Westside Purple Line Extension Section 2 Project



WESTSIDE PURPLE LINE EXTENSION SECTION 2 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).

JANUARY 2018

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PROJECT OVERVIEW & STATUS

Section 2 of the Westside Purple Line Extension Project is the second of three sections to be designed and constructed as part of the Los Angeles County Metropolitan Transportation Authority (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 Westside Purple Line Extension Section 1 Project currently under construction to the Century City area. 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 and two new stations as well as the purchase of 20 heavy rail vehicles. 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.

<u>Design</u>

The Engineering Management Services (EMS) team continues to provide design support for the Advanced Utility Relocation (AUR) work in Century City and Beverly Hills as well as real estate support services. The team is supporting Metro in reviewing final design submittals, responding to RFI's, and assisting in the preparation of change notices.

The C1120 Contractor, Tutor Perini/O&G, a Joint Venture (TPOG), has mobilized the final design team, STV.

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

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

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). If required, critical design units can be advanced as Advanced Partial Design Units (APDU's) to support ongoing construction activities.

Design progress meetings are occurring weekly related to the design unit packages. TPOG is continuing with the required contractual submittals. *Design related submittals of note that TPOG has submitted this month are: Geotechnical Investigation Program; Work Shaft Support of Excavation; Final Sustainability Plan; and Acoustical Analysis.*

Major Contract Procurement

All construction contracts for the Project have been awarded.

Construction

Advanced Utility Relocations

Century City Constellation: Telecom joint trench civil work completed in June 2017. *All utility relocation work within the tunnel boring machine "Launch Box" are complete as of January 11, 2018. LADWP Power construction began in May 2017, and civil work is approximately 40% complete.* SCG utility relocations are complete. AT&T utility relocations began in November 2017 and are ongoing.

Wilshire/Rodeo: SCE began its relocation of power lines on September 5, 2017 and completed on January 30, 2018. SCG and AT&T work is planned to start in February 2018.

TBM Launch Box: SCG utility relocations are complete. LADWP Power utility relocations are ongoing. *TPOG was granted access to this area on January 11, 2018 as planned.*

Contract C1120 – Tunnels, Stations, Trackwork and Systems (Design/Build) Contract award was issued on January 31, 2017 and Notice to Proceed on April 26, 2017. TBM's purchase order has been executed.

TPOG submitted a Value Engineering Proposal to provide a precast concrete special lining in lieu of a fabricated steel lining. The proposal was accepted and approved by Metro and results in a net Project savings of \$22.3M.

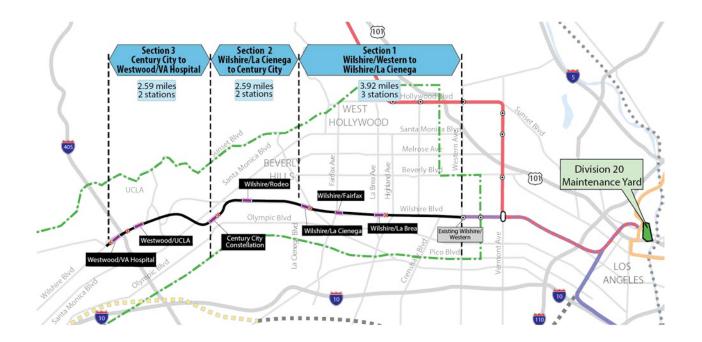
TPOG was granted access to the future Wilshire/Rodeo Station entrance site on October 10, 2017.

Beverly Hills City Council (BHCC) approved the permit for geotechnical investigation work. BHCC approved the Memorandum of Agreement (MOA) governing remaining third party utility relocation work on November 22, 2017. MOA negotiations are ongoing with the City of Beverly Hills for the D/B Contract work. *Metro anticipates obtaining MOA in second quarter of 2018.*

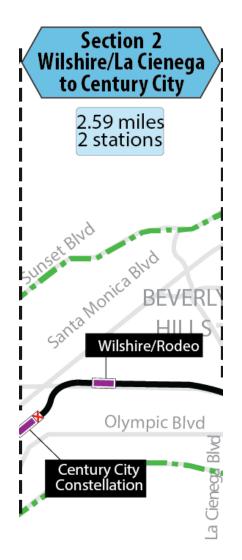
MANAGEMENT ISSUES

No management issues this period.

PROJECT ALIGNMENT BY SECTIONS



PROJECT ALIGNMENT SECTION 2



BASE PROJECT SCOPE

Section 2 of the Westside Purple Line Extension Project is the second of three sections to be designed and constructed as part of the Los Angeles County Metropolitan Transportation Authority (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.

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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 breaking distance will be provided at the interim terminus station.

<u>Contract C1120 – Tunnels, Stations, Trackwork, Systems and Systems Integration</u> <u>Testing</u>

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 launch (TBM) 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.

BASE PROJECT SCOPE (Continued)

Metro Furnished Equipment

Metro has procured a separate contract to provide the 20 Heavy Rail Vehicles (HRV) and will procure a separate contract for the Universal Fare System (UFS) necessary to operate the Purple Line. The scope of the HRV contract includes design, manufacturing, testing and delivery of the vehicles. The scope of the UFS contract will include design, fabrication and installation of equipment at the two stations and system testing.

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.

