDUs 41, 42, 43, 44, 45, 51, 52, 53, 54: OTS, 100%, AFC and IFC
  - *100% design is on-going for APDU 53 (Parts 1-3), 55 (Parts 1, 3, 4)*
  - *AFC design is on-going for APDUs 44B, 51B, 52 Part 2, 55 (Parts 2 & 5)*
  - *IFC is on-going for APDUs 41A, 41D, 45, 51C, 52 Part 1*

DUs and APDUs submitted this reporting period:

- *APDU 41A Part 2, AFC*
- *APDU 45, AFC*
- *APDU 42 Specifications Only, IFC*
- *APDU 44A Specifications Only, IFC*
- *APDU 52 Specifications Only, IFC*
- *APDU 52 Part 1, AFC*
- *APDU 55 Parts 2 and 5, 100%*
- *APDU 90A & 90B, 100%*

### Construction Status

- C1153 – Advanced Utility Relocations: (Complete)  
Substantial completion occurred on June 30, 2019 and the contract is 100% complete. The City of Los Angeles' Bureau of Contract Administration signed-off on all punch list items on July 31, 2019. SBCC completed all punch list items and submitted 100% billing for all remaining items. SBCC submitted request for Certificate of Final Acceptance and release of retention on April 12, 2020 and Final Acceptance was issued by Metro on April 13, 2020. Metro has issued a contract modification to close the balance of provisional sums and final payment and the release of retention was processed to the contractor. Metro issued the final release of retention check and SBCC issued "Unconditional Waiver and Release on Final Payment" on July 16, 2020.
- C1151 – Tunnels Contract:  
*Tunnel Boring Machine No. 1 resumed mining in August and is approaching the west enwall of the Westwood/VA Station. The gantries for Tunnel Boring Machine No. 2 have been assembled and moved into the BL tunnel where the mechanical and electrical connections for each gantry will commence.* Permeation grouting below the Metropolitan Water District waterline in Sepulveda Blvd continues and is scheduled to be complete by mid-September. Instrumentation installation along the alignment and segment production is ongoing.
- C1152 – Stations Contract:  
*Final design continues and is approximately 89% complete. At the Westwood/VA Station area, demolition of the non-active steam tunnel was completed, and deliveries of lagging materials continued. Additionally, decking manufacturing began at an offsite location. At the Westwood/UCLA station, Support of Excavation (SOE) pile installation began on Lot 36. Utility sewer and storm drain relocations on Wilshire and Gayley Avenue continues.*
- Third Party Utility Relocations:  
The LADWP power cutover to 10921 Wilshire Boulevard is expected to be complete in winter 2021.

**Cost and Schedule Summary**

Metro has issued Contract Modification 2 to the C1151 Tunnels contractor for extending Substantial Completion by 95 calendar days. Mitigation efforts are being evaluated to improve on the Substantial Completion date and not to impact the C1152 Stations contractor. It is anticipated that the forecast revenue service date can be achieved.

*The Critical Path (CP) of the Project includes third party utility relocations, C1152’s Contractor required utility relocations, followed by both stations’ support of excavation, street decking, station structural box excavations, and structural concrete for the stations.* Next it flows into installation of the interior finishes and electrical equipment, followed by systems, testing and pre-revenue operations. A summary graphic of the critical path is found on Page 18.

**C1151 Tunnels**

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed	01/15/19A	0	01/15/19A		0
Substantial Completion	11/15/22	95	02/17/23	02/17/23	0

**C1152 Stations, Trackwork, Systems, and Testing**

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed	7/16/19A	0	7/16/19A		0
Substantial Completion	6/08/26	0	6/08/26	6/08/26	0

Project costs continue to track within budget and projected contingency limits. The Current Budget and Current Forecast remain the same this period at \$3.6 billion. Detailed cost and budget information is provided on Page 20.

There is an open claim that is being evaluated.

- C1151 Western VA TTES Site Access Delay (Claim 1)

**Key Management Concerns**

No concerns to report at this time.

**Project Construction Photos**



Sewer Relocation for Westwood/UCLA Station



Temporary Ventilation System for "Aura" TBM



Lagging Delivered to Westwood/VA Station area (Lot 42)



Aerial Overview at Tail Track Exit Shaft

# PROJECT UPDATE

## PROJECT SCHEDULE

### Project Summary Schedule

WPLE Section 3 Century City Constellation to VA Hospital - Aug 2021		WPLE Section 3 Level 1 Schedule					MASTER SCHEDULE									
Activity Name	Finish	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028				
<b>WPLE Section 3 Century City Constellation to VA Hospital</b>	<b>2027</b>	[Gantt bar spanning 2018 to 2027]														
<b>PROJECT PLANNING &amp; DEVELOPMENT</b>	21-Dec-18 A	[Gantt bar from 2018 to 2021]														
<b>ENGINEERING</b>	24-Nov-21	[Gantt bar from 2018 to 2022]														
<b>RIGHT-OF-WAY (ROW)</b>	24-Feb-23	[Gantt bar from 2019 to 2023]														
<b>OWNER FURNISHED EQUIPMENT</b>	24-Apr-25	[Gantt bar from 2020 to 2025]														
<b>CONSTRUCTION</b>	20-Aug-26	[Gantt bar from 2020 to 2026]														
Utilities	27-Aug-21	[Gantt bar from 2018 to 2022]														
Guideway & Track	08-Jul-25	[Gantt bar from 2019 to 2025]														
Stations	29-Oct-25	[Gantt bar from 2020 to 2026]														
Systems	13-Oct-25	[Gantt bar from 2020 to 2025]														
Testing	13-May-26	[Gantt bar from 2021 to 2026]														
<b>Start Up</b>	<b>2027</b>	[Gantt bar in 2027]														
Dynamic Testing and System Integration Tests	2026	[Gantt bar in 2026]														
Test Running & Trial Operations	2027	[Gantt bar in 2027]														
Revenue Service Date - RSD	2027	[Gantt bar in 2027]														
<b>Miscellaneous</b>	<b>2027</b>	[Gantt bar in 2027]														
Metro Activities	2027	[Gantt bar in 2027]														
FTA Process & Approvals	16-Mar-20 A	[Gantt bar from 2018 to 2021]														

