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April 19, 2024

TO: DISTRIBUTION

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SUBJECT: WESTSIDE PURPLE LINE EXTENSION SECTION 2 PROJECT
MARCH 2024 QUARTERLY PROJECT STATUS REPORT

Enclosed herewith is the Quarterly Project Status Report for the Westside Purple Line Extension Section 2 Project. This report contains the Los Angeles County Metropolitan Transportation Authority's (LACMTA) representation of the Westside Purple Line Extension Section 2 Project status for the period ending March 29, 2024.

If you have any questions regarding this report or its supporting information, please contact Michael Martin, Deputy Executive Officer, Program Control at (424) 551-4471.

MM: DS
Enclosure

PURPLE (D LINE) EXTENSION PROJECT Section 2



Metro[®]

Purple (D Line) Extension Project

Section 2

QUARTERLY 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).

March 2024

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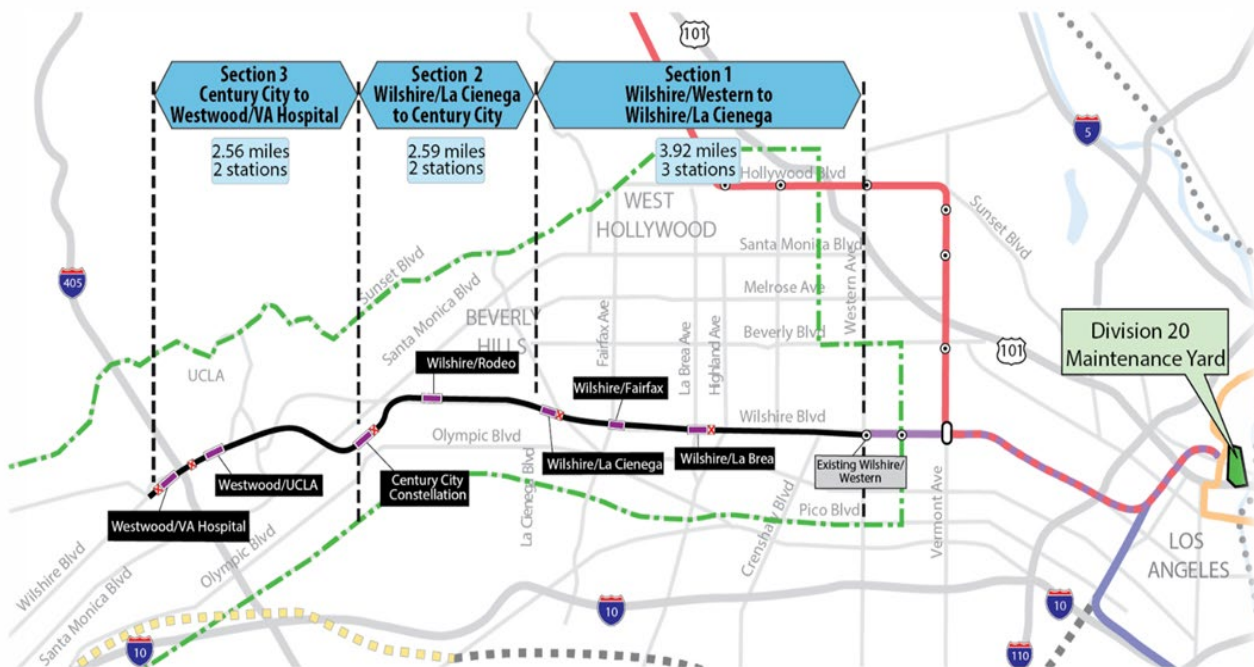
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PROJECT OVERVIEW

Monthly Project Background

The Purple (D Line) Extension Section 2 Project (Project) is the second of three sections to be designed and constructed as part of the Los Angeles County Metropolitan Transportation Authority's (LACMTA) Measure R Program. The program was approved by Los Angeles County voters in November 2008 and provides a half-cent sales tax to finance new transportation projects. In April 2012, the three sections of the Project were environmentally cleared and adopted by LACMTA Board of Directors.

Section 2 will extend the future Wilshire/La Cienega Station that is part of the Purple (D Line) Extension Section 1 Project currently under construction to Century City. The Project is located entirely underground, primarily following Wilshire Boulevard, and includes the design and construction of approximately 2.59 miles of double-track heavy rail, two new stations as well as the purchase of 20 heavy rail vehicles. The Wilshire/Rodeo Station is within the jurisdiction of City of Beverly Hills, and the Century City Constellation Station is within the jurisdiction of City of Los Angeles. 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 Wilshire/Rodeo Station box will be under the center of Wilshire Boulevard beginning just east of South Canon Drive and extending to El Camino Drive. The entrance will be on the southwest corner of Wilshire Boulevard and Reeves Drive.

The Century City Constellation Station box will be under the center of Constellation Boulevard between Century Park East and Solar Way. A double crossover will be located east of this station. The entrance will be on the northeast corner of Constellation Boulevard and Avenue of the Stars. In lieu of tail tracks, safe braking distance will be provided at the interim terminus station.

Major Procurements

Contract C1120 – Tunnels, Stations, Trackwork, Systems and Systems Integration Testing: The procurement of this 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 with an option at Metro's discretion for Best and Final Offers (BAFO).

The Design/Build contract provides for final design and construction of the infrastructure along the 2.59-mile alignment. Contract scope includes demolition and removal of structures and clearing sites to facilitate construction operations. The structures to be constructed include twin bored tunnels complete with cross-passages and walkways including all mechanical, electrical, and finished work. A tunnel boring machine (TBM) launch shaft will be constructed at the Century City Constellation Station. Two underground stations are to be constructed with one double crossover location set east of the Century City Constellation (terminus) Station. Each station has a single entrance plaza 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 to the Wilshire/La Cienega Station (currently under construction), testing and commissioning.

Metro Furnished Equipment

The option to purchase 20 Heavy Rail Vehicles (HRV) of the existing HR4000 contract will not be exercised. A new HRV procurement was issued in December 2022, bids were received in April 2023. In January 2024, Metro Board approved award of the HR5000 contract to Hyundai Rotem Company for the manufacturing and delivery of 182 heavy rail vehicles of which 20 will be used for the Purple (D Line) Extension Section 2 Project. The scope of the HRV contract includes design, manufacturing, testing and delivery of the vehicles. *An additional contract has been 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 Purple (D Line) Extension Section 2 Project is being managed under the direction of an Integrated Project Management Office (IPMO). WSP Global (WSP) provides engineering and design support services, while Purple (D Line) 2 CM Partners, a Joint Venture provides construction management support services. An overview of staffing is provided under the Staffing section of this report. The program management team is also supported by Metro headquarters'

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

Project Schedule and Budget: The Revenue Service Date (RSD) is forecasted for 2026.

On January 26, 2017, the Metro Board approved the Life of Project (LOP) Budget for the Purple (D Line) Extension Section 2 Project 865522 for \$2.4 billion excluding Finance Charges of \$88.7 million. On July 27, 2023, a LOP budget amendment of \$134 million was approved by the Metro Board. A detailed Life of Project Budget forecast is included under the Project Cost Forecast section of this report.

Funding has been secured from a variety of sources to include:

- Federal – Section 5309 New Starts
- Federal – Section 5309 New Starts (ARPA-CIG)
- Federal CMAQ (Congestion Mitigation & Air Quality)
- Measure R – TIFIA Loan (Transportation Infrastructure Finance & Innovation Act)
- Measure R 35%
- State Capital Projects Loans

Construction and Community Relations: The Construction and Community Relations team is tasked with promoting the Project and performing public outreach within the community to keep stakeholders informed of construction activities occurring along the Project alignment.

The Project is also engaged in social media outreach and various marketing and advertising efforts designed to keep the public informed and excited about the Project. These efforts are aimed at promoting businesses that are affected by construction. An overview of monthly activities is presented in the Construction and Community Relations section of this report.

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 March 2024, the Project reached 67% completion based on earned value measurements for design and construction. The focus of the Project continued to be completion of final design and construction activities in Century City and Beverly Hills. Final design base scope is anticipated to be completed by September 2024. The C1120 Design Build Contractor has a contractual substantial completion in May 2025 and demobilization in October 2025. The forecast Revenue Service Date (RSD) for the Project has been revised to Summer 2026. The following is an overview of current design and construction activities.

Design Status

The Engineering Management Services team (WSP) continued to provide engineering services during construction as well as real estate support services. The team is also supporting Metro in reviewing final design submittals, responding to RFI's, and assisting in the preparation of change notices.

The design work has originally been identified into three distinct design unit packages. They are the following:

1. Design Package 1 – Utility/Civil Design at Launch Box in Century City
2. Design Package 2 – Remaining Utility Conflicts (Outside of Launch Box)
3. Design Package 3
 - (Volume 1) – Tunnel Reaches
 - (Volume 2) – Stations
 - (Volume 3) – Track & Systems

The design packages noted above have been broken out into discrete advanced design units/packages to facilitate and prioritize design deliverables.

Metro, Tutor Perini/O&G (TPOG) and STV have been working together to identify advanced partial design units for the above-mentioned design packages and proposed submittal dates to facilitate timely design review to support the Project schedule.

Each design unit package will be submitted and evaluated at each of the following phases: 60%, 85%, 100%, Approved for Construction (AFC) and Issued for Construction (IFC). Critical design units have been advanced as Advanced Partial Design Units (APDU's) to support ongoing construction activities.