KEY MILESTONES SIX-MONTH LOOK AHEAD

| | Milestone Date | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 |
|--|-------------------|-------------------|--------|-----------|--------|--------|--------|
| Third Party Utility Construction Begins at Wilshire/Rodeo - SCG & AT&T | 02/12/18 | \bigtriangleup | | | | | |
| Submit 100% Design Package - SOE for TBM Launch Box | 02/27/18 | | | | | | |
| Submit 100% Drawings - Wilshire/Rodeo Station SOE | 03/09/18 | | | | | | |
| Submit 100% Design Package 1 - Utility/Civil Design at Launch Box in Century City | 03/09/18 | | | | | | |
| Issue IFC Drawings for TBM Launch Box SOE | 03/30/18 | | | | | | |
| Submit 60% Design Package 3 - Volume 2 Rodeo Station | 03/30/18 | | | | | | |
| Issue IFC Drawings for Design Package 1 - Utility/Civil Design at Launch Box in Century City | 04/09/18 | | | | | | |
| Issue IFC Drawings for Wilshire/Rodeo Station SOE | 04/14/18 | | | | | | |
| Submit 100% Design Package 2 - Remaining Utility Conflicts (Outside of Launch Box) | 04/19/18 | | | | | | |
| Start Construction Bus Layover Facility at Constellation Avenue | 04/23/18 | | | | | | |
| Start Installation of Soldier Piles - TBM Launch Box | 04/24/18 | | | | | | |
| Start Temporary Utility Support/Relocation at Wilshire/Rodeo Station | 06/18/18 | | | | | | |
| Issue IFC Drawings Package 2 - Remaining Utility Conflicts (Outside of Launch Box) | 06/22/18 | | | | | | |
| Third Party Utility Relocations Complete at Wilshire/Rodeo Station | 07/14/18 | | | | | | |
| MTA Staff MTA Board Action FTA (Federal Tra Administration) | ansit 🛆 | Other Agencies | | Contracto | r | | |

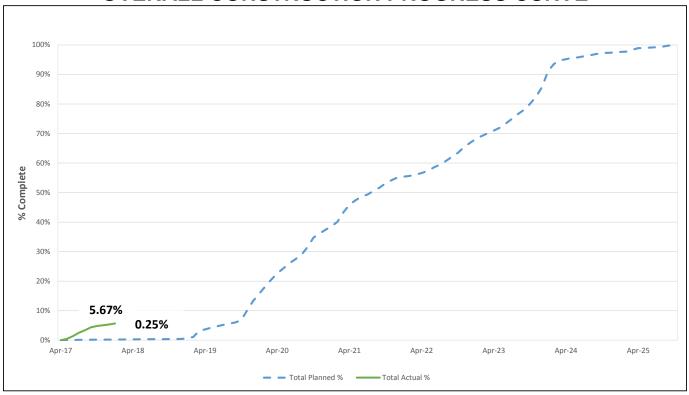
٠ **VF** ٠ ٠ MASTER SCHEDULE Data Date: 03-Feb-18 1 of 1 Westside Purple Line Extension Section 2 Project os Angeles County Metropolitan Transportation Authority Schedule - MPSR 09-Aug-12 A 24-Jan-13 A 15-Dec-16 A 26-Jan-17 A 09-Jun-26 09-Jun-26 07-Oct-25* 20-Dec-16A 01-Dec-17 A 13-Apr-16 A 26-Apr-17 A 26-Apr-12 A 31-Dec-14A 26-Apr-17 A 31-Dec-26* 01-Dec-17 A 25-Oct-19 22-Feb-19 15-Aug-25 26-Apr-17 A 10-Feb-25* 22-Feb-19 15-Aug-25 21-Nov-23 29-Dec-23 08-Jan-24 25-Oct-19 03-Jul-18 03-Aug-22 03-Apr-20 09-Jan-25 10-Feb-25 17-Apr-25 30-Aug-25 30-Aug-25 31-Dec-31-Dec-14 A 20-May-15 A 28-May-15 A 28-May-15 A Managerr Start 02-Mar-15 A 05-Jan-15 A 02-Mar-15 A 05-Jan-15 A 02-Mar-15 A 03-Aug-15 A 01-Jul-15 A 01-Jul-21 03-Jan-22 05-Sep-17 A 06-Sep-16 A 27-Apr-17 A 31-Dec-14 A 26-Apr-12 A 29-Aug-25* 05-Jan-15 A 02-Mar-15 A 06-Sep-16 A 01-Aug-18 15-Nov-23 18-Apr-25 13-May-25 03-Apr-24 18-Apr-25 13-May-25 1072 2565 2565 1678 1615 3497 694 1210 264 8 8 610 600 243 897 311 264 135 135 270 270 0 494 694 583 00 0 0 0 0 0 0 0 0 0 Contract C1120 Milestone # 1 - Substantial Completion (NTP+2,950 CD Project Close Out C1120 Milestone # 4 - Complete Demobilization (NTP+3,100 CD) FTA Issue Full Funding Grant Agreement (FFGA) Metro Board Adopt Project & Authorize Life of Project Budget FTA Approval to Enter Into Preliminary Engineering FTA Approval to Enter into New Starts Engineering Phase ellation - Current Schedule Forecast Revenue Service Date - RSD ga to Century City Con ssue NTP to Major D/B Contractor MTA Board Approve Final EIS/EIR FFGA Revenue Service Date FTA Record of Decision Advanced Preliminary Engineering (APE) WPLE Section 2 - Wilshire/La Cienega to Century City Co Re-Start Section 2 **PROJECT PLANNING & DEVELOPMENT** Heavy Rail Vehicles Contract HR4000 Universal Fare Collection Equipment Environmental Document Update OWNER FURNISHED EQUIPMENT SCADA Software and Equipment CONSTRUCTION Site Work & Temporary Facilities Wilshire/La DATES RE Acquisitions - Critical RE Relocations - Critical FTA Process & Approvals Actual Work
Actual Work
Remaining Work
Actional Remaining Work Contract Procurement RIGHT-OF-WAY (R/W) KΕV Pre-revenue Service Project Close-Out WS2-WS-PC-1000 WS2-WS-PC-1005 Guideway & Track Final Design (FD) WS2-MS1040 WS2-MS1050 ENGINEERING MILESTONES WS2-MS1010 WS2-MS1120 WS2-MS1020 WS2-MS1060 WS2-MS1070 WS2-MS1110 WS2-MS1000 WS2-MS1005 WS2-MS1030 Systems Utilities Stations Testing Start Up VPLE