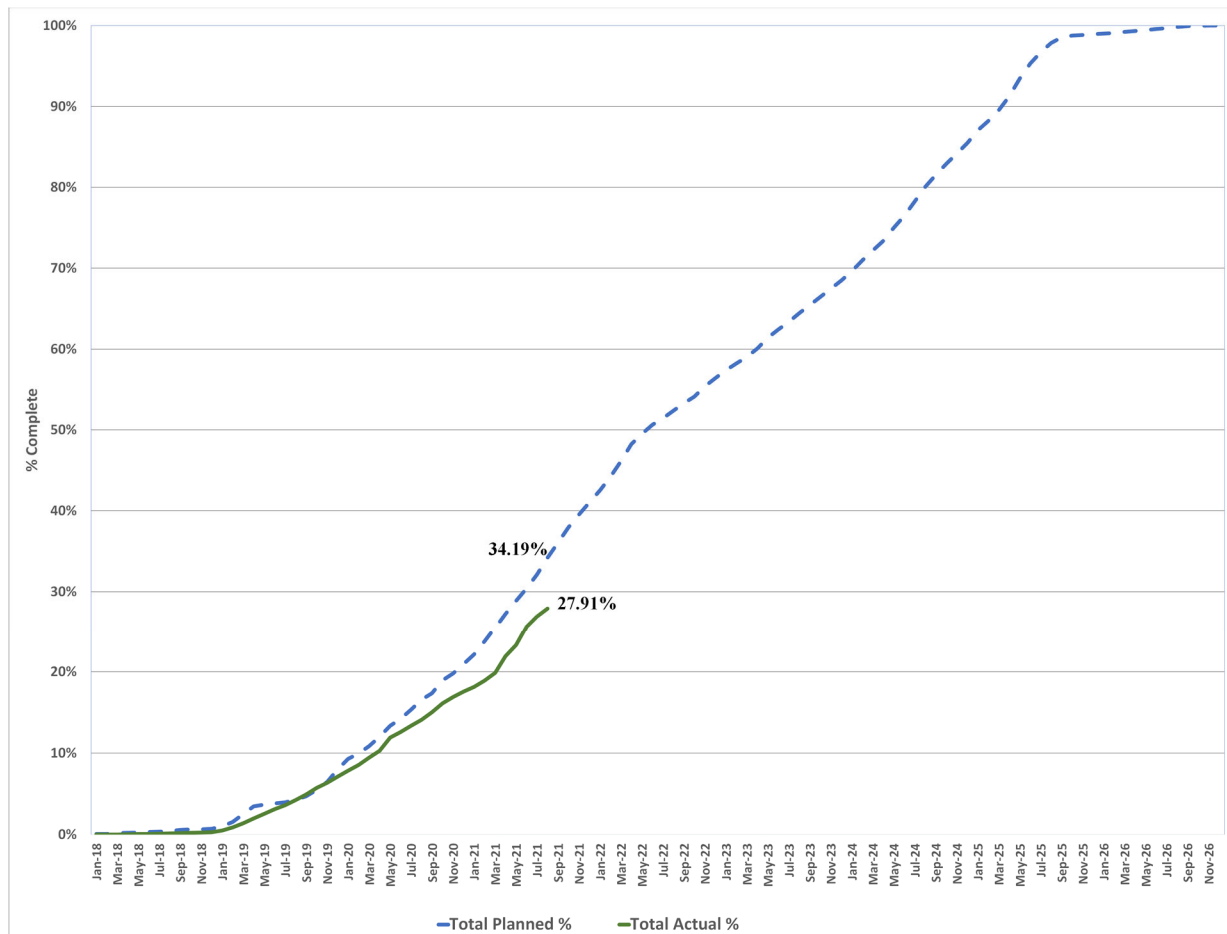
<ul style="list-style-type: none"> <li> Remaining Work</li> <li> Milestone</li> <li> Summary</li> </ul>	Page 1 of 1 WPLE Section 3 Level 1 Summary Schedule Los Angeles County Metropolitan Transportation	Data Date: 01-Sept-21 Current Date: 03-Sept-21
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**Progress Summary**

	Status	Change from Last Period	Comment
Forecast Revenue Service	2027		
FFGA Revenue Service	2028		FFGA was awarded in March 2020
<b>Final Design Progress:</b>			
Contract C1151	99%	0%	
Contract C1152	87%	2%	
<b>Construction Contracts Progress:</b>			
Contract C1151	58%	0.6%	
Contract C1152	10%	1%	
Contract C1153	100%	0%	Substantial Completion occurred on 6/30/19

**Planned vs. Actual Progress**



**Key Milestones Six-Month Look Ahead**

	Milestone Date	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22
C1151 BR Tunnel Full Mining Began	8/9/21A	⬡					
C1152 Started UCLA Station Piling	8/23/21A	⬡					
C1152 Submit DU 81 100%, Tunnels, Cross Passages & Tracks	09/17/21		⬡				
C1152 Submit APDU 51B AFC, LADWP-PS Power Connection	09/24/21		⬡				
C1152 Submit APDU 41D AFC, Permanent Water Service to VA Station	09/30/21		⬡				
C1152 Issue APDU 45 IFC, VA Steam Tunnel	10/06/21			⬡			
C1152 Issue APDU 61A IFC, Mural Removal & New Art Wall	10/08/21			⬡			
C1152 Issue APDU 61B IFC, Westwood VA Station N. Entrance & Ped Bridge	10/08/21			⬡			
C1151 BL Tunnel Full Mining Begin	10/19/21			⬡			
C1152 Issue APDU 90A IFC, Tail Track Exit Shaft	11/26/21				⬡		
C1152 Issue APDU 90B IFC, Western VA Staging Area Permanent Restoration	12/14/21					⬡	
C1152 Submit DU 70 100%, UCLA Station	12/14/21					⬡	
C1152 Submit DU 60 AFC, VA Station	01/31/22						⬡

MTA Staff 
 MTA Board Action 
 FTA (Federal Transit Administration) 
 Other Agencies 
 Contractor 
 D/B Contractor