Design progress meetings occur weekly related to the design unit packages. Weekly design task force meetings (by individual discipline) began at the end of March 2018 and are scheduled to continue through design completion. TPOG is continuing with the required contractual submittals.

Design related submittals of note that TPOG submitted for this month are:

- IFC - DU 3.3 WRS Primary-Emergency Perm Power.
- AFC - APDU 2.5.1 DWP Water Main Relocation at CCS.
- AFC - APDU 3.4.4 WRS West UPE #8 SOE Design.
- 100% - DU 2.3 CCS Bus Stop No. 6 and 7.

Systems design is mostly complete and is consistently moving forward to support construction and testing activities.

Construction Status

Century City Constellation Station:

Installation of rebar and embedded conduits continued for concrete walls and floor slabs. TPOG continued setting wall forms and placing concrete for the invert level interior walls GL 38.5 to GL 47. Preparation is ongoing for concrete placement for the exterior walls invert to concourse GL 45 to GL 47, and concourse to roof GL 1 to GL 8. Work continued for the concourse level with the installation of falsework, and concrete placement proceeded at CLS-16, CLS-17, and CLS-18. Concrete was also placed at platform deck level from GL 35 to GL 40. TPOG started stripping formwork for CLS-1 and continued stripping for concrete pours from CLS-14 through CLS-18. TPOG continued SOE removal at BL-4 in advance of concrete work, GL 1 to GL 19, and BL-5, GL 12 to GL 19 in advance of concrete work.

TPOG continued HDPE membrane installation, extrusion welding, heat sealing, invert MEP and rebar installation at the Station Entrance (concourse level). TPOG completed invert concrete pour at ELS-2 and ELS-3.

PLE3 miners performed miscellaneous activities at the west end of the station in advance of removing excavated soil from PLE3 cross passages. TPOG has indicated that there are no anticipated schedule impacts to the Section 2 CCCS schedule. Coordination of access for the JMB construction site through the PLE2 work area continues.

Tunnels:

On November 18, 2022, the BR (Harriet) Tunnel Boring Machine (TBM) completed excavation. The BL (Ruth)TBM completed excavation on January 12, 2023. Both TBMs have completed overall excavation and rest at the concrete end wall at the Purple Line Extension Section 1 interface. *BL Reach 5 tunnel invert cleaning, bolt tightening, and patching recessed holes in invert (i.e., bolt pockets, picking eye holes, and grouting holes) is complete with the exception of the two (2) fault crossings and the Tunnel Access Shaft (approximately 78% complete overall).*

There is a total of fifteen (15) Cross Passages in Reaches 4 and 5. One (1) will be constructed within the Tunnel Access Shaft and fourteen (14) will be constructed in the mined tunnels. All fourteen (14) SEM cross passages have been excavated, with the last cross passage, CP-28, completed on January 31, 2024. Final lining construction is ongoing in all seven (7) of the cross passages in Reach 5, with six (6) completed from invert to bulkheads. *In Reach 4, TPOG continued final lining construction (waterproofing installation, invert & bulkhead activities) in CP-33, 32 and 31 and 30, 29 and 28 with two (2) completed from invert to bulkheads (CP-32 & 33). No final lining work has started at CP-27.*

First stage tunnel invert was completed in the BL Reach 5 tunnel from the west side of the Wilshire Rodeo Station (Ring 1, 148) to the east side of the Century City Constellation Station (Ring 1) (approximately 5,740 feet). This does not include the two (2) fault crossings (Wilshire & Lasky) or the Tunnel Access Shaft. Overall completion for the BL Reach 5 first stage invert is 78%.

Wilshire/Rodeo Station:

Placement of concrete for the invert slab and platform level station walls and concourse level slabs are complete. Installation of waterproofing, rebar, formwork, and concrete continued this month for

second level exterior walls. Overall progress for second level walls is 81% complete. Falsework at East and West Highbay walls to support the roof deck started this month and is 65% complete.

Installation of rebar for Entrance Stairs #3 and #4 started this month. Installation of gas venting systems followed by the waterproofing system on the intermediate landing slab and walls started this month. The protective slab was also placed this month.

The installation of the gas venting, waterproofing system and invert slab concrete was completed this month for West EVS (Emergency Ventilation System)/Grating #9 appendage. The installation of rebar, formwork and concrete placement for the exterior walls was completed at the first level during this month. Re-strutting activities started this month.

Installation of internal bracing and lagging, hanging of utilities, and excavation is complete for East UPE (Under Platform Exhaust/Grating #3 appendage. The installation of the gas venting and waterproofing system for the invert slab started and was completed this month. Invert slab was also placed this month. Installation of gas venting, waterproofing system and rebar for exterior walls started this month.

All 15 piles for the Traction Power Substation (TPSS) Access Shaft appendage are complete. Installation of internal bracing and excavation to the bottom is 25% complete. The Canon yard staging area soundwall was partially modified to accommodate pile drilling.

Infrastructure for permanent power construction for (SCE) is complete outside of the station box and is at 64% completion overall. The portion over the station box will be completed during final street restoration.

All twenty (20) dewatering wells continue to be operational around the WRS site.

Cost and Schedule Summary

For the C1120 Design/Build contract, Metro received the Contractor’s March 2024 schedule update, which reports the substantial completion date finishing 546 calendar days behind the May 23, 2025, contractual date. The Contractor has reported a loss of eleven (11) days to the overall Project this reporting period. The primary critical path associated with the forecasted delay to the Century City Constellation Station is followed closely by the secondary path which flows through tunnel finishing activities. Future revisions to the contractor’s means and methods, and revised schedule logic may have an impact on future updates. Based on the contractor’s re-sequenced schedule, and Metro’s evaluation of progress to date, the Project Master Schedule has been revised to reflect a forecast Revenue Service Date of Summer 2026.

The Critical Path (CP) goes through the Century City Station Invert Slab activities then proceeds into the Century City Station platform level concrete along with cross passages and track installation. It also includes Century City Station finishes, and systems installation and testing work (including installation of interior finishes and electrical equipment at both stations). A summary graphic of the critical path is found on Page 16.

C1120 Design-Build Contract Schedule Metrics

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed	04/26/17A	0	04/26/17A		0
Substantial Completion	05/23/25	0	05/23/25	05/26/2026	368

To date, the Current Budget and Current Forecast are \$2.7 billion. This reflects a Life of Project (LOP) budget amendment approved by Metro Board on July 27, 2023. Detailed cost and budget information is provided on Page 18. Project staff will continue to assess ongoing future Project risks, and the potential impact they may have on the LOP Budget and Project schedule, while continuing to manage those risks to control costs.

There are currently twenty-two (22) open claims. Fifteen (15) remain with TPOG to identify next steps, five (5) reside with Metro and two (2) are in preparation for Alternative Disputes Resolution (ADR).

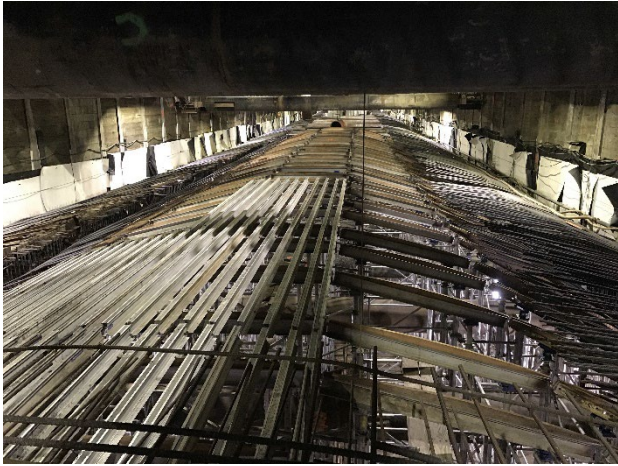
1. Mitigation Plan for Subsurface Settlement above BL Tunnel (Claim 19)
2. WRS Groundwater Inflows (Claim 21)
3. COVID Impacts (Claim 22)
4. Wilshire/Rodeo Structural Changes (Claim 23)
5. Cutterhead Damage (Claim 28)
6. Resubmittal of 100% Submittal DU 6.1 Pkg 3, Volume 3B (Claim 29)
7. CCS Appendage Grating 15 (Claim 31)
8. CCS Emergency Stair 1 (Claim 33)
9. WRS East EVS Grating 4 Design (Claim 41)
10. WRS Emergency Exit 4 Design (Claim 42)
11. Unilateral CO No. 48 NPDES Construction Project Dewatering Permit (Claim 45)
12. Appendage Grating 10 Design (Claim 46)
13. Station Revised OPE Construction (Claim 47)
14. CCS Elevators 1 & 2 Additional Sheet – Framing (Claim 50)
15. Tunnel Suspension Delays (Claim 51)
16. Escalation of Metals (Claim 53)

17. Additional Ladders (Claim 54)
18. N. Canon Dr. Geo-Instrumentation (Claim 55)
19. CCS Cross-Over Ventilation Design (Claim 56)
20. WRS Entrance EMP/FA Equipment Relocation (Claim 57)
21. *Additional Project Management for Extended Design Services (Claim 58)*
22. *Unilateral CO-58 RFC-100.2 (Part 3) WRS Delays (Claim 59)*

Key Management Concerns

- *The Project Recordable Injury Rate for this period is 2.74, which is higher than the national average of 2.4. TPOG reported one (1) recordable injury this period. TPOG is continuing to utilize a third-party consultant to provide safety oversight on both shifts.*
- Cross passage excavation is complete. Final lining construction is progressing much slower than what was assumed in TPOG's baseline schedule.
- Opportunities to mitigate the delay to the critical path through Century City Constellation Station (CCCS) are not likely to substantially reduce the impact. TPOG's re-sequenced schedule did not result in a reduction of its previously reported delay. As a result, Metro is now forecasting a revised RSD of Summer 2026.
- TPOG has not submitted a revised plan indicating its means for TBM disassembly and mitigation of impacts to other construction activities in the tunnels.