PROJECT SUMMARY SCHEDULE

SCHEDULE MEASUREMENTS

| | Status | Last Period | Change from Last Period | Comment |
|-----------------------------------|------------|-------------|-------------------------------|--|
| Forecast Revenue Service | 8/29/2025 | 8/29/2025 | None | |
| FFGA Revenue Service | 12/31/2026 | 12/31/2026 | None | |
| Final Design Progress: | | | | |
| Contract C1120 | 50.60% | 47.36% | 3.24% | Final design is scheduled to complete in December 2018 |
| Construction Contracts Progress*: | | | | |
| Contract C1120 | 0.00% | 0.00% | 0.00% | NTP issued on April 26, 2017 |

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



OVERALL CONSTRUCTION PROGRESS CURVE

The actual overall construction progress is 5.67% versus a planned of 0.25% through January 2018. The progress curves represent the physical progress of work performed to complete Contract C1120. The "Total Planned %" curve is based on the Contractor's late schedule dates from the approved baseline schedule.

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.

MAJOR EQUIPMENT DELIVERY

| | Submittal | Procurement | Delivery | Installation |
|------------------------------|-----------|----------------------|---------------|--------------|
| C1120 DESIGN/BUILD* | | | | |
| Tunnel Boring Machine | 7/27/17A | 8/14/2017A | 10/4/18 | 1/30/19 |
| Emergency Ventilation Fans | 4/16/19 | | 10/8/19 | 11/20/20 |
| Station Elevators/Escalators | 4/5/19 | 8/29/19 | 8/21/20 | 1/15/21 |
| Direct Fixation Tracks | 4/16/19 | 5/17/19 | 9/10/19 | 6/2/21 |
| Automatic Train Control | 6/11/18 | 1/29/19 | 4/9/19 | 12/10/20 |
| Traction Power Equipment | 7/15/19 | 8/15/19 | 4/22/20 | 4/13/21 |
| Radio System | 8/6/18 | 1/29/19 | 4/9/19 | 12/15/20 |
| | | | | |
| Heavy Rail Vehicles | | Exercise Option #3 I | March 1, 2019 | |
| | | | | |
| Ticket Vending Machines | TBD | TBD | TBD | June 2023** |
| | | | | |

* Dates derived from TPOG's January 2018 Update Schedule.

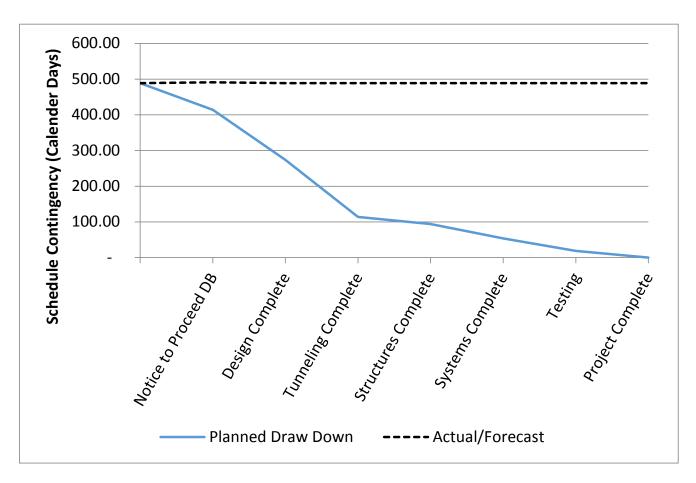
** Forecast release date by C1120 contractor to UFS contractor access at stations.

DESIGN BUILDER'S (C1120) LONG LEAD ITEM LIST

Currently under development.

CRITICAL PATH NARRATIVE

The Critical Path for the Westside Purple Line Extension Project Section 2 begins with thirdparty utility relocations at the future Century City Constellation (CCC) Station and is followed by the Contractor, Tutor Perini/O&G a Joint Venture (TPOG), required utility relocations in the same area. The path then follows into installation of soldier piles on the north side, then immediately on the south side, then proceeding into support beams and temporary street decking of the CCC Station. The critical path then flows into excavation below the deck, and then structural concrete for the station through the arched roof concrete. The path continues into the installation of the interior finishes and mechanical/electrical equipment. Simultaneously, systems installation work for Automatic Train Controls, Traction Power and Communications will be on-going. It follows with connecting with Rail Operations Center (ROC) for TPOG's System Integration Testing to ROC and then complete Systems Integration Testing for the Heavy Rail Vehicles, Communications tie-ins and with the Wilshire/La Cienega Station to obtain FLS Certification and CPUC Safety Certification Verification, and then ends with pre-revenue operations.



PROJECT SCHEDULE CONTINGENCY DRAWDOWN

PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS

The project schedule contingency drawdown curve is based on an August 29, 2025 Forecast Revenue Service Date (RSD).