**Major Equipment Delivery**

**MAJOR EQUIPMENT DELIVERY**

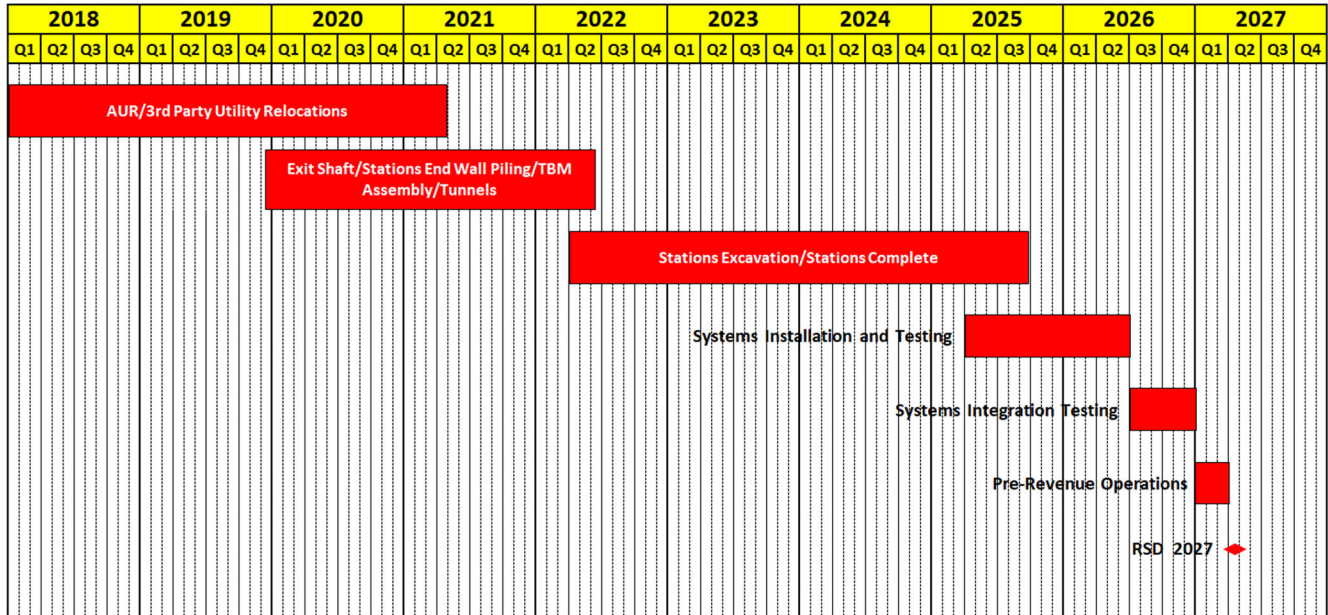
	<b>Submittal</b>	<b>Procurement</b>	<b>Delivery</b>	<b>Installation</b>
<b>C1151 Design/Build (Tunnels)*</b>	Finish	Start	Start	Start
Tunnel Boring Machines	01/31/19A	02/28/19A	05/15/20A	7/28/20A
<b>C1152 Design/Build (Stations)*</b>				
Emergency Ventilation Fans	09/13/22	09/14/22	05/22/23	04/29/24
Station Elevators	06/15/22	06/16/22	06/09/23	02/28/25
Station Escalators	06/15/22	06/16/22	06/09/23	03/21/25
Track – Running Rail	03/22/22	03/23/22	07/14/22	07/18/23
Traction Power Equipment	10/11/22	10/12/22	06/20/23	04/29/24
Automatic Train Control	10/11/22	10/12/22	06/20/23	01/10/25
SCADA RTU System	10/11/22	10/12/22	06/20/23	09/18/25
Radio System	10/11/22	10/12/22	06/20/23	09/18/25
<b>Heavy Rail Vehicles***</b>	Exercise Option #3 - TBD			
<b>Universal Fare System**</b>	TBD	TBD	TBD	2027

*\*Dates derived from FKTP’s July 2021 Schedule Update and TPOG’s July 2021 Schedule Update.*

**\*\*Forecast release date by TPOG to UFS Contractor access at stations.**

**\*\*\*Metro supplied equipment.**

Project Critical Path

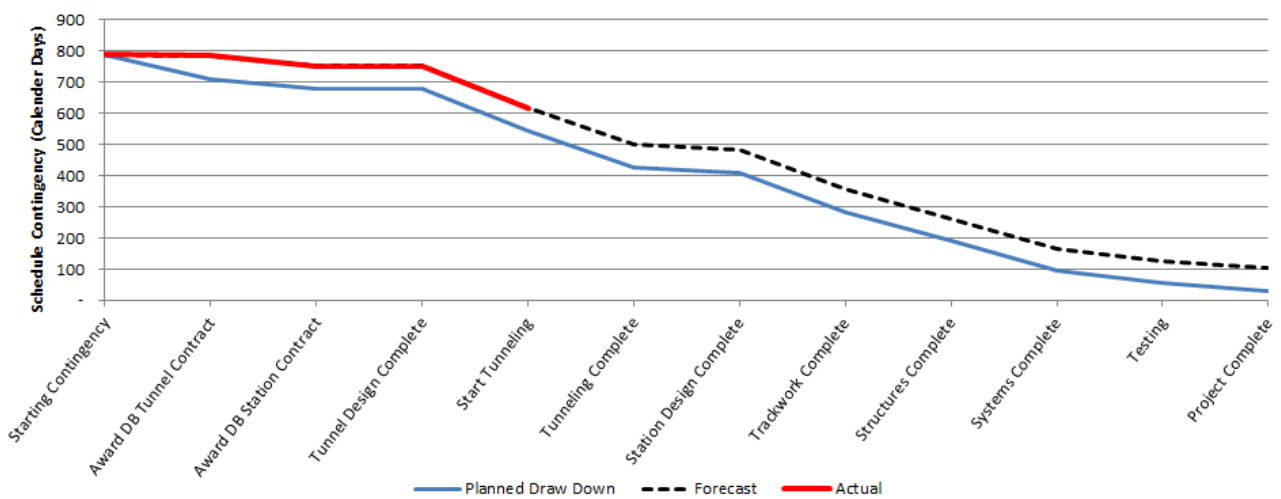


### Project Schedule Contingency Drawdown Analysis

The project schedule contingency drawdown model provides a dual-axis perspective based upon the FFGA RSD of December 2028 and Metro’s Project Master Schedule (PMS) forecast of 2027.

The introduction of the PMS model axis reflects a proportional distribution of available float relative to the FFGA model.

With regards to the FFGA RSD, schedule float of twenty-one (21) months has been maintained.



## PROJECT COST

### Project Cost Analysis

DOLLARS IN THOUSANDS

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		CURRENT BUDGET/ FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAYS & TRACK ELEMENTS	490,712	0	448,571	0	418,039	4,819	170,053	0	448,571	0
20	STATIONS, STOPS, TERMINALS, INTERMODAL	624,995	0	717,637	0	591,735	8,070	59,646	0	717,637	0
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN, BLDGS	0	0	0	0	0	0	0	0	0	0
40	SITWORK & SPECIAL CONDITIONS	497,805	0	758,379	170	664,547	5,769	382,441	0	758,379	0
50	SYSTEMS	130,778	0	81,835	2	57,129	40	122	0	81,835	0
	<b>CONSTRUCTION SUBTOTAL (10-50)</b>	<b>1,744,291</b>	<b>0</b>	<b>2,006,422</b>	<b>172</b>	<b>1,731,451</b>	<b>18,697</b>	<b>612,263</b>	<b>0</b>	<b>2,006,422</b>	<b>0</b>
60	ROW, LAND, EXISTING IMPROVEMENTS	467,874	0	416,057	3	141,960	263	44,757	0	416,057	0
70	VEHICLES	38,092	0	43,806	0	0	0	0	0	43,806	0
80	PROFESSIONAL SERVICES	508,093	0	519,733	15,333	294,357	3,695	227,160	0	519,733	0
	<b>SUBTOTAL (10-80)</b>	<b>2,758,350</b>	<b>0</b>	<b>2,986,018</b>	<b>15,508</b>	<b>2,167,768</b>	<b>22,654</b>	<b>884,180</b>	<b>0</b>	<b>2,986,018</b>	<b>0</b>
90	UNALLOCATED CONTINGENCY	464,142	0	236,730	0	0	0	0	0	236,730	0
100	FINANCE CHARGES	387,375	0	387,375	0	0	0	0	0	387,375	0
	<b>TOTAL PROJECTS 865523 (FFGA &amp; Non-FFGA)</b>	<b>3,609,867</b>	<b>0</b>	<b>3,610,123</b>	<b>15,508</b>	<b>2,167,768</b>	<b>22,654</b>	<b>884,180</b>	<b>0</b>	<b>3,610,123</b>	<b>0</b>
	ENVIRONMENTAL/PLANNING - 465523	1,131	0	875	0	875	0	875	0	875	0
	<b>TOTAL PROJECTS 465523 (ENV/PLAN'G)</b>	<b>1,131</b>	<b>0</b>	<b>875</b>	<b>0</b>	<b>875</b>	<b>0</b>	<b>875</b>	<b>0</b>	<b>875</b>	<b>0</b>
	<b>TOTAL PROJECTS 465523 &amp; 865523</b>	<b>3,610,998</b>	<b>0</b>	<b>3,610,998</b>	<b>15,508</b>	<b>2,168,643</b>	<b>22,654</b>	<b>885,055</b>	<b>0</b>	<b>3,610,998</b>	<b>0</b>

### Original Budget

Original Budget of \$3.6 billion reflects the Life of Project (LOP) budget approved by the Board on February 28, 2019, plus Finance Charges of \$387.4 million.