Project Construction Photos



WRS Roof Deck at East Highbay Walls- Station Box



WRS West Highbay Walls-Falsework for Roof Deck



Tunnel Invert Rebar Installation



Relocating Utilities to Make Way for Walkway



CCCS Falsework Stripping Concourse Level

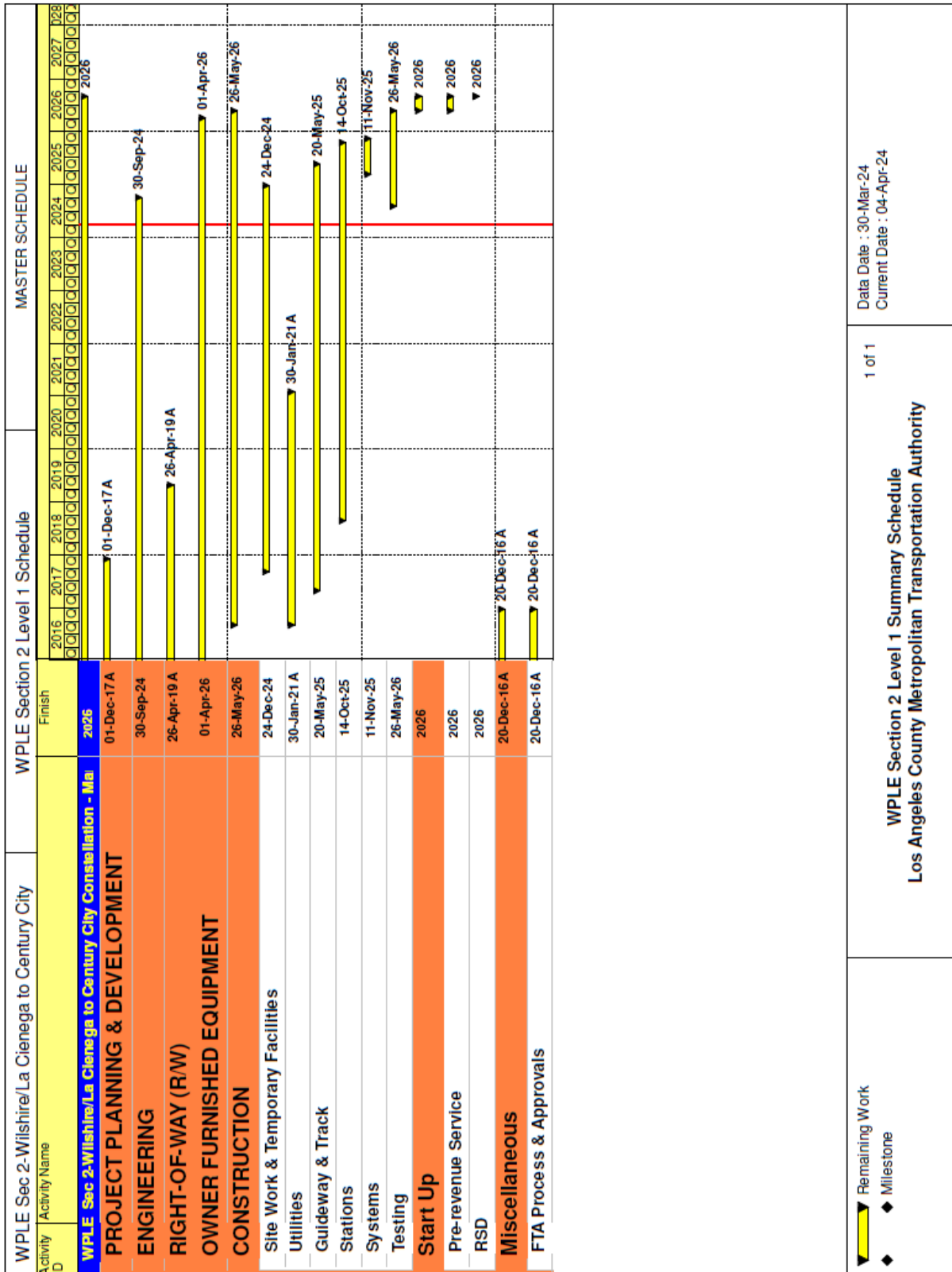


CCCS Rebar at East Side Exterior Wall Concourse Level

PROJECT UPDATE

PROJECT SCHEDULE

Project Summary Schedule



Remaining Work
Milestone

1 of 1

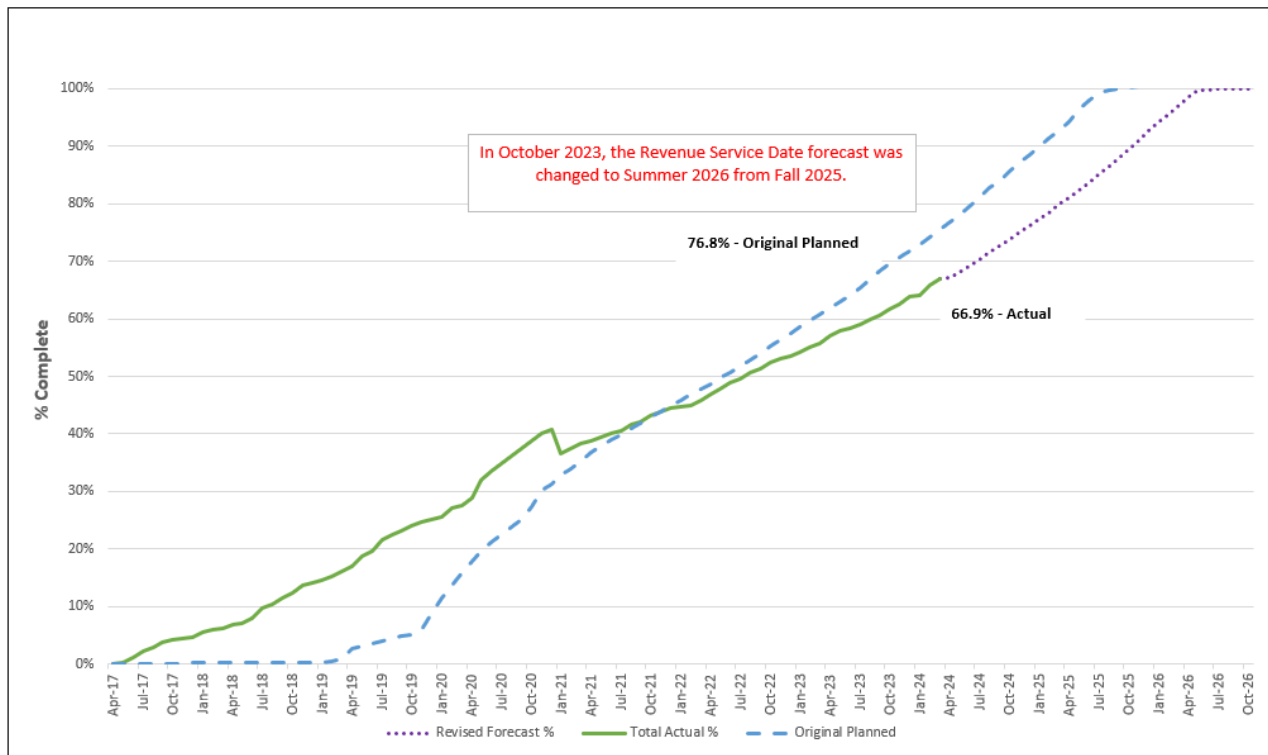
Data Date : 30-Mar-24
Current Date : 04-Apr-24

WPLE Section 2 Level 1 Summary Schedule
Los Angeles County Metropolitan Transportation Authority

Progress Summary

	Status	Change from Last Period	Comment
Forecast Revenue Service Date	2026	None	Forecast RSD - Summer 2026
TIFIA Revenue Service Date	12/31/2026	None	
FFGA Revenue Service Date	12/31/2026	None	
Final Design Progress:			
Contract C1120	99.91%	None	<i>Final Design for Base scope is anticipated to be complete by September 2024. No impact to Project schedule.</i>
Construction Contracts Progress:			
Contract C1120	66.89%	0.86%	









Note: Physical completion assessment reflects work completed and work in progress.



Planned vs. Actual Progress

The actual overall construction progress is 66.9% versus an original planned of 76.8% through March 2024. The progress curves represent the physical progress of work performed to complete Contract C1120. The physical progress percentage excludes non-construction items such as contractor's design and construction mobilization costs and all general requirement costs not tied specifically to a construction work effort.