PROJECT COST STATUS

| SCC | DESCRIPTION | | RIGINAL CURRENT BUDGET | | COMMITMENTS | | EXPENDITURES | | CURRENT FORECAST | | FORECAST/ BUDGET |
|---------|--|-----------|------------------------|-----------|-------------|-----------|--------------|---------|------------------|-----------|---------------------|
| CODE | | BUDGET | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | VARIANCE |
| 10 | GUIDEWAY & TRACK ELEMENTS | 346,440 | - | 346,440 | (23,019) | 306,924 | - | 23,000 | (17,605) | 328,836 | (17,605) |
| 20 | STATIONS, STOPS, TERMINALS, INTERMODAL | 434,990 | - | 434,990 | - | 410,368 | - | 41 | 8,081 | 443,071 | 8,081 |
| 30 | SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS | - | - | - | - | - | - | - | - | - | - |
| 40 | SITEWORK & SPECIAL CONDITIONS | 553,282 | - | 553,282 | 2,371 | 528,963 | 11,832 | 180,757 | 23,518 | 576,800 | 23,518 |
| 50 | 50 SYSTEMS | | - | 81,457 | - | 68,537 | 117 | 1,325 | 450 | 81,907 | 450 |
| | CONSTRUCTION SUBTOTAL (10-50) | | - | 1,416,169 | (20,648) | 1,314,791 | 11,949 | 205,123 | 14,445 | 1,430,614 | 14,445 |
| 60 | 60 ROW, LAND, EXISTING IMPROVEMENTS | | - | 426,396 | - | 230,081 | 2,292 | 132,935 | - | 426,396 | - |
| 70 | VEHICLES | 42,000 | - | 42,000 | - | - | - | - | - | 42,000 | - |
| 80 | PROFESSIONAL SERVICES | 374,878 | - | 374,878 | 1,818 | 175,687 | 4,500 | 104,186 | 1,096 | 375,974 | 1,096 |
| | SUBTOTAL (10-80) | 2,259,444 | - | 2,259,444 | (18,830) | 1,720,560 | 18,741 | 442,243 | 15,540 | 2,274,984 | 15,540 |
| 90 | UNALLOCATED CONTINGENCY | 177,176 | - | 177,176 | - | - | - | - | (15,540) | 161,636 | (15,540) |
| 100 | FINANCE CHARGES | 88,695 | - | 88,695 | - | - | - | - | - | 88,695 | - |
| DTAL PR | OJECT 865522 (FFGA & NON-FFGA CONCURRENT ACTIVITIES) | 2,525,314 | - | 2,525,314 | (18,830) | 1,720,560 | 18,741 | 442,243 | - | 2,525,314 | - |
| | ENVIRONMENTAL/PLANNING - 465518 & 465522 | 4,349 | - | 4,349 | - | 3,329 | 27 | 2,683 | - | 4,349 | - |
| | TOTAL PROJECT 465518 & 465522 (ENV / PLAN'G) | 4,349 | - | 4,349 | - | 3,329 | 27 | 2,683 | - | 4,349 | - |
| | TOTAL PROJECTS 465518, 465522 & 865522 | | - | 2,529,664 | (18,830) | 1,723,889 | 18,767 | 444,927 | - | 2,529,664 | _ |

PROJECT COST ANALYSIS

Original Budget and Current Budget

The Original Budget and Current Budget of \$2.5 billion reflects the Life of Project (LOP) budget approved by the Board on January 26, 2017, plus Finance Charges of \$88.7 million.

Current Forecast

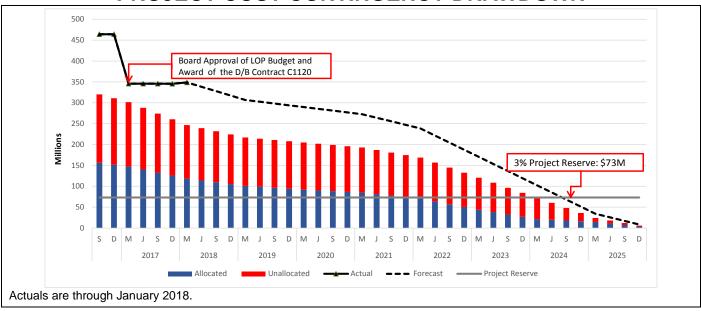
The Current Forecast remains the same this period at \$2.5 billion. However, the Guideway & Track Elements category decreased by \$17.6 million due to the accepted Value Engineering Proposal associated with the Design/Build Contract C1120. The Site & Special Conditions category increased by \$23.5 million primarily due to ongoing work required by the Private Utility Companies and Environmental Services. The Stations, Stops, Terminals Intermodal category increase by \$8.1 million and the Professional Services category increase by \$1.1 million due to the reallocation of contingency for the Design/Build Contract C1120. The net of \$15.5 million was transferred from Unallocated Contingency.

Commitments

The Commitments decreased this period by \$18.8 million primarily due Executed Modifications for the Design/Build Contract C1120. The \$1.7 billion in Commitments to date represents 68.1% of the Current Budget.

Expenditures

The Expenditures increased this period by \$18.7 million primarily for costs associated with Design/Build Contract C1120, Private Utilities, Real Estate Acquisitions, Memorandum of Agreement with City of Beverly Hills, Legal Services, Metro Project Administration, Construction Management Support Services and Engineering Management Services. The \$444.9 million in Expenditures to date represents 17.6% of the Current Budget.



PROJECT COST CONTINGENCY DRAWDOWN

PROJECT COST CONTINGENCY DRAWDOWN ANALYSIS

The Current 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 upon 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 where 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 an August 29, 2025 Forecast Revenue Service Date (RSD).

The unallocated contingency decreased this period by \$15.5 million primarily due to ongoing work required by the Private Utility Companies and Environmental Services. The allocated contingency increased this period by \$18.8 million mainly due to the accepted Value Engineering Proposal to replace the fabricated steel tunnel lining with a precast concrete tunnel lining for the Design/Build Contract C1120.