### Current Budget and Current Forecast

The Current Budget and Current Forecast remains the same this period at \$3.6 billion.

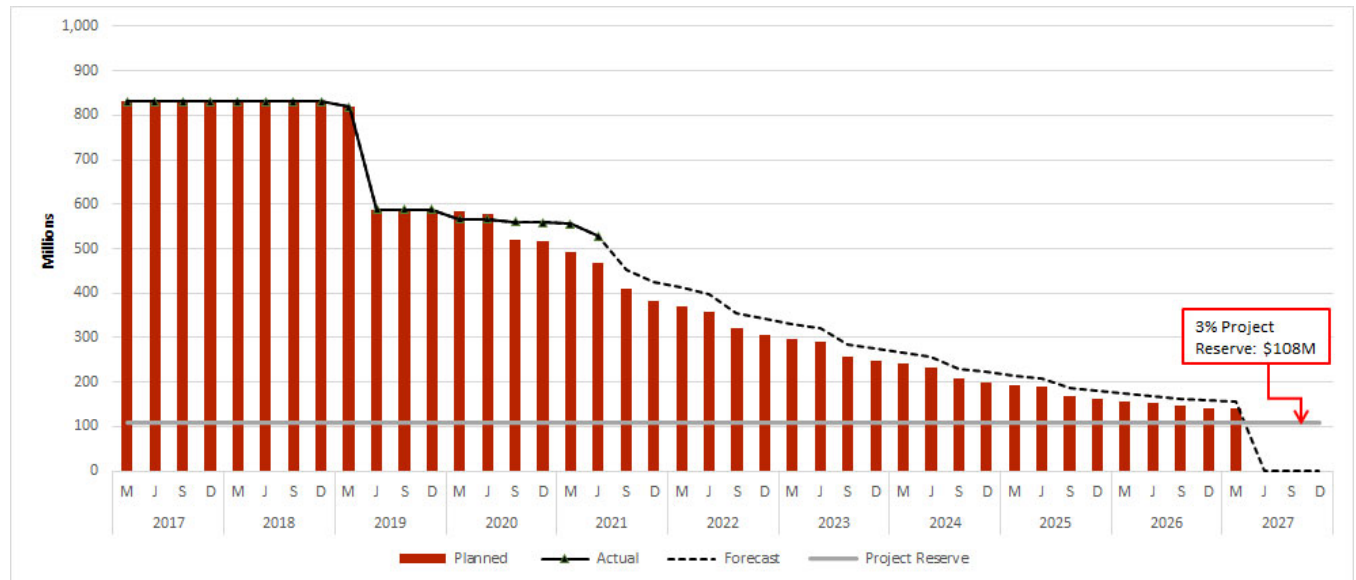
### Commitments

*The Commitments increased by \$15.5 million primarily due to Change Orders for Stations Contract C1152, Contract Modifications for Construction Management Support Services, Quality Assurance Support Services, Environmental Support Services, and Project Management Support Services. The \$2.2 billion in Commitments to date represent 60.0% of the Current Budget.*

### Expenditures

*The Expenditures increased by \$22.7 million primarily due to costs associated with the Tunnels Contract C1151, Stations Contract C1152, Shuttle and Valet Services, Metro Project Administration, Engineering Management Support Services, Construction Management Support Services, Project Management Support Services, Environmental Support Services, Quality Assurance Support Services, Legal Services, ROW Agreement, appraisal and acquisition fees, Engineering Design Services, and Third Party Utility Agency. The \$885.1 million in Expenditures to date represent 24.5% of the Current Budget.*

### Cost Contingency Drawdown



### Cost Contingency Drawdown Analysis

The Original Budget of \$3.6 billion includes finance charges of \$387.4 million. It also includes a project cost contingency of \$830.6 million or 23.1% of the total project, which is based on the amended Life of Project (LOP) Budget approved by the Board in February 2019. An allocated contingency amount of \$366.5 million is included in the total cost contingency. The allocated contingency is an amount to cover anticipated but unknown contract modifications issued by Metro [when applicable to specific contracts within each Standard Cost Category (SCC)].

A 3% project reserve threshold is included in the project cost contingency drawdown. Metro’s Board is to be notified when it becomes necessary to drawdown contingency below the project reserve threshold to cover project costs. This process was adopted by the Metro Board of Directors in September 2012.

The project cost contingency drawdown curve is based on a 2027 Forecast Revenue Service Date (RSD).

*The allocated contingency decreased this period by \$0.09M due to approved Contract Change Orders for Stations Contract C1152.*

PROJECT COST CONTINGENCY					
DOLLARS IN THOUSANDS					
	Original Contingency (Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	464,142	(227,412)	-	(227,412)	236,730
Allocated Contingency	366,455	(74,815)	(90)	(74,905)	291,550
<b>Total Contingency</b>	<b>830,597</b>	<b>(302,227)</b>	<b>(90)</b>	<b>(302,317)</b>	<b>528,280</b>

## Risk Management

### Summary of Risks

During the quarterly risk register meeting, one (1) new risk was identified, two (2) risks were closed, resulting in a total of sixty-two (62) risks to be managed in the next quarter.

Of the sixty-two (62) risks, three (3) are scored as high, thirty-one (31) as medium, and twenty-seven (28) as low.

The next WPLE Section 3 Project Risk Register quarterly update is scheduled for September 2021.