Key Milestone Six-Month Look Ahead

	Milestone Date	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Completed concourse level invert slab concrete at Century City Constellation Station entrance	3/20/24 A						
Complete intermediate landing invert slab at Wilshire/Rodeo Station entrance	04/18/24						
Complete first level interior walls at Century City Constellation Station	04/26/24						
Complete concourse deck at Century City Constellation Station	05/08/24						
Complete exterior walls above concourse level at Wilshire/Rodeo Station	05/24/24						
Complete exterior walls intermediate landing to street at Wilshire/Rodeo Station entrance	06/17/24						
Complete pile installation at Century City Constellation Station side structure 14	07/23/24						
Complete upper concourse deck at Century City Constellation Station	08/14/24						

◆ MTA Staff



MTA Board Action



FTA
(Federal
Transit)



Utility Company



Other Agencies



Contractors



Design
Consultant



C1120 D/B

"A" following date is actual and completed

* New

Major Equipment Delivery

MAJOR EQUIPMENT DELIVERY

	Submittal	Procurement	Delivery	Installation
C1120 DESIGN/BUILD*				
Tunnel Boring Machines	27-Jul-17(A)	14-Aug-17(A)	13-Sep-18(A)	26-Dec-19(A)
Emergency Ventilation Fans	26-Apr-24	14-Feb-23(A)	9-Aug-24	17-Dec-24
Station Elevators/Escalators	08-Feb-23(A)	14-Dec-22(A)	25-Mar-25	17-Mar-25
Track - Running Rail	22-Aug-2(A)	1-May-23(A)	22-Oct-24	30-May-25
Traction Power Equipment	30-Apr-24	14-Apr-23(A)	6-Dec-24	26-Nov-25
Automatic Train Control	11-Mar-22(A)	2-Mar-23(A)	19-Apr-24	1-May-25
Radio System	2-Apr-24	3-Oct-23(A)	16-Oct-24	31-Mar-25
SCADA RTU System	11-Mar-22(A)	3-Oct-22(A)	26-Apr-24	31-Mar-25
Heavy Rail Vehicles	<i>HR5000 New HRV Procurement RFP was issued on December 5th, 2022 and bids received on April 17, 2023. Issue NTP in February 2024 and Pilot car delivery forecasted in May 2027.</i>			
Universal Fare System***	TBD	TBD	TBD	Dec. 2025**

* Dates derived from TPOG's March 2024 Schedule.

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

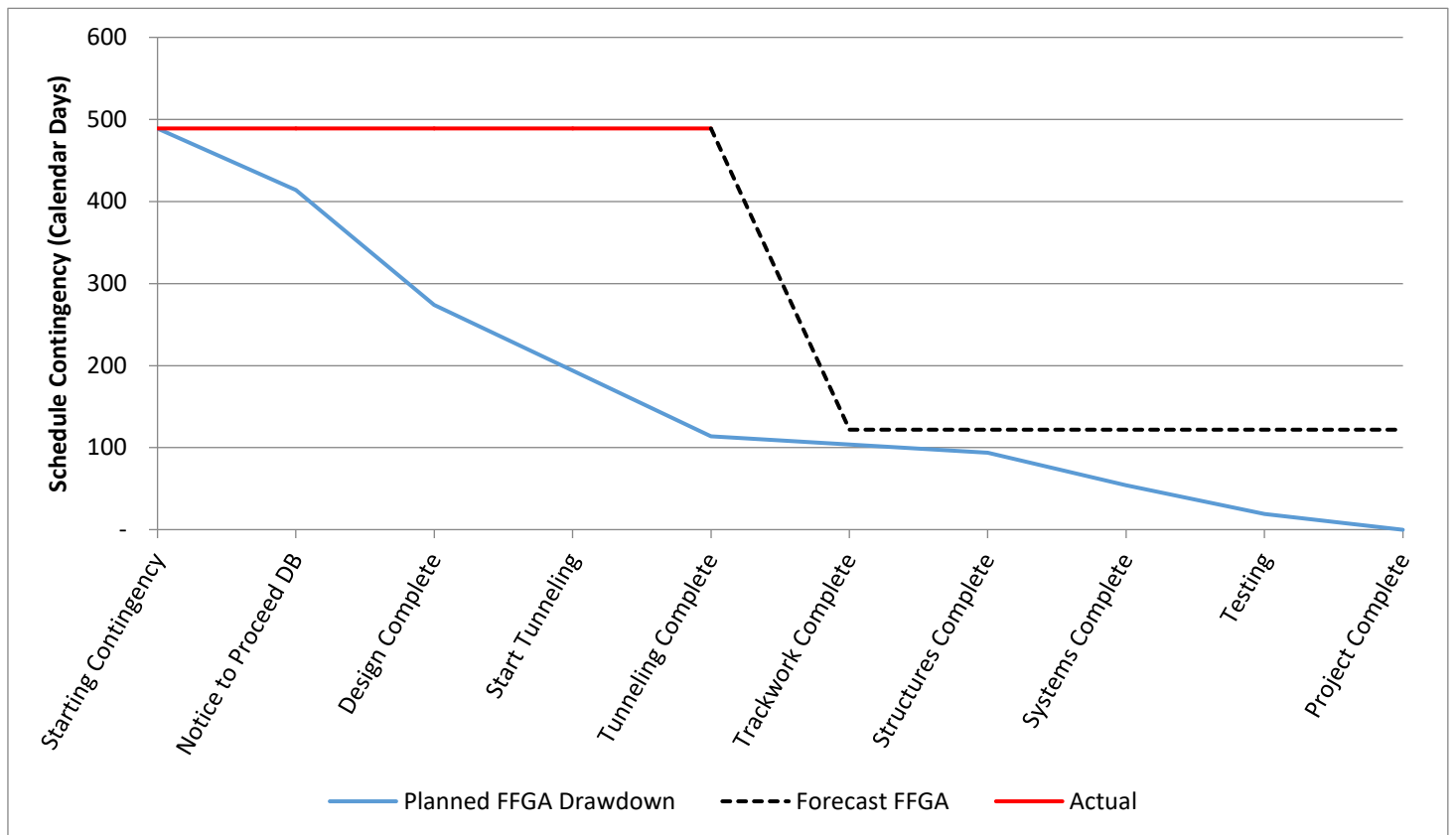
*** Metro supplied equipment.

Project Schedule Contingency Drawdown Analysis

The project schedule contingency drawdown model provides a dual-axis perspective based upon the FFGA RSD of December 2026 and Metro’s Project Master Schedule (PMS) forecast of Summer 2026.

The introduction of the PMS model axis reflects a proportional distribution of available float relative to the FFGA model. Based on the January 2023 actual completion of tunneling. This model will be updated with actuals once trackwork is complete. The Forecast FFGA line depicted in black dashes below has been adjusted to account for the revised variance of 4 months between the revised forecast RSD and the FFGA RSD.

Regarding the FFGA RSD, a schedule float of sixteen (16) months has been maintained.



PROJECT COST

Project Cost Analysis – 865522

DOLLARS IN THOUSANDS

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST/ BUDGET VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAY & TRACK ELEMENTS	346,440	-	324,202	-	318,552	3,057	230,603	-	323,202	(1,000)
20	STATIONS, STOPS, TERMINALS, INTERMODAL	434,990	-	523,683	606	502,338	12,001	291,882	-	523,683	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	-	-	-	-	-	-	-	-	-	-
40	SITWORK & SPECIAL CONDITIONS	553,282	-	628,792	743	616,040	1,882	520,623	(3,000)	626,792	(2,000)
50	SYSTEMS	81,457	-	84,845	4,090	74,114	255	19,820	-	84,845	-
CONSTRUCTION SUBTOTAL (10-50)		1,416,169	-	1,561,523	5,439	1,511,045	17,195	1,062,928	(3,000)	1,558,523	(3,000)
60	ROW, LAND, EXISTING IMPROVEMENTS	426,396	-	351,675	-	318,091	38	300,003	-	351,675	-
70	VEHICLES	42,000	-	42,000	-	-	-	-	-	42,000	-
80	PROFESSIONAL SERVICES	374,878	-	455,354	2,129	449,159	9,535	380,959	3,227	493,429	38,075
SUBTOTAL (10-80)		2,259,444	-	2,410,552	7,568	2,278,295	26,767	1,743,889	227	2,445,627	35,075
90	UNALLOCATED CONTINGENCY	177,176	-	160,068	-	-	-	-	(227)	124,993	(35,075)
100	FINANCE CHARGES	88,695	-	88,695	-	29,192	-	29,192	-	88,695	-
TOTAL PROJECT 865522 (FFGA & NON-FFGA CONCURRENT ACTIVITIES)		2,525,314	-	2,659,314	7,568	2,307,487	26,767	1,773,081	-	2,659,314	-
ENVIRONMENTAL/PLANNING 465522		4,349	-	4,349	-	3,982	-	3,377	-	4,349	-
TOTAL PROJECT 465522 (ENV / PLAN'G)		4,349	-	4,349	-	3,982	-	3,377	-	4,349	-
TOTAL PROJECTS 465522 & 865522		2,529,664	-	2,663,664	7,568	2,311,469	26,767	1,776,459	-	2,663,664	-

NOTE: FINANCE CHARGES ARE MANAGED UNDER DEBT SERVICE - MEASURE R PROJECT NO. 660301

Original Budget

Original Budget of \$2.53 billion reflects the Life of Project (LOP) budget approved by the Board on January 26, 2017, plus Finance Charges of \$88.69 million.

Current Budget

Current Budget remains the same this period at \$2.66 billion.

Current Forecast

Current Forecast remains the same this period at \$2.66 billion. *However, this period reflects an increase of \$0.23 million under the professional services category for continuation of City of Beverly Hills support services per the Memorandum of Agreement and a decrease to the unallocated contingency. Also, it reflects a \$3.00 million reallocation of allocated contingency from Sitework & Special Conditions to Professional Services to cover potential changes.*

Commitments

The Commitments increased this period by \$7.6 million due to executed Contract Modifications and Change Orders for the Design/Build Contract C1120. A Contract Modification for Universal Fare System and a Work Order for City of Beverly Hill support per the Memorandum of Agreement. The \$2.31 billion in Commitments to date represent 86.8% of the Current Budget.