PROJECT COST CONTINGENCY

| DOLLARS IN THOUSANDS | | | | | |
|-------------------------|-------------------------------------|--------------------|-------------------|----------|--|
| | Original Contingency (Budget) | Previous Period | Current Period | To-Date | Remaining Contingency (Forecast) |
| Unallocated Contingency | 177,176 | - | (15,540) | (15,540) | 161,636 |
| Allocated Contingency | 168,534 | (196) | 18,830 | 18,634 | 187,168 |
| Total Contingency | 345,710 | (196) | 3,290 | 3,094 | 348,804 |

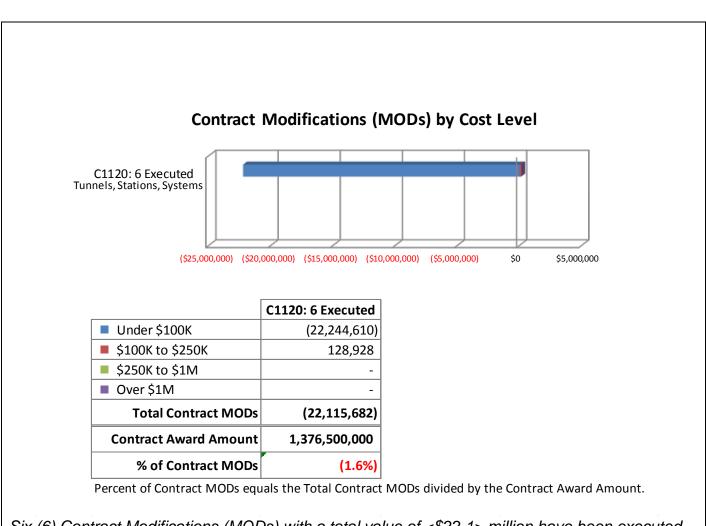
RACE-CONSCIOUS DISADVANTAGED BUSINESS ENTERPRISE (RC-DBE) STATUS

Contract C1120

| • | RC-DBE Goal – Design | |
|-----|--|-------------------------|
| | A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of RC-DBE firms as compared to all firms in the relevant geographic market area. | 25.00% |
| • | Current RC-DBE Commitment – Design | \$14,477,320 |
| | Total RC-DBE Committed Dollars divided by Total Contract Value for Design or Construction. | |
| • | Current RC-DBE Participation | \$5,762,180 |
| | Total amount paid to date to RC-DBEs divided by the amount paid to date to Prime. | (15.66%) |
| Fif | teen (15) Design RC-DBE subcontractors have been identified. | |
| | | |
| | | |
| • | RC-DBE Goal – Construction | |
| • | RC-DBE Goal – Construction A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of RC-DBE firms as compared to all firms in the relevant geographic market area. | 17.00% |
| • | A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of RC-DBE firms as compared to all firms in the | 17.00% \$75,238,139 |
| • | A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of RC-DBE firms as compared to all firms in the relevant geographic market area. | |
| • | A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of RC-DBE firms as compared to all firms in the relevant geographic market area. Current RC-DBE Commitment – Construction | \$75,238,139 |
| • | A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of RC-DBE firms as compared to all firms in the relevant geographic market area. Current RC-DBE Commitment – Construction Actual commitments as Construction work is awarded. | \$75,238,139 (5.70%) |

PROJECT LABOR AGREEMENTS (PLA) STATUS

TPOG has committed to comply with Project Labor Agreements/Construction Careers Policy (PLA/CCP) requirements for the Project. Project Staff will monitor and report TPOG's progress toward meeting the goals of the PLA/CCP once construction begins.



SUMMARY OF CONTRACT MODIFICATIONS

Six (6) Contract Modifications (MODs) with a total value of <\$22.1> million have been executed since the award of C1120 Contract –Tunnels, Stations, Trackwork, and Systems.

FINANCIAL/GRANT STATUS

| SOURCE | (A) ORIGINAL BUDGET | (B) TOTAL FUNDS ANTICIPATED | (C) TOTAL FUNDS AVAILABLE | (D) COMMIT \$ | (D/B) MENTS % | (E) EXPEN \$ | (E/B) IDITURES % | (F) BILLED TO SOURO \$ | |
|-----------------------------------|---------------------------|--------------------------------------|------------------------------------|---------------------|---------------------|--------------------|------------------------|---------------------------------|-------|
| FEDERAL - SECTION 5309 NEW STARTS | \$1,187.000 | \$1,187.000 | \$200.000 | \$1,045.545 | 88% | \$124.303 | 10% | \$124.303 | 10% |
| FEDERAL CMAQ | \$169.000 | \$169.000 | \$43.000 | \$43.000 | 25% | \$26.826 | 16% | \$26.826 | 16% |
| MEASURE R - TIFIA LOAN | \$307.000 | \$307.000 | \$146.000 | \$146.000 | 48% | \$131.652 | 43% | \$111.131 | 36% |
| MEASURE R 35% | \$811.902 | \$811.902 | \$145.783 | \$434.582 | 54% | \$107.384 | 13% | \$56.265 | 7% |
| STATE CAPITAL PROJECT LOANS | \$54.762 | \$54.762 | \$54.762 | \$54.762 | 100% | \$54.762 | 100% | \$54.762 | 100% |
| TOTAL | \$2,529.664 | \$2,529.664 | \$589.545 | \$1,723.889 | 68.1% | \$444.927 | 17.6% | \$373.287 | 14.8% |

STATUS OF FUNDS ANTICIPATED

FEDERAL SECTION 5309 NEW STARTS: FTA grant CA-2016-047 for \$100.0 million was awarded by the FTA on December 15, 2016. FTA grant CA-2016-047 Amendment No. 1 for \$100.0 million was awarded by the FTA on September 22, 2017. Funds are available for drawdown.

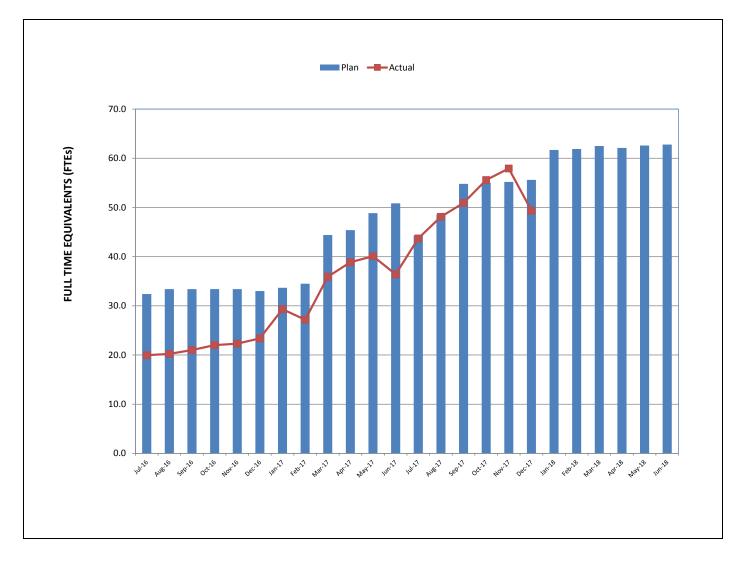
CMAQ (Congestion Mitigation & Air Quality): FTA grant CA-2016-2045 for \$43.0 million was awarded by the FTA on December 15, 2016. Funds are available for drawdown.