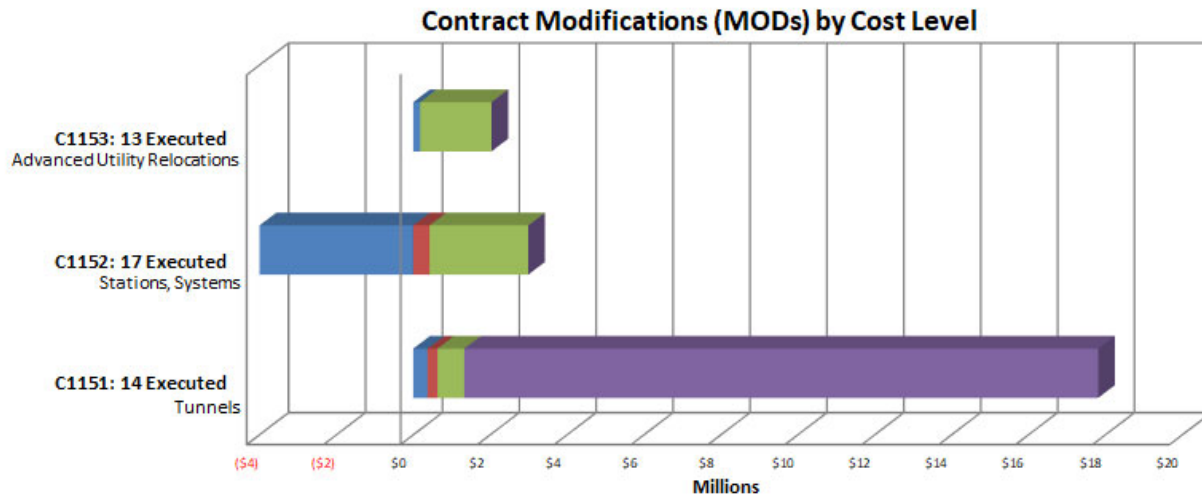
### Top Five Risks

The table below shows the top five (5) project risks.

Risk ID	Risk Description	Risk Score	Action Items
90.4	Covid 19 pandemic impact	20.0	1. Evaluate the guideline from the State and local government 2. Putting contingency plan in place.
40	ROW negotiations in the alignment between Constellation and UCLA may require longer negotiations and result in schedule delay and increased project cost.	10.5	1. Finalize alignment and tunnel diameter to establish acquisition plan. [Completed 7/17/2017] 2. Subsurface easement (SSE) appraisal starts in early August, 2019 - closed 3. Obtain right of entry to allow C1151 contractor to access construction site prior to execution of easement transactions.
701.3	Tariffs potentially impact D/B contractors.	10.5	1. Monitor the market trend and assess the potential impact. 2. Review contract condition for any escalation clause to allow cost increase.
287.3	Delays due to obtaining lane closures and peak hour exemptions.	9.0	1. Identify temporary bus stop re-locations. Meet with City to identify relocation of stops outside work areas. 2. Metro to review bus routes and stop locations. 3. Submit the Peak Hour Exemption Request
657.3	Replacement parking and related activities at VA hospital may impact cost and schedule. Additional parking spaces above and beyond the in-kind parking spaces replacement will be funded by local fund. No cost risk impact on FFGA budget.	9.0	1. Include in ROW budget - Complete 2. Identify local funding source to meet the additional parking spaces requirement. - closed 3. Close coordination with VA on the bus shuttle service and temporary parking area during the design and construction of the replacement parking structure.



Summary of Contract Modifications



	C1151 14 Executed	C1152 17 Executed	C1153 13 Executed	Total
Under \$100K	\$ 377,004	\$ (3,991,632)	\$ 181,291	\$ (3,433,337)
\$100K to \$250K	\$ 255,187	\$ 427,093	\$ -	\$ 682,280
\$250K to \$1M	\$ 698,526	\$ 2,568,001	\$ 1,855,558	\$ 5,122,085
Over \$1M	\$ 16,484,961	\$ -	\$ -	\$ 16,484,961
<b>Total Contract MODs</b>	<b>\$ 17,815,678</b>	<b>\$ (996,538)</b>	<b>\$ 2,036,849</b>	<b>\$ 18,855,989</b>
<b>Contract Award Amount</b>	<b>\$ 410,002,000</b>	<b>\$ 1,363,620,000</b>	<b>\$ 11,439,000</b>	<b>\$ 1,785,061,000</b>
<b>% of Contract MODs</b>	<b>4.3%</b>	<b>-0.1%</b>	<b>17.8%</b>	<b>1.1%</b>

Percent of Contract MODs equals the Total Contract MODs divided by the Contract Award Amount.

Fourteen Contract Modifications (MODS) with a total value of \$17.8 million have been executed since the award of C1151 Contract for Tunnels.

Seventeen Contract Modifications (MODS) with a total credit value of \$1 million have been executed since the award of C1152 Contract for Stations.

Thirteen Contract Modifications (MODS) with a total value of \$2.0 million have been executed since the award of C1153 Contract for Advanced Utility Relocations.

## DISADVANTAGED BUSINESS ENTERPRISE (DBE)

### Contract C1151

*As of August 2021:*

<b>DBE Goal – Design</b> The percentage of funds apportioned to Design Contracts	11.19%
<b>Current DBE Commitment Design</b> Total DBE Committed Dollars divided by Total Contract Value for Design	\$3.1M 16.60%
<b>Current DBE Participation</b> Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$3.2M 19.56%

Six (6) Design DBE sub-consultants have been identified for Design.

<b>DBE Goal – Construction</b> The percentage of funds apportioned to Construction Contracts	17.10%
<b>Current DBE Commitment Construction</b> Contract commitment divided by current contract value for Construction	\$68.1M 17.18%
<b>Current DBE Participation</b> Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$34.9M 14.53%

*Sixty-Four (64) Construction DBE sub-contractors have been identified to date.*

**Contract C1152**

*As of August 2021:*

<b>DBE Goal – Design</b> The percentage of funds apportioned to Design Contracts	19.25%
<b>Current DBE Commitment Design</b> Total DBE Committed Dollars divided by Total Contract Value for Design	\$14.1M 17.57%
<b>Current DBE Participation</b> Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$10.7M 19.13%

Eighteen (18) Design DBE subcontractors have been identified for Design.

<b>DBE Goal – Construction</b> The percentage of funds apportioned to Construction Contracts	21.00%
<b>Current DBE Commitment Construction</b> Contract commitment divided by current contract value for Construction	\$46.4M 3.63%
<b>Current DBE Participation</b> Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$12.1M 3.77%

Nine (9) Construction DBE sub-contractors have been identified to date.

## PROJECT LABOR AGREEMENTS (PLA)

### Contract C1151

<b>Targeted Worker Goal</b> Construction work to be performed by residents from Economically Disadvantaged Areas in the United States	40.00%
<b>Targeted Worker Current Attainment</b>	37.60%
<b>Apprentice Worker Goal</b> Construction work to be performed by Apprentices	20.00%
<b>Apprentice Worker Current Attainment</b>	11.64%
<b>Disadvantaged Worker Goal</b> Construction work to be performed by disadvantaged workers	10.00%
<b>Disadvantaged Worker Current Attainment</b>	1.80%

### Contract C1152

<b>Targeted Worker Goal</b> Construction work to be performed by residents from Economically Disadvantaged Areas in the United States	40.00%
<b>Targeted Worker Current Attainment (Final)</b>	63.90%
<b>Apprentice Worker Goal</b> Construction work to be performed by Apprentices	20.00%
<b>Apprentice Worker Current Attainment (Final)</b>	9.39%
<b>Disadvantaged Worker Goal</b> Construction work to be performed by disadvantaged workers	10.00%
<b>Disadvantaged Worker Current Attainment (Final)</b>	0%