Expenditures

The Expenditures increased this period by \$26.77 million primarily for costs associated with Design/Build Contract C1120, Third Party Utilities, Environmental Services, Real Estate Acquisition, Metro Project Administration, Engineering Management Support Services, Construction Management Services, Legal Services, Quality Management Support Services, City of Beverly Hills Memorandum of Agreement and City of Los Angeles Master Cooperative Agreement. The \$1.78 billion in Expenditures to date represent 66.7% of the Current Budget.

Project Cost Analysis – 860522 (Beverly Hills North Entrance)

DOLLARS IN THOUSANDS

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST/ BUDGET VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAY & TRACK ELEMENTS	-	-	-	-	-	-	-	-	-	-
20	STATIONS, STOPS, TERMINALS, INTERMODAL	27,350	-	27,350	-	-	-	-	-	27,350	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	-	-	-	-	-	-	-	-	-	-
40	SITework & SPECIAL CONDITIONS	-	-	-	-	-	-	-	-	-	-
50	SYSTEMS	-	-	-	-	-	-	-	-	-	-
CONSTRUCTION SUBTOTAL (10-50)		27,350	-	27,350	-	-	-	-	-	27,350	-
60	ROW, LAND, EXISTING IMPROVEMENTS	-	-	-	-	-	-	-	-	-	-
70	VEHICLES	-	-	-	-	-	-	-	-	-	-
80	PROFESSIONAL SERVICES	1,900	-	1,900	-	371	-	28	-	1,900	-
SUBTOTAL (10-80)		29,250	-	29,250	-	371	-	28	-	29,250	-
90	UNALLOCATED CONTINGENCY	-	-	-	-	-	-	-	-	-	-
100	FINANCE CHARGES	-	-	-	-	-	-	-	-	-	-
TOTAL PROJECT 860522		29,250	-	29,250	-	371	-	28	-	29,250	-

Original Budget

Original Budget of \$29.3 million reflects the Life of Project (LOP) budget approved by the Board on May 26, 2022. This project satisfies the terms and conditions set forth in a Settlement Agreement executed by and between LA Metro and City of Beverly Hills on November 10, 2020. The Agreement requires Metro to assist the City in designing and constructing a new half entrance on the north side of the future Wilshire/Rodeo Station. This is a Non-Federal Funded Project, managed by the City of Beverly Hills. In addition to the LOP budget indicated above, the remainder of Metro’s contribution per the Settlement Agreement (approximately \$10M) is being paid by using contingency from the C1120 contract to cover the cost of changes to the Wilshire/Rodeo Station to facilitate the connection to the City’s new entrance.

Current Budget and Current Forecast

Current Budget and Current Forecast remain the same this period at \$29.25 million.

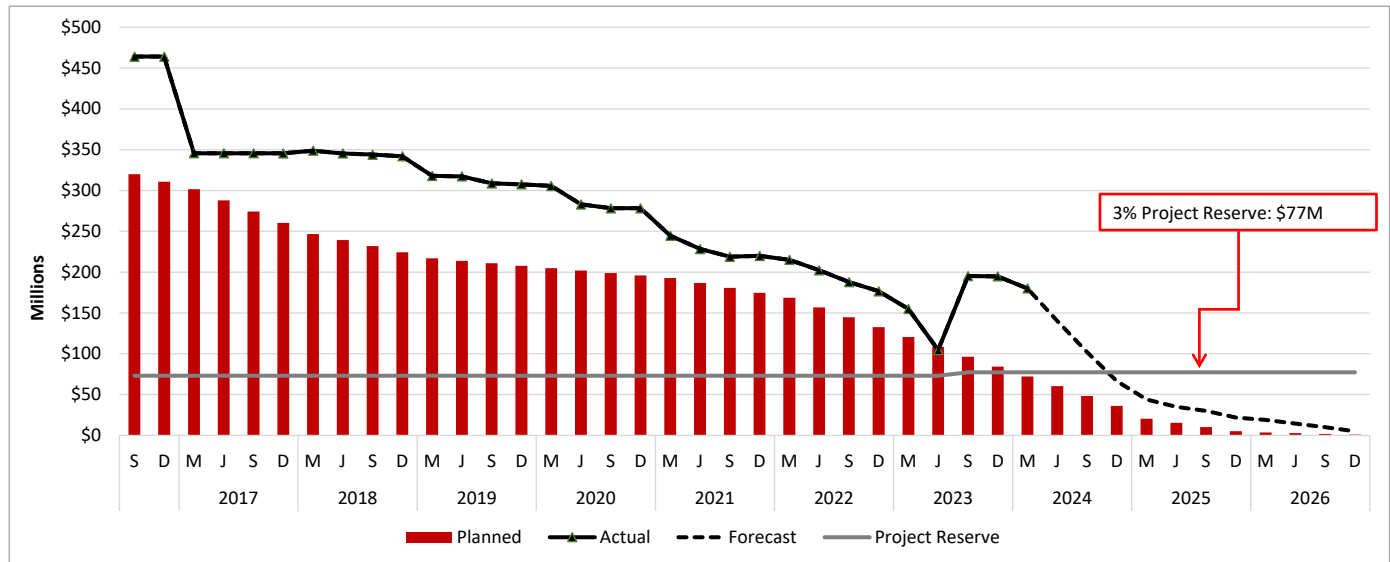
Commitments

Commitments remain the same this period at \$0.4 million. The \$0.37 million in Commitments to date represent 1.3% of the Current Budget.

Expenditures

Expenditure remains the same this period. The \$28 thousand in Expenditures to date represent less than 1% of the Current Budget.

Cost Contingency Drawdown



The above represents project contingency as of March 31, 2024

Cost Contingency Drawdown Analysis

The Original Budget of \$2.5 billion includes finance charges of \$88.7 million. It also includes a project cost contingency of \$345.7 million or 13.7% of the total project, which is based on the Life of Project (LOP) Budget approved by the Board in January 2017. An allocated contingency amount of \$168.5 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 revised 2026 Forecast Revenue Service Date (RSD).

The Unallocated Contingency decreased this period by \$0.2 million for continuation of City of Beverly Hills support services per the Memorandum of Agreement. The Allocated Contingency decreased this period by \$3.3 million due to executed Contract Modifications and Change Orders for the Design/Build Contract C1120.

PROJECT COST CONTINGENCY					
DOLLARS IN THOUSANDS					
	Original Contingency (LOP Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	177,176	(51,956)	(227)	(52,183)	124,993
Allocated Contingency	168,534	(110,139)	(3,251)	(113,390)	55,144
Total Contingency	345,710	(162,095)	(3,478)	(165,573)	180,137

Note: the above table includes FFGA and Non-FFGA contingency.

Risk Management

Summary of Risks

During the quarterly Risk Register update that occurred on April 16, 2024, four (4) new risks were identified, and four (4) risk were closed. There are a total of eighty (80) risks that are being tracked with four (4) risks scored as high, forty-six (46) scored as medium and thirty (30) scored as low to be managed in the next quarter.

Four (4) New Risks Identified:

Risk ID	Risk Description	SCC	Risk Score
PLE2-10.3	Delays to tunnel fit out.	10	6.0
PLE2-50.5	ROC Availability to Perform Tie-In	50	4.0
PLE2-60.3	Potential Claims by Property Owners Once Property is Turned Over	60	2.5
PLE2-10.4	Procurement Delay if Contractor Decides to Order Shorter Length of Rail.	10	1.0

Four (4) Closed Risks:

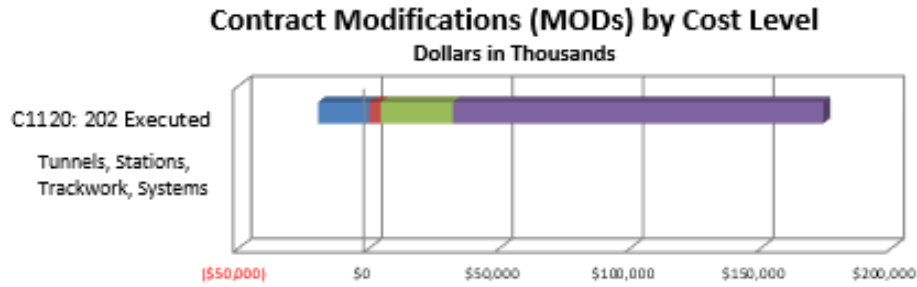
Risk ID	Risk Description	SCC	Risk Score
PLE2-10.1	Potential that the x-passages excavations do not meet assumed production rate	10	7.0
PLE2-80.1	The sequencing of x-passages excavations may be impacted due to Contractor resource availability	80	3.5
PLE2-20.4	Section 3 TBM removal further delays Century City Constellation construction	20	3.0
PLE2-36	Cal OSHA does not provide declassification after excavation is complete.	10	2.0

Top Five Risks

The table below shows the top five (5) Project risks identified after the Risk Register update meeting:

Risk ID	Risk Description	Risk	Action Items
PLE2-70.1	The schedule for the new vehicle procurement will likely not meet the FFGA requirement.	15.0	1. Supporting consultant to assist with Heavy Rail RFP forecasted to go out in July 2022. RFP for new HRV contract is forecasted to go out in December 2022. 2. RFP went out on December 6, 2022 and bids received on April 17, 2023.
PLE2-20.5	Inability to recover time lost at Century City Constellation Station	13.5	1. Look for opportunities for potential mitigation of schedule delays along Century City schedule path.
PLE2-40.3	Delay to permanent power caused by new DWP changes to customer service agreements	10.0	
PLE2-60.1	Requests to extend some temporary easements may be required	10.0	
PLE2-24	Resource constraints at private utility companies delay schedule.	9.0	1. Maintain close coordination with utility companies and sequence utility work as necessary.