MEASURE R – TIFIA LOAN (Transportation Infrastructure Finance & Innovation Act): TIFIA Loan was executed on December 20, 2016 for \$307.0 million. \$146 million funds are available for drawdown.

MEASURE R: \$145.8 million have been allocated to the Project through FY18. Funds are available for drawdown.

STAFFING STATUS

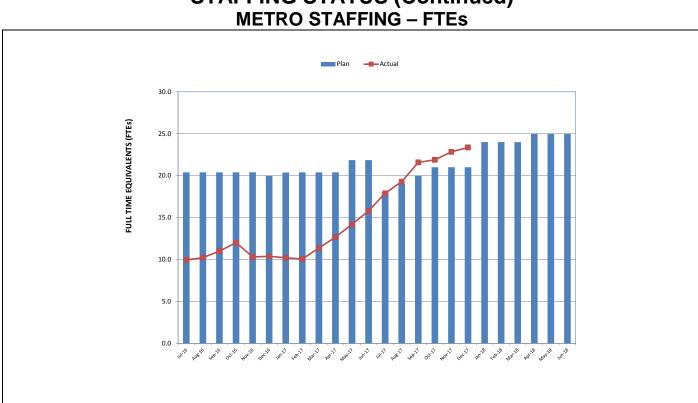
Total Project Staffing – FTEs



TOTAL PROJECT STAFFING

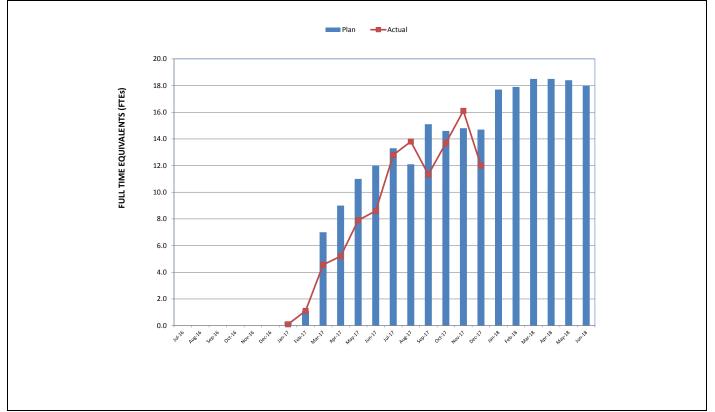
The overall FY18 Total Project Staffing Plan averages 57.3 FTEs per month.

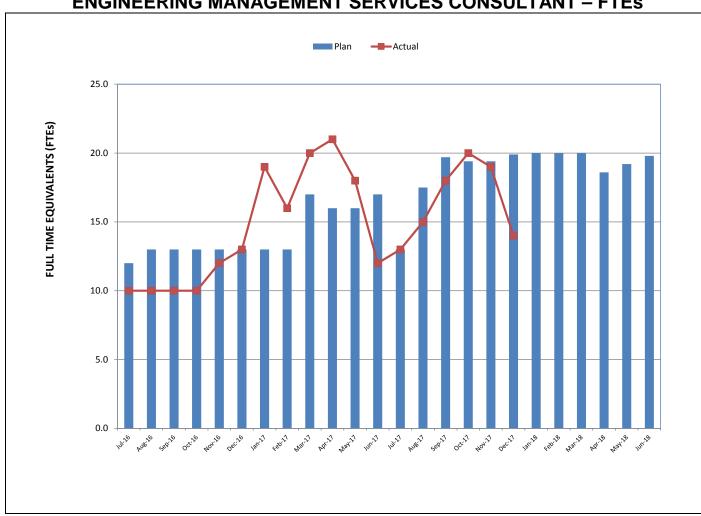
For December 2017, there were a total of 23.4 FTEs for MTA's Project Administration Staff and 26.0 FTEs for Consulting Staff. The total project staffing for December 2017 was 49.4 FTEs.



STAFFING STATUS (Continued)

CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTEs





STAFFING STATUS (Continued) ENGINEERING MANAGEMENT SERVICES CONSULTANT – FTEs

REAL ESTATE STATUS

| Real Estate Status Summary | | | | | | | | | | |
|----------------------------|------------|-----------|------------|---------------------|--------|--------------|----------|-----------|-----------|--|
| Description | Number | Certified | Appraisals | Offers Agreements C | | Condemnation | Reloc | Parcels | | |
| Description | of Parcels | Gerunieu | Completed | Made | Signed | Filed | Required | Completed | Available | |
| | | | | | | | | | | |
| Full Takes | 3 | 3 | 3 | 3 | 1 | 2 | 21 | 19 | 2 | |
| Part Takes | 3 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | |
| TCE | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | |
| SSE | 23 | 23 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | |
| Permanent Easements | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Parcels | 33 | 30 | 6 | 6 | 4 | 4 | 25 | 22 | 5 | |