**Contract C1153**

<b>Targeted Worker Goal</b> Construction work to be performed by residents from Economically Disadvantaged Areas in the United States	40.00%
<b>Targeted Worker Current Attainment (Final)</b>	47.64%
<b>Apprentice Worker Goal</b> Construction work to be performed by Apprentices	20.00%
<b>Apprentice Worker Current Attainment (Final)</b>	21.18%
<b>Disadvantaged Worker Goal</b> Construction work to be performed by disadvantaged workers	10.00%
<b>Disadvantaged Worker Current Attainment (Final)</b>	12.07%

## FINANCIAL/GRANT

### Status of Funds by Source\*

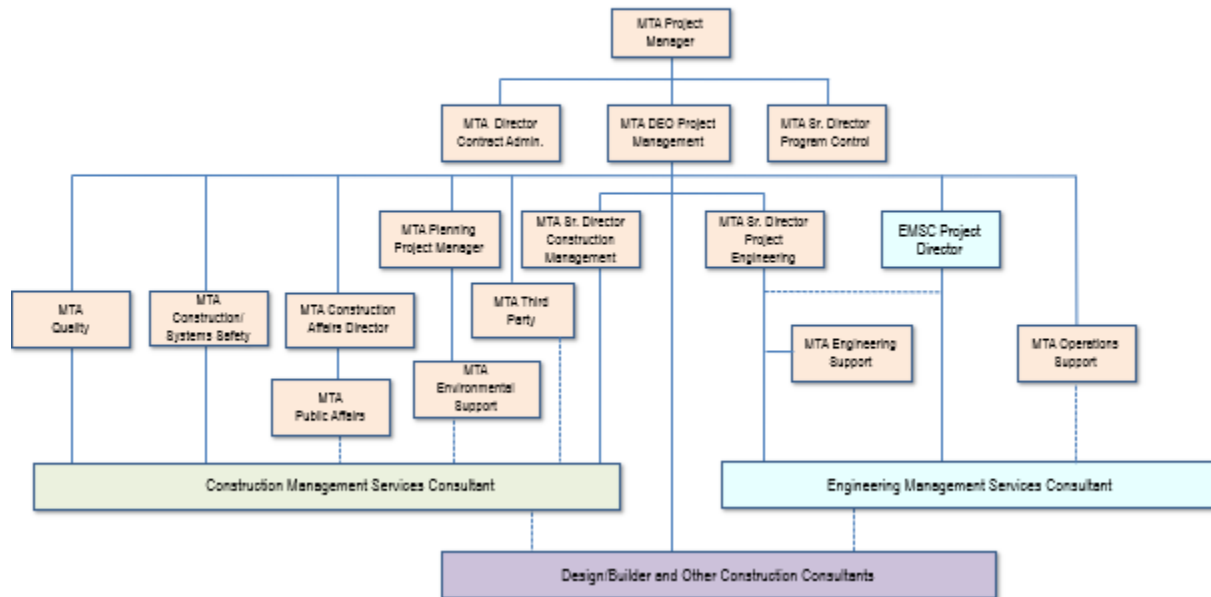
SOURCE	(A)	(B)	(C)	(D)	(D/B)	(E)	(E/B)	(F)	(F/B)
	ORIGINAL BUDGET	TOTAL FUNDS ANTICIPATED	TOTAL FUNDS AVAILABLE	COMMITMENTS \$	%	EXPENDITURES \$	%	BILLED TO FUNDING SOURCE \$	%
FEDERAL - SECTION 5309 NEW STARTS	\$1,300.000	\$1,300.000	\$397.711	\$310.000	24%	\$310.000	24%	\$308.914	24%
FEDERAL - SECTION 5309 NEW STARTS (ARPA-CIG**)	\$0.000	\$93.438	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
FEDERAL RSTP	\$93.048	\$93.048	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
FEDERAL CMAQ	\$45.000	\$45.000	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
LOCAL AGENCY	\$96.391	\$96.391	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
TCRP	\$10.001	\$10.001	\$10.001	\$10.001	100%	\$10.001	100%	\$10.001	100%
MEASURE R 35%	\$844.063	\$750.625	\$499.654	\$746.639	99%	\$43.179	6%	\$30.352	4%
MEASURE M 35%	\$1,190.661	\$1,190.661	\$689.591	\$1,102.003	93%	\$521.875	44%	\$470.889	40%
STATE RIP	\$31.834	\$31.834	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
<b>TOTAL</b>	<b>\$3,610.998</b>	<b>\$3,610.998</b>	<b>\$1,596.957</b>	<b>\$2,168.643</b>	<b>60.1%</b>	<b>\$885.055</b>	<b>24.5%</b>	<b>\$820.156</b>	<b>22.7%</b>

Original Budget based on 2019 Board approved LOP Budget, plus Finance Charges of \$387.4 million.

## PROJECT ORGANIZATION AND STAFFING

The design-build contract is being managed by a joint team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO).

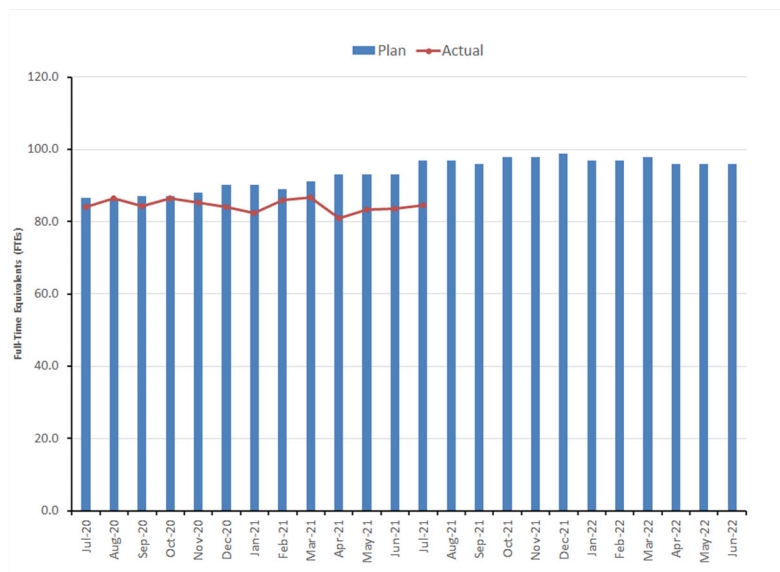
**Westside Purple Line Extension Section 3  
 Responsibility and Reporting Matrix**



The overall FY22 Total Project Staffing Plan averages 97.0 FTEs per month.