Summary of Contract Modifications



	C1120: 202 Executed
■ Under \$100K	(19,490)
■ \$100K to \$250K	4,416
■ \$250K to \$1M	27,552
■ Over \$1M	141,872
Total Contract MODs	154,350
Contract Award Amount	1,376,500
% of Contract MODs	11.21%

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

Two hundred and two (202) Contract Modifications (MODs) with a total value of \$154.4 million have been executed since the award of C1120 Contract – Tunnels, Stations, Trackwork and Systems.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

DBE Commitment – Design ⁽¹⁾ The percentage of funds apportioned to Design Contracts	25.31%
Current DBE Commitment Design ⁽¹⁾ Actual commitments as Design work is awarded	\$20.3M 26.19%
Current DBE Participation ⁽²⁾ Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$21.8M 30.14%

Twenty-one (21) Design DBE sub-consultants have been identified to date.

DBE Commitment – Construction ⁽¹⁾ The percentage of funds apportioned to Construction Contracts	17.00%
Current DBE Commitment Construction ⁽¹⁾ Actual commitments as Construction work is awarded	\$193.8M 13.24%
Current DBE Participation ⁽²⁾ Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$154.5M 15.79%

Fifty-Four (54) Construction DBE sub-contractors have been identified to date.

⁽¹⁾ Data as of April 2024 (when the report was run).
⁽²⁾ Data as of February 2024.

PROJECT LABOR AGREEMENTS (PLA)

As of February, 2024:

Targeted Worker Goal Construction work to be performed by residents from Economically Disadvantaged Area in the United States	40.00%
Targeted Worker Current Attainment	42.69%
Apprentice Worker Goal Construction work to be performed by Apprentices	20.00%
Apprentice Worker Current Attainment	17.19%
Disadvantaged Worker Goal Construction work to be performed by disadvantaged workers	10.00%
Disadvantaged Worker Current Attainment	9.07%

FINANCIAL/GRANT

Status of Funds Source

WESTSIDE PURPLE LINE EXTENSION - SECTION 2 (IN MILLIONS OF DOLLARS)

MARCH 2024

STATUS OF FUNDS BY SOURCE

SOURCE	(A) ORIGINAL BUDGET	(B) TOTAL FUNDS ANTICIPATED	(C) TOTAL FUNDS AVAILABLE	(D) COMMITMENTS \$	(D/B) %	(E) EXPENDITURES \$	(E/B) %	(F) BILLED TO FUNDING SOURCE \$	(F/B) %
	FEDERAL - SECTION 5309 NEW STARTS	\$1,187.000	\$1,187.000	\$771.984	\$1,065.104	90%	\$788.308	66%	\$735.781
FEDERAL - SECTION 5309 NEW STARTS (ARPA-CIG**)	\$0.000	\$58.418	\$58.418	\$58.418	100%	\$58.418	100%	\$58.418	100%
FEDERAL CMAQ	\$169.000	\$169.000	\$169.000	\$169.000	100%	\$169.000	100%	\$169.000	100%
MEASURE R - TIFIA LOAN	\$307.000	\$307.000	\$307.000	\$307.000	100%	\$307.000	100%	\$307.000	100%
MEASURE R 35%	\$811.902	\$887.484	\$608.598	\$657.185	74%	\$398.971	45%	\$351.205	40%
STATE CAPITAL PROJECT LOANS	\$54.762	\$54.762	\$54.762	\$54.762	100%	\$54.762	100%	\$54.762	100%
TOTAL	\$2,529.664	\$2,663.664	\$1,969.762	\$2,311.469	86.8%	\$1,776.459	66.7%	\$1,676.166	62.9%

EXPENDITURES ARE CUMULATIVE THROUGH MARCH 31, 2024

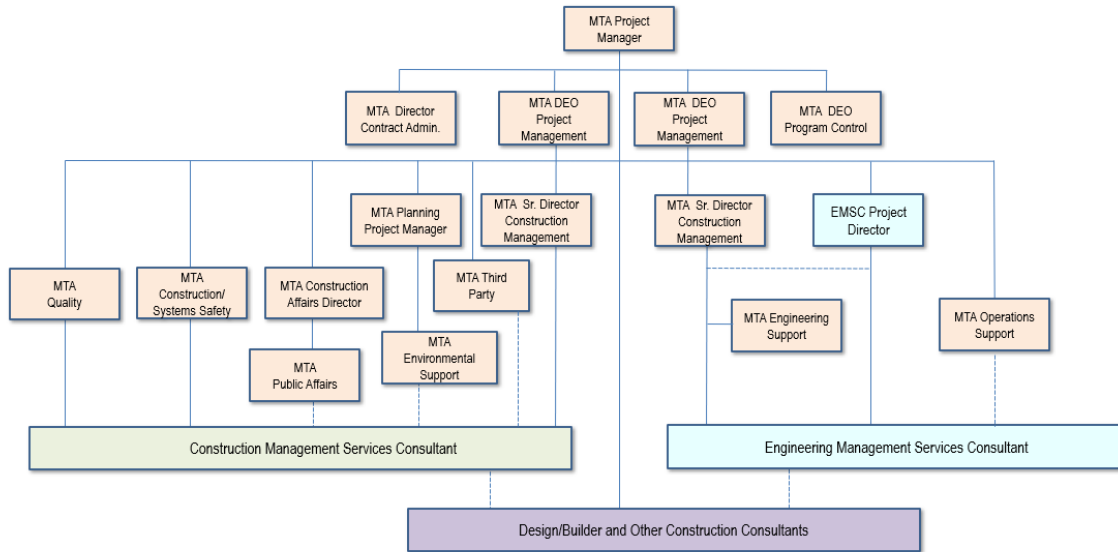
**AMERICAN RESCUE PLAN ACT - CAPITAL INVESTMENTS PROGRAM (ARPA-CIG)

Original Budget based on 2017 Board approved LOP Budget, plus Finance Charges of \$88.7 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).

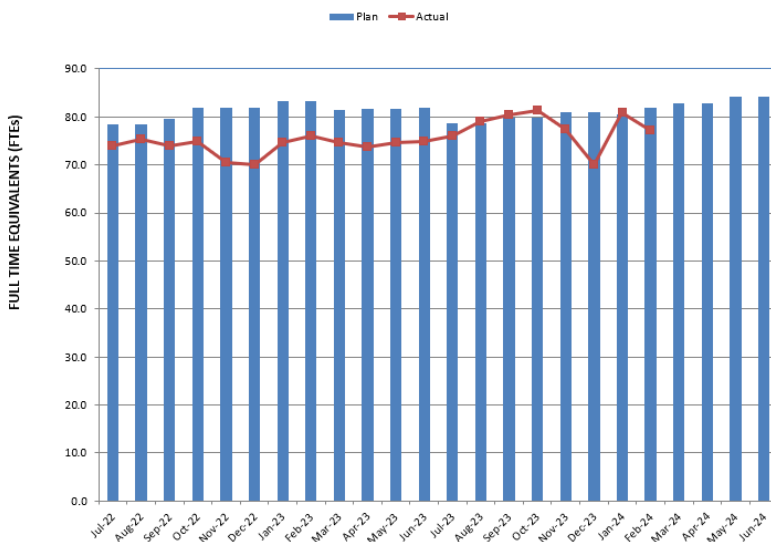
**Purple (D Line) Extension Project Section 2
Responsibility and Reporting Matrix**



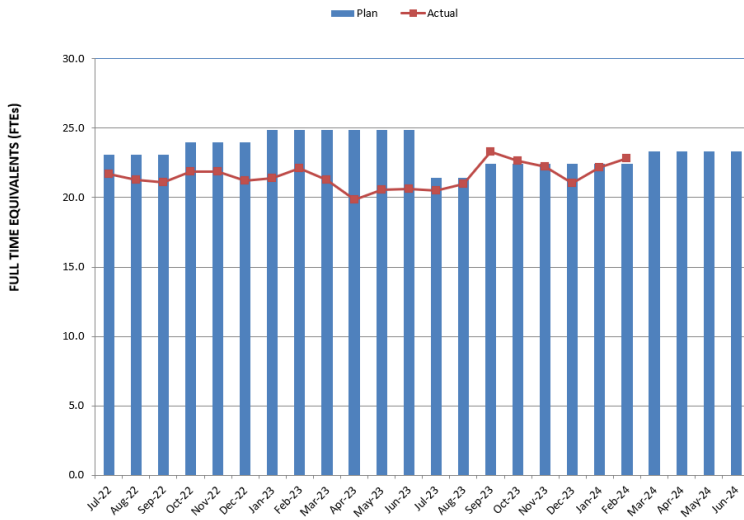
The overall FY24 Total Project Staffing Plan averages 81.3 FTEs per month.