QUALITY ASSURANCE STATUS

- Attended weekly project staff meetings and progress meetings with TPOG.
- Chaired the meeting with TPOG Quality Manager for:
 - Construction Quality Manual revision with respect to procurement control of fabricated items, materials and services;
 - o Document Control Procedure preparation; and
 - February 2018 surveillance for design review activities.
- Reviewed and provided comments on the following with a disposition of Approved:
 - Qualifications and Certifications of Consolidated Engineering Laboratories Test and Inspection Personnel (CEL);
 - Station Noise and Vibration Testing Plan (STV).
- Reviewed and provided comments on the following with a disposition of Approved as Noted:
 - o Observation Well Work Plan (ASC);
 - Pre-construction Condition Survey Engineers Qualifications (ASC).
- Reviewed and provided comments on the following with a disposition of Rejected, Revise and Resubmit:
 - Demolition Work Plan and Schedule for 1940 and 1950 Century Park East Rev01 (Silverado Contractors, Inc.).
- Reviewed and provided comments on the following with a disposition of For Records Only:
 - Temporary Decking Systems Fabricators Qualifications and Quality Control (JiangSu Ltd., China);
 - o Geotechnical and Environmental Investigation Program Qualifications (Fugro);
 - Construction Monitoring Program Plan Geotechnical Instrumentation Program (ASC).

ENVIRONMENTAL STATUS

- Performed daily noise monitoring activities at Century City Constellation Station and at Wilshire/Rodeo Station for advanced utility relocation work and submitted daily field reports.
- Performed daily noise monitoring activities at various locations along alignment for TPOG geotechnical investigation work.
- Participated in various project pre-construction, construction, and advanced utility relocation meetings and reported on environmental compliance with local, state and federal regulations, specifications and EIR.
- Provided environmental awareness training to advanced utility relocation and TPOG construction crews as required.
- Conducted field environmental monitoring and spot check inspections for construction noise, stormwater and dust BMPs, cultural resources and Metro's Green Construction Policy.
- Participated in various advanced utility relocation and TPOG coordination meetings and evaluated progress and schedules for environmental compliance and sustainability efforts.
- Provided responses to various TPOG submittals and requests for information related to environmental matters.
- Attended and provided guidance at various TPOG and advanced utility relocation construction meetings.
- Reviewed Supplemental Environmental Impact Statement for implications and potential change to Project as they relate to required mitigation measures.
- Received PMOC Review Report of 10th Quarterly Mitigation Measures Status Report with a rating of Substantially Compliant with the requirements of OP 20.
- Finalized and submitted the 11th Quarterly Mitigation Measures Status Report to the FTA.
- Finalized the Sustainability Plan for the Project.
- Removed abandoned, asbestos-containing oil pipelines that were in conflict with advanced utility relocation work at Century City Constellation Station. These conflicts were unforeseen.
- Finalized November 2017 noise monitoring reports for both the City of Los Angeles and the City of Beverly Hills.

CONSTRUCTION RELATIONS STATUS

- Attended the following meetings: Construction Management, Advanced Utility Relocations, Construction Relations, Third Party Coordination, Social Media and Bus Relocations and Stops, Beverly Hills Memorandum of Agreement.
- Addressed Traffic control concerns related to utility work on Constellation Boulevard.
- Updated Facebook/Twitter and website as needed.
- Conducted online and door-to-door outreach regarding potholing/geotechnical investigation work.
- Conducted project presentations at the Beverly Hills Monthly Community Meeting, Rodeo Stakeholders meeting, and the Beverly Hills/Greater Los Angeles Realtors Association meeting.
- Produced and distributed four pre-construction work notices for advanced utility relocations, geotechnical boring, and bus stop relocations.

CREATIVE SERVICES STATUS

- Conducted community outreach and coordinated cultural partnerships.
- Refined artwork opportunities with Metro Planning staff.

SAFETY & SECURITY STATUS

- Third party advanced utility relocation work continues. *No injuries were reported during January 2018.*
- Monitored Third Party advance utility construction work activities to ensure contractor compliance with regulations and good business practices.
 - January 29, 2018: AT&T VCI employee's left foot was caught between a steel street plate and the curb as a plate was removed from the trench. Employee suffered a hairline fracture; employee has returned to work on light duty.
- Attended weekly Project Issues Standing Meetings.
- Attended weekly D/B progress meetings.
- Conducted LADWP Water & Power, Southern California Edison (SCE) and Southern California Gas (SCG) Injury and Illness Prevention Program (IPP) reviews and conducted site safety walks.
- Conducted Safety Workshop and Coordination meetings with TPOG safety staff and defined over-the-shoulder review schedules.
- Conducted meetings with TPOG safety personnel to ensure pre-submittal compliance for adequate contractual construction safety staffing.
- Conducted project safety orientation for new Metro/Consultants and IPMO project staff.
- Coordinated and attended TPOG project safety orientation for Metro/Consultants and IPMO project staff.
- Conducted over-the-shoulder reviews on safety/security submittal drafts with TPOG safety staff.
- Conducted right-of-way (ROW) and worksite safety/security walks.
- Conducted safety reviews and coordination with TPOG safety staff for geotechnical investigation work activities.
- Conducted formal TPOG Project Safety Submittals reviews.
- Attended LADWP Water & Power, SCE, AT&T and SCG weekly progress meetings.
- TPOG design work completed 20,477 work-hours for the month of January 2018 with zero recordable incidents. Total Project to Date work-hours are 155,690 with zero recordable incidents.