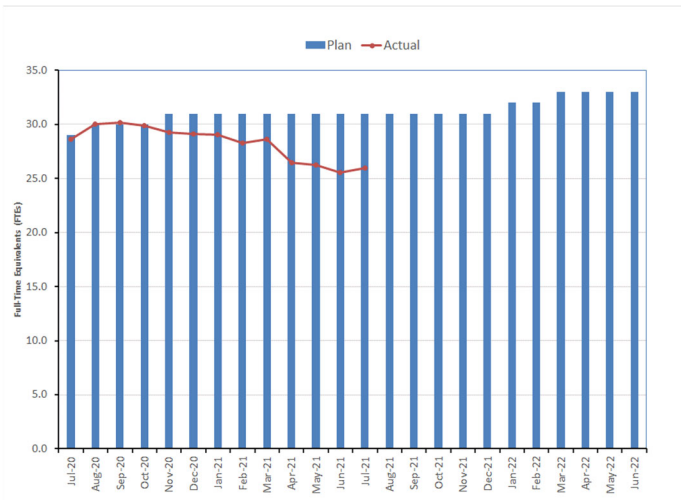
For July 2021, there were a total of 26.0 FTEs for MTA's Project Administration Staff and 58.6\* FTEs for Consulting Staff. The total project staffing for July 2021 was 84.5 FTEs.

### Total Project Staffing – Metro and Consultants

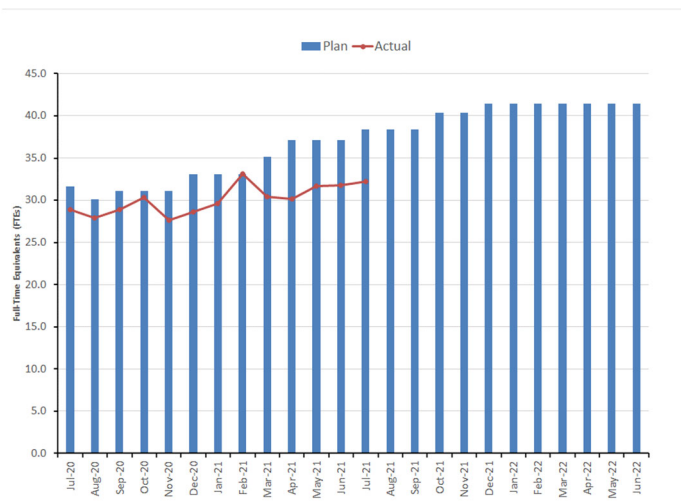


\*Actuals include 6.4 FTEs related to Project Management Support Services (PMSS).

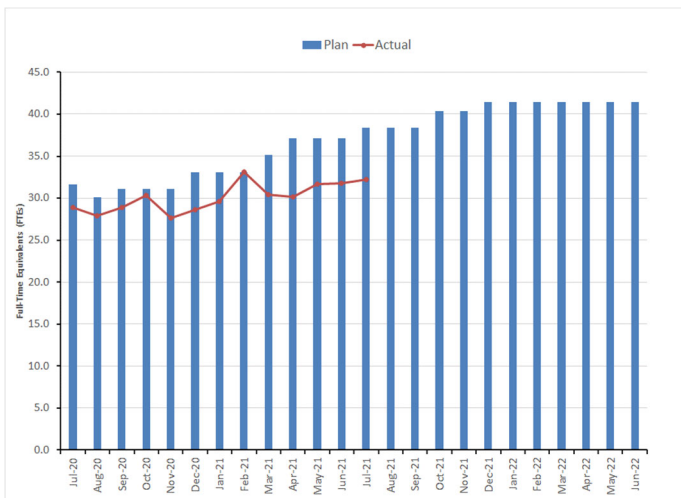
### Metro Staff



### CM Support Services Staff (Consultant)



### Engineering Services Staff (Consultant)



### Staffing by Group

The opposing graphs represent planned vs. actual staffing levels by group.

Metro staffing includes full time staff located in the IPMO as well as part-time support located at Gateway Headquarters.

Staffing plans are developed for each fiscal year based on project needs.



## REAL ESTATE

Real Estate Status Summary									
Description	Number of Parcels	Certified	Appraisals Completed	Offers Made	Agreements Signed	Condemnation Filed	Relocations		Parcels Available
							Required	Completed	
Full Takes	0	0	0	0	0	0	0	0	0
Part Takes	1	1	1	0	0	0	0	0	0
TCE	4	4	0	0	0	0	1	0	1
SSE	79	79	79	79	44	61	0	0	77
Permanent Easements	1	1	1	1	1	0	0	0	1
<b>Total Parcels *</b>	<b>85</b>	<b>85</b>	<b>81</b>	<b>80</b>	<b>45</b>	<b>61</b>	<b>1</b>	<b>0</b>	<b>79</b>

Real Estate certifications are substantially complete.

The following parcels are available to the Contractors:

- C1151 Tunnel Contract
  - VA Staging Area (W-5401)
  - Caltrans (W-5301)
  - UCLA Lot 36 End Wall Piling (W-5101-4)
  
- C1152 Station Contract
  - UCLA Lot 36 Staging Areas (W-5101 through W-5101-6)
  - VA Staging Area (W-5401-3 includes Lot 42)

## QUALITY ASSURANCE

- Attended weekly project staff meetings for C1151 Tunnels, C1152 Stations, and weekly progress meetings with FKTP & TPOG.
- Reviewed Daily Inspection Reports by Metro's inspectors (CMSS) for completeness and correctness.
- *Review N & M/Metro ITL conducted QA Test Reports and Inspection Reports.*
- Chaired readiness review meeting for:
  - C1152 (Stations Contract)
    - *UCLA SOE Readiness Review Meeting*
- Conducted assessment as issued subsequent conforming or non-conforming items for following:
  - C1151(Tunnels Contract)
    - *TBM BR 1215 Full Mining Mode Startup and Launch Assessment*
    - *TBM BL 1214 Startup and Launch Assessment*
    - *TBM BL 1214 main alignment monitoring procedure assessment*
    - *Process Assessment on Implementation of Contractor's Inspection and Testing Process from 01/01/2021 - 06/30/2021*
    - *Install MPBX Geotechnical Instrumentation & Record Initial Readings at VA Station*
    - *Assessment of TBM grout batching and placement including mix design verification testing for BR 1215 Full Mining Mode*
    - *TBM Ventilation System and Air Scrubbers, Ventilation Equipment and related submittals*
    - *Traylor Precast Plant Assessment*
    - *Tunnel Gas Monitoring assessment*
    - *Gabion Wall Installation at Caltrans ROW*
  - C1152 (Station Contract)
    - *Continue on concrete field sampling and testing Aggregate Batch Sampling and testing for SOE Toe Concrete.*
    - *(5) Traffic Management Assessments conducted on various traffic closures at Wilshire/Galey; I-405 of SS relocation works.*
    - *VA and UCLA Station SOE Piles Installation.*
    - *I-405 Night Work Traffic management and control →*
    - *Process Assessment of Implementation of Construction Work Plan and R/R*
    - *Assessment conducted on Pro Cast plant / SOE Deck Panels Fabricator*
- NCRs and CARs:
  - C1151 (Tunnel Contract)
    - *Discuss with FKTP on its proposed Segment Type Color Code Plan which is part of NCR-017 corrective action taken.*
    - *No CAR issued to date.*
  - C1152 (Station Contract)