For February 2024, there were a total of 22.8 FTEs for MTA's Project Administration Staff and 54.4 FTEs for Consulting Staff. The total project staffing for February 2024 was 77.2 FTEs.*

Total Project Staffing – Metro and Consultants



*Actuals include 4.4 FTEs related to Project Management Support Services (PMSS).



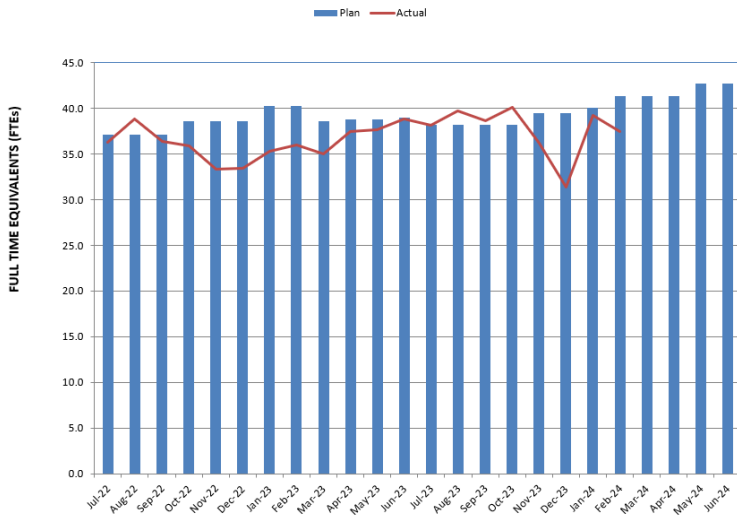
Staffing by Group

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

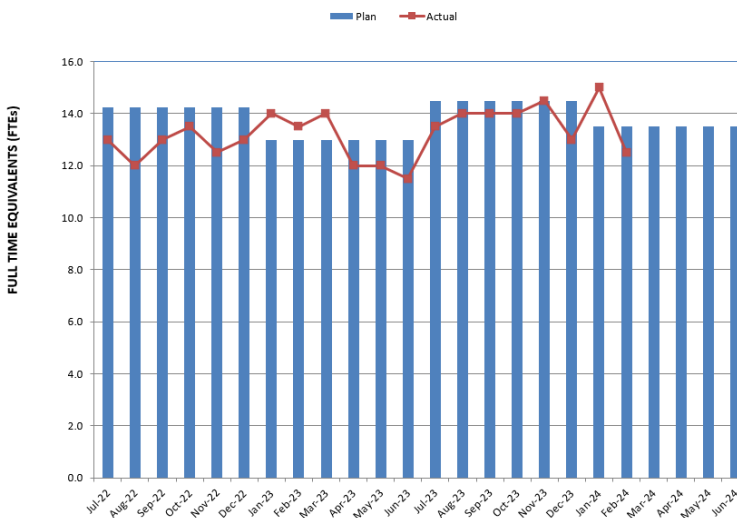
Metro staffing includes full time staff located in the IPMO as well as part-time support located at Gateway Headquarters.

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

Metro Staff



CM Support Services Staff (Consultant)



Engineering Services Staff (Consultant)

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	3	3	3	3	1	2	21	21	3
Part Takes	0	0	0	0	0	0	0	0	0
TCE	3	3	3	3	2	1	1	1	3
SSE	23	23	23	23	15	9	3	3	23
Permanent Easements	3	3	3	3	3	1	0	0	3
Total Parcels	32	32	32	32	21	13	25	25	32

- Parcel W-3301: Award granted by Jury, pending signed final order of condemnation.
- Parcel W-3303: Settlement reached, pending final documentation.
- Parcel W-3304: Litigated settlement obtained, pending attorney recommendation. Will require Metro approval and FTA concurrence.
- Parcel W-3505: Settlement reached and agreement executed. Pending Stipulation for Entry of Judgment and Final Order of Condemnation.

QUALITY ASSURANCE

- Attended weekly Project construction progress meetings.
- Reviewed construction submittals, inspection and assessment reports at various job locations, Twining Independent test laboratory reports (TPOG), Ninyo and Moore test laboratory reports (Metro) and invoices for the work performed by Ninyo and Moore and PQM.
- Contributed to the development of Metro Quality Management Oversight Program and managed the implementation of the Project. Prepared QMO program project monthly report.
- Chaired weekly quality meetings with TPOG Quality Manager for the status, corrective actions, close out documents and verification actions for NCRs issued by Metro; quality control results for the current and upcoming works; planning activities of Metro laboratory materials verification testing and special processes construction assessments.
- Reviewed the following with a disposition for record only/approved/approved as noted:
 - *Cemex Concrete Mix Design 1617198 (Long Distance Pumping)*
 - *CCCS and WRS Disconnect Switch O&M Manual*
 - *CCCS Plumbing Shop Drawings*

ENVIRONMENTAL

- Reviewed and provided responses to various contractor submittals and requests for information related to environmental matters.
- Issued various QMO reports assessing implementation of environmental requirements.
- Participated in various Project coordination meetings and evaluated progress and schedules for environmental compliance and sustainability efforts.
- Provided environmental awareness training as needed.
- Conducted field environmental monitoring and spot check inspections for construction noise and vibration, stormwater and fugitive dust BMPs, and Metro's Green Construction Policy.
- *Submitted Notice of Intent for NPDES Permit re-enrollment on March 22, 2024.*

CONSTRUCTION AND COMMUNITY RELATIONS

- Produced and distributed six (6) construction work notices which include specific construction location updates, monthly Look Ahead summaries and weekly construction work updates.
- *Conducted project presentations in person for the monthly Beverly Hills Sections 1 & 2 Community Construction update meeting. Conducted the Wilshire Rodeo Monthly Stakeholder briefing.* Conducted one-on-one stakeholder meetings in person and online with Property Managers and business owners regarding traffic control, schedule updates, and construction coordination for PLE2 in Beverly Hills and Century City. Continued individual contact with commercial and residential stakeholders as needed.
- Extensive outreach for community meetings including distribution of digital notices, direct emails, mailers, social media and paid online and print advertising. *Primary outreach efforts are digital, with door-to-door outreach taking place in Beverly Hills for appendage work on South Beverly Drive, South Canon Dr, North Canon Dr., cross passages and other construction activities within the City of Beverly Hills.* Maintained expanded footprint of door-to-door distribution of monthly notices and construction updates in the City of Beverly Hills.
- Continued efforts on behalf of Eat Shop Play and Business Interruption Fund (BIF) in Century City and Beverly Hills. Updated Facebook/Twitter and website as needed.

CREATIVE SERVICES

- *Reviewed and responded to fabricator proposals for CCCS Platform Artworks*
- Ongoing coordination with Marketing partners to develop materials for public surveys and findings for station naming Board Report.
- Continued management of artwork design development for integrated station artworks.
- Continued assessment of Project operating impacts to signage between sections and systemwide.
- Continued coordination with arts and cultural stakeholders.

SAFETY & SECURITY

- *TPOG reported one (1) Recordable Injuries in March 2024.*
- Attended daily toolbox meetings, weekly crew all hand safety meetings, progress meetings, readiness reviews, and other project meetings to evaluate Contractor's Safety Program compliance with contract requirements.
- Worked 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.
- *Conducted Project Safety Orientation, W-65 and Underground Safety Training for new Metro/Consultants and IPMO project staff.*
- Conducted right-of-way (ROW) and Safety/Security walks, Safety/Security reviews and coordination with TPOG staff for oversight and support of all project field work activities.
- Metro/TPOG project safety staff conducted schedule, Safety / Security, and over-the-shoulder review meetings.
- *Metro Project Safety hosted the March Monthly Safety and Security Meeting on March 29, 2024.*
- *TPOG reported 82,805 actual work hours in March 2024.*
- *TPOG Project to Date Work Hours are 4,016,447 with fifty-five (55) Recordable Injuries and twelve (12) days Away from Work Injuries.*
- *The Recordable Injury Rate is 2.74. 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
December 2014	FTA approval to enter New Starts Engineering Phase
March 2015	Began Real Estate Acquisition
May 2015	Began Advanced Preliminary Engineering
September 2015	Issued RFQ for C1120 Design/Build contract
October 2015	Received RFQ responses for C1120 Design/Build contract
May 2016	Submitted draft FFGA application
May 2016	Submitted TIFIA loan application
June 2016	Submitted application to FTA requesting an FFGA
June 2016	Received RFP Proposals for Contract C1120
September 2016	Began telecom joint trench construction in Century City
December 2016	FTA executed FFGA
December 2016	Received TIFIA Loan
January 2017	NTP for Construction Management Support Services Contract
January 2017	Metro Board approved staff recommendation to award the Design/Build Contract C1120 to TPOG and approved Life-of-Project Budget
January 2017	Issued C1120 Contract Award to TPOG
April 2017	Issued C1120 Contract NTP to TPOG
May 2017	Mobilized C1120 Contract Design and Construction Team
August 2017	Third party relocations started at Century City Constellation Station
September 2017	Third party relocations started at the Wilshire/Rodeo Station
November 2017	Beverly Hills City Council approved Memorandum of Agreement (MOA) governing remaining third-party utility relocations

December 2017	Final Supplemental Environmental Impact Statement (FSEIS) was available to the public in the Federal Registry on December 1, 2017
January 2018	Completed all utility relocations within the Tunnel Boring Machine “Launch Box”
February 2018	Held Groundbreaking Ceremony on February 23, 2018
May 2018	Bureau of Engineering approved a nine-month street closure of Constellation Blvd. between Century Park East and Avenue of the Stars
September 2018	Full street closure of Constellation Blvd. commenced
September 2018	Delivery of tunnel boring machines (TBMs) commenced
October 2018	Piling installation commenced at launch box in Century City
October 2018	Granted Wilshire/Rodeo Station footprint right-of-way (ROW) access to TPOG
December 2018	Completed all civil work for third parties at Century City Constellation Station
December 2018	Demolition of former Ace Gallery complete
January 2019	Completed soldier pile installation for the TBM launch box at the eastern end of the Century City Constellation Station
January 2019	Metro Board Approves City of Beverly Hills MOA for C1120 Contract
February 2019	City of Beverly Hills City Council Approves MOA for C1120 Contract
March 2019	Start of installation of deck beams for the TBM Launch Box
May 2019	Completed soldier pile installation for Tunnel Access Shaft in Century City
June 2019	TBM Unveiling Event
June 2019	Full Street Closure of Constellation Blvd. Extension Granted
August 2019	Completed Construction of Santa Monica Boulevard Bus Layover in Century City
September 2019	Metro’s request to lift the holiday moratorium for construction activities in Beverly Hills was rejected by the City Council
October 2019	Piling installation commenced for the Wilshire/Rodeo Station box.
November 2019	Poured invert slab at TBM launch box in Century City.
December 2019	An Additional 7-Month Full Street Closure of Constellation Blvd. was Granted by Los Angeles Board of Public Works.
December 2019	Started TBM Assembly.