- *NCRs: Review (2) TPOG issued new NCRs, NCR-019 and NCR-020. NCR-019 "Rework" disposition approved by TPOG PQM. Pending on traffic closure to perform the pressure test on SS line.*
- *CARs: Review TPOG issued internal CAR 2021-001 corrective action taken and the closure verification. CAR 2021-002 is still pending on repair work to be complete. TPOG/STV provided corrective action taken of CARs (2021-001 and 2021-002 from Metro conducted Design Management Audit) are still under Metro auditor's review and approval.*

## ENVIRONMENTAL

- Conducted field environmental monitoring and inspections for environmental compliance and VA/UCLA MOA's for FKTP and TPOG.
- Participated in contract construction progress meetings with FKTP and TPOG.
- *Completed daily monitoring for Geffen Academy for construction per UCLA MOA.*
- *Completed subsurface investigations and reviewed locations for the replacement VA parking, future VA Parking Structure.*
- *Completed site analysis for potential vibratory measurement at 10921 Wilshire during station construction.*

## CONSTRUCTION AND COMMUNITY RELATIONS

- *Attended the following meetings: Construction Management meetings for the Tunnels and Stations contracts, LADOT, VA Coordination, LA BOE, and Westwood Building Managers meeting.*
- *Produced and distributed twelve (12) construction work notices for Westwood/UCLA work activities and Westwood/VA work activities.*
- Continued coordination with major stakeholder groups and City Council Districts 5 and 11.
- Updated Facebook/Twitter and Metro.net as needed.

## CREATIVE SERVICES

- Coordinated with LA County and VA on legacy mural honoring veterans.
- Finalizing artwork finish materials and artwork areas in stations.
- Artist selection process underway.
- *Call to Arts Organizations (RFQ) for the “Veterans Legacy Art Project” closed, selection process underway*
- *Ongoing design package reviews*
- *Project team design workshops*
- *Signage design asset delivery*
- *Coordination for CX continuity between sections*

## SAFETY AND SECURITY

### Contract C1151 Tunnels

- Metro Safety staff attended weekly Tool Box Meetings, Progress Meetings, readiness reviews, and other project meetings to evaluate Contractors Safety Program compliance with contract requirements.
- Metro/FKTP project safety staff conducted schedule, safety/security, and over-the-shoulder review meetings.
- Safety staff worked regularly with Program Management and Construction Relations staff to monitor issues related to public concerns regarding noise, traffic, and public/construction interfaces as well as public interactions with the construction crews.
- Metro project safety staff conducted project Safety Orientation for new Metro/Consultants and IPMO project staff.
- Metro project safety staff conducted right-of-way (ROW) and safety/security walks, safety/security reviews and coordination with FKTP-JV staff for oversight and support of all project field work activities.
- *Metro Safety hosted the Monthly Safety Meeting for Section 2 and 3 Westside Purple Line Extension Contractors on August 27, 2021.*
- *Frontier-Kemper/Tutor Perini (FKTP-JV) reported Zero (0) Recordable Injuries in August 2021.*
- *FKTP-JV reported 28,979 actual work hours through August 2021.*
- *FKTP-JV Project to Date through August 2021, Contractor FKTP-JV Work Hours is 574,902.*
- *FKTP-JV Project to Date, there are Ten (10) Recordable Injury and Three (3) Days Away from Work Injury. The Recordable Injury Rate of 3.48. The Bureau of Labor Statistics reports the National Average Recordable Injury Rate is 2.4.*

### Contract C1152 Stations, Trackwork, Systems, and Testing

- Metro Safety staff attended weekly Tool Box Meetings, Progress Meetings, readiness reviews, and other project meetings to evaluate Contractors Safety Program compliance with contract requirements.
- Metro/TPOG project safety staff conducted schedule, safety/security, and over-the-shoulder review meetings.
- *Metro Safety hosted the Monthly Safety and Security Meeting for Section 2 and 3 of Westside Purple Line Extension Contractors on August 27, 2021.*
- Metro project safety staff conducted project Safety Orientation for new Metro/Consultants and IPMO project staff.

- Metro project safety staff conducted right-of-way (ROW) and safety/security walks, safety/security reviews and coordination with TPOG-JV staff for oversight and support of all project field work activities.
- *Tutor Perini/O&G (TPOG-JV) has reported Zero (0) Recordable Injury status in August 2021.*
- *TPOG-JV reported 29,807 actual hours through August 2021.*
  - *TPOG-JV provided and included an updated tabulation correction of 134 Work Hours for previous months of 2021.*
- *TPOG-JV Project to Date through August 2021 Contractor TPOG-JV Work Hours are 730,833.*
- TPOG-JV Project to Date, there are Zero (0) Recordable Injuries and Zero (0) Days Away from Work Injuries. The Recordable Injury Rate of 0.0. The Bureau of Labor Statistics reports the National Average Recordable Injury Rate is 2.4.

## APPENDIX

### CHRONOLOGY OF EVENTS

January 2011	FTA approval to enter Preliminary Engineering
August 2012	FTA Record of Decision
April 2017	Issued RFQ for C1151 Tunnels Design/Build Contract
May 2017	Issued IFB for C1153 AUR Contract
September 2017	Issued RFQ for C1152 Stations, Trackwork, Systems & Testing Design/Build Contract
January 2018	Issued NTP for C1153 AUR Contract
April 2018	C1153 Contractor commenced work
August 2018	FTA approval to enter New Starts Engineering Phase
September 2018	Received FTA approval for Letter of No Prejudice for C1151 Tunnels Contract
November 2018	Issued Contract Award for C1151 Tunnels Contract
December 2018	FTA completed environmental review of 23 CFR §771.130 (c)
January 2019	Issued NTP for C1151 Tunnels Contract
April 2019	Received FTA's Letter of No Prejudice for C1152 Stations Contract
May 2019	Issued Contract Award for C1152 Stations Contract
June 2019	C1153 AUR Contract achieved Substantial Completion
July 2019	Issued NTP for C1152 Stations Contract
September 2019	FKTP began SCE Ductbank Construction
December 2019	Partial VA Site Access Given for Tree Removal
January 2020	Access to Tail Track Exit Shaft & Western Staging Area
February 2020	UCLA Lot 36 Access Given to TPOG
March 2020	FTA Executed FFGA



June 2020	FKTP Completed SCE Ductbank Construction
July 2020	Began TBM Assembly in the Tail Track Exit Shaft
October 2020	TBM #1 Began Initial Tunnel Operations on October 23, 2020
November 2020	Access to VA Campus Lot 42
December 2020	Installation of Starter Gantry for TBM #1 (BR)
January 2021	TBM #1 (BR) Bore the first 415 feet. Permeation Grouting at Sepulveda started in January.
February 2021	Removal of Starter Gentry for TBM #1 (BR)
March 2021	Installation of Starter Gentry and Cradle for TBM #2 (BL). Start Utilities Relocation in VA
April 2021	Commission TBM #2 (BL) Starter Gentry & Start Boring. SOE Piling at VA started in April
May 2021	Storm Drain and Sanitary Sewer in VA completed in May
June 2021	West Endwall at VA completed in June