December 2019	Motion for prejudgment possession for SSE under Beverly Hill High School was granted.
January 2020	Piling activities resumed at Wilshire/Rodeo Station after the holiday moratorium.
January 2020	A geophysical survey identified three oil wells located east of the Tunnel Access Shaft underneath Beverly Hills High School within the tunnel alignment.
March 2020	LADWP completed 4.8kv system cabling pulling and splicing, along with the remaining cable removals at Century City Constellation Station.
March 2020	Beverly Hills City Council approved a full street closure of Wilshire Boulevard (between Beverly Drive and Crescent Drive) for the duration of the “Safer at Home” orders due to the COVID-19 Pandemic.
March 2020	Right of Entry Executed to Access BHUSD.
April 2020	Began tunneling operations of the BL Tunnel.
April 2020	Completed implementation of the Wilshire Boulevard closure (between Beverly Drive and Crescent Drive) for the duration of the “Safer at Home” orders due to the COVID-19 Pandemic.
May 2020	Completed station box and entrance piling activities at Wilshire/Rodeo Station.
June 2020	Wilshire Boulevard reopened to traffic following completion of decking at Wilshire/Rodeo Station.
July 2020	Began tunneling operations of the BR Tunnel.
August 2020	Completed excavation of Tunnel Access Shaft.
August 2020	Access granted to contractor to W-3801 for the Century City Constellation Station entrance.
September 2020	Abandonment of the first legacy oil well was completed.
September 2020	BL TBM “Ruth” Breaks into Tunnel Access Shaft.
September 2020	TIFIA Loan Paid Off and Account Closed.
October 2020	The abandonment of the remaining oil wells has been completed.
October 2020	BR TBM “Harriet” Breaks into Tunnel Access Shaft.
November 2020	Settlement agreement reached with City of Beverly Hills ending city’s lawsuit against FTA and Metro.

November 2020	Beverly Hills City Council approved Metro's holiday moratorium waiver request and work hours established by the Memorandum of Agreement (MOA). Construction of Wilshire/Rodeo Station will continue through New Year's Day.
November 2020	City of Los Angeles approved additional closures east of Avenue of the Stars along Constellation Boulevard through January 2, 2021.
December 2020	First TBM clears all buildings under Beverly Hills High School campus.
January 2021	City of Los Angeles approved extension of street closure for decking and utility work between Avenue of the Stars and Solar Way to April 5, 2021, and weekend closures at the intersection of Constellation Boulevard and Avenue of the Stars.
February 2021	Both TBMs have pushed through the Tunnel Access Shaft and the BL TBM "Ruth" is using conveyor belts for muck removal.
March 2021	Decking complete at Century City Constellation Station except for the twelve (12) remaining panels that are being utilized for additional ventilation openings.
March 2021	BL TBM (Ruth) excavation suspended after approximately 1,300 feet from eastern end of Century City Constellation Station due to unplanned maintenance to face of cutterhead and completion of repairs.
March 2021	Street restoration complete and Constellation Blvd. between Avenue of the Stars and Solar Way fully reopened earlier than planned.
April 2021	Permanent concrete work began at the Wilshire/Rodeo Station.
May 2021	Reopening of Constellation Blvd.
May 2021	Concrete placement for the first section of the invert slab at Wilshire/Rodeo station in Beverly Hills.
May 2021	TBM's resumed excavation after cutterhead inspection and maintenance for BL TBM and muck removal transitioning to conveyor belts for BR TBM.
June 2021	Switching from vertical conveyor belts to crane and muck boxes in the Tunnel Access Shaft.
July 2021	The conversion of the muck conveyance systems for both tunnels was completed on July 27, 2021.
August 2021	The first concrete placement for the first level Wilshire/Rodeo Station walls occurred during this period.
August 2021	Both BL and BR TBM have exited the first of two seismic lining sections this period.
October 2021	Both TBM's have exited the 2 nd seismic zone of the alignment.

October 2021	Excavation of the Century City Constellation station entrance box has commenced.
October 2021	City of Beverly Hills approved the request for the Holiday Moratorium waiver allowing work to continue with adjusted hours and activities.
December 2021	Both TBM's reached the planned stopping point prior to break-in at Wilshire/Rodeo.
January 2022	BR TBM "Harriet" Breaks into Wilshire/Rodeo Station Box on January 12, and BL TBM "Ruth" Breaks into Wilshire/Rodeo Station Box on January 28.
March 2022	Both TBM's have begun excavation on reach 4 toward Wilshire/La Cienega Station. BL on March 2, 2022, and BR on March 29, 2022.
April 2022	On April 8, 2022, VCM notifies CRRC MA Corporation that Metro does not intend to exercise any of the available Options for the HR4000 Contract.
May 2022	Completed drilling for shoring beams on south side of Avenue of the Stars for Storm Drain.
June 2022	Completed membrane waterproofing on Concourse Walls (Entrance) – Wilshire/Rodeo Station.
June 2022	Began cross passage dewatering well installation along tunnel alignment.
July 2022	On July 29, 2022, a jury determined the amount of just compensation that Metro owes the Beverly Hills Unified School District (BHUSD) for the subsurface easements under the high school campus and the administration building. The verdict concludes all litigation between BHUSD and Metro.
August 2022	Started formwork for Station Entrance Roof at Wilshire/Rodeo Station.
September 2022	Started work for SCE permanent power at Wilshire/Rodeo.
September 2022	Started Cross Passage 40 work in BL tunnel.
October 2022	Metro issued a Notice of Work Suspension on October 21, 2022, effective immediately until November 7, 2022, out of concern for TPOG's Safety performance.
November 2022	On November 4, 2022, Metro allowed production work to resume at the Century City Constellation and Wilshire/Rodeo stations. TBM tunneling production resumed on November 16, 2022. Work resumed for the BL tunnels and Cross Passages on November 18, 2022.
November 2022	On November 18, 2022, the BR TBM completed overall excavation and reached the Purple Line Extension Section 1 interface concrete end wall.

December 2022	On December 6, 2022, HRV 5000 (New Heavy Rail Vehicle Contract) was issued.
January 2023	On January 12, 2023, the BL TBM completed overall excavation and reached the Purple Line Extension Section 1 interface concrete end wall.
February 2023	Completion of Wilshire/Rodeo Station Entrance Concourse Roof Deck.
April 2023	Completion of Wilshire/Rodeo Station Main Concourse Roof Deck.
April 2023	On April 17, 2023, bids were received for HRV5000 (New Heavy Rail Vehicle Contract).
May 2023	Completion of removal of temporary backfill for future passageway at Century City Constellation.
June 2023	TPOG has agreed to retain a third-party independent safety company to improve adherence to safety policies and procedures and to upgrade the culture of safety.
June 2023	Concrete invert placement at Century City Constellation Station resumed on the east end of the station just west of the existing launch box slab which was completed in December 2019.
July 2023	Began pile installation for first WRS Appendage structure (Emergency Ventilation Shaft #9 at Wilshire/Beverly).
August 2023	Completed excavation and initial lining of all seven (7) cross passages along Reach 5.
September 2023	Completed excavation of the station box at Century City Constellation Station.
October 2023	Completed concrete placement of Invert Slab at Century City Constellation Station.
December 2023	Started concourse level slab falsework at Century City Constellation Station.
January 2024	Completed concrete placement of East Concourse Level Slab at Wilshire/Rodeo Station (GL1-12).
January 2024	Began pile installation of TPSS Access Shaft at Wilshire/Rodeo Station.
January 2024	Completed excavation of all Cross Passages.
January 2024	Metro Board awards HR5000 Heavy Rail (HRV) Procurement to Hyundai Rotem Company.
February 2024	Completed concrete placement of concourse Level Slab at Wilshire/Rodeo Station.

February 2024	Completed excavation of East UPE/Exhaust #3 appendage along S. Canon Dr.
March 2024	<i>Completed Concourse Level Invert Slab at Century City Constellation Station Entrance.</i>
March 2024	<i>Complete Reach 5 BL Tunnel 1st Stage invert (Excluding Fault Zones and TAS)</i>