THIRD PARTY AGREEMENT STATUS

| No. | Third Party | Type of Agreement | Forecast Execution Date | Required Need Date | Status/ Comments |
|-----|---|------------------------------------|-------------------------------|-----------------------|---|
| 1 | City of Los Angeles (LA) | Master Cooperative Agreement | N/A | N/A | Parties will work under 2003 MCA. |
| 2 | City of Beverly Hills (COBH) | Memorandum of Agreement | 03/17(A) | 03/17(A) | Reimbursement Agreement was executed in March 2017. |
| | | | 06/17(A) | 06/17(A) | Beverly Hills City Council approved the construction permit for SCE work in June 2017. |
| | | | 11/17(A) | 11/17(A) | Beverly Hills City Council approved MOA for remaining third party utility relocations on November 22, 2017. |
| | | | 03/18 | 04/18 | Metro continues to work with the City to establish an MOA for the C1120 Design/Build contract. Required Need Date reflects turnover date to C1120 contractor for station footprint availability. |
| 3 | Los Angeles Department of Water and Power (LADWP)- Water & Power | Master Cooperative Agreement | N/A | N/A | Metro and LADWP will continue to work under the terms of the previous Master Cooperative Agreement. |
| 4 | Los Angeles County Public Works Flood Control | Master Cooperative Agreement | N/A | N/A | Executed. |
| 5 | Private Utilities | Utility Cooperative Agreement | N/A | N/A | AT&T, Pac Bell, SBC, MCI, Verizon, Southern California Gas Company (SCGC), TCG Los Angeles – Metro is working under existing agreements. |
| | | | 3/18 | 3/18 | Level 3 – Metro and Level 3 have initiated a new agreement. Currently, awaiting comments from Level 3. Time Warner Pacific West LLC, D/B/A Time Warner Cable – County Counsel to respond to Time Warner's latest comments. SCE – Metro and SCE have initiated a new agreement. A draft is under review. Veolia – Agreement is scheduled to be presented to Metro Board in March 2018 for execution. Sprint – A draft of the Agreement submitted has been submitted to Sprint, pending comments. |
| | | | 11/17(A) | 11/17(A) | Zayo, XO Communications, LLC – The agreements have been approved by the Metro Board. <i>Agreement is now at the CEO's office awaiting signatures.</i> |

ADVANCED UTILITY RELOCATION STATUS

Century City Constellation

- LADWP Power utility relocations are ongoing.
- All joint trench cable pulling and splicing have been completed.
- AT&T advanced utility relocations began in November 2017 and are ongoing.

Wilshire/Rodeo

- Advanced third party utility relocations (conduit installation) by Southern California Edison (SCE) completed on January 30, 2018.
- Beverly Hills City Council approved Memorandum of Agreement (MOA) governing the remaining third party utility work on November 22, 2017. *Remaining work including SCE cutover completed on January 30, 2018. AT&T and SCG work is anticipated to begin in February 2018.*

PEAK HOUR AND NIGHTTIME CONSTRUCTION VARIANCES

Metro is actively pursuing extended hour variances/exemptions to accommodate the Project's needs. Metro staff is working with the City of Los Angeles Bureau of Engineering (BOE) and the Los Angeles Police Commission to obtain Peak Hour Exemptions and Nighttime Construction Variances.

- A nighttime noise variance permit for relocation of third party utilities on Constellation Boulevard is approved through August 2018.
- Peak Hour Exemption application for the TBM launch box excavation on Constellation Boulevard was approved by BOE on January 30, 2018.
- A Peak Hour Exemption application for AT&T relocations on Constellation Boulevard has been extended to February 28, 2018.

CHRONOLOGY OF EVENTS

| August 2012 | FTA Record of Decision |
|----------------|--|
| January 2013 | FTA approval to enter to Preliminary Engineering |
| December 2014 | FTA approval to enter to 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 Tutor Perini/O&G, a Joint Venture (TPOG) and approved Life-of-Project Budget |
| January 2017 | Issued C1120 Contract Award 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 |

| Description: Purple Line Extension Design-Build | Contract No. 0 | C1120 | | | | |
|--|--|-------------------------------|-------------------|----------------------------------|----------|-------------|
| Contractor: Tutor Perini/O&G a Joint Venture | Status as of: February 2, 2018 | | | | | |
| Progress / Work Completed: - Prepare 100% Design - (Package 1 Utilities at Launch Box) - Prepare 100% Design Wilshire Rodeo Station SOE - Metro, Beverly Hills & Third Party Review 85% Design (Package 2 Remaining Utilities) - Century City Constellation (CCC) - Telecom joint trench cable pulling and splicing - Wilshire/Rodeo - SCE utility relocations - Temporary Right of access to 2040 Century Park East (JMB Parking Lot) was entered on January 10, 2018 - Access to Launch Box was issued on January 11, 2018 | Major Activities (In Progress): - IFC Design Package - SOE for TBM Launch Box - Submit 100% Design (Package 1 Utilities at Launch Box) - Review/Comment 100% Design Wilshire Rodeo Station SOE - Comment Review & Resolution Meeting w/Metro & 3rd Parties (85% Package 2 Remaining Utilities) - Prepare 60% Design (Package 3 Track & Systems) - Prepare/Submit Demo Permit Application for ACE Gallery - Prepare/Submit SWPPP and Preconstruction Survey Plan - CCC: AT&T and LADWP utility relocations ongoing | | | | | |
| Areas of Concern: None at this time | Major Activities Next Period: - Investigative Borings for Obstructions in Tunnel Alignment - Prepare IFC Drawings Wilshire Rodeo Station SOE - Prepare Geotech Report (Package 3 Tunnels) - Wilshire/Rodeo: SCG/AT&T utility relocation begins - ROW: Issue access to JMB Parking Lot to Contractor | | | | | |
| Schedule Summary: | | Original Contract Dates | Time Extension | Current Contract | Forecast | Variance CD |
| Date of Award: 01/31/17 Notice to Proceed: 04/26/17 | Notice to Proceed | 04/26/17 | 0 | 04/26/17 | 04/26/17 | 0 |
| Original Contract Duration:3,100CDCurrent Contract Duration:3,100CD | MS 1 (NTP + 2950): Substantial Completion | 05/24/25 | 0 | 05/24/25 | 05/24/25 | 0 |
| Elapsed Time from NTP: 283 CD | MS 2 (NTP + 2600): Stations Available to UFS for Install of Equip | 06/08/24 | 0 | 06/08/24 | 06/08/24 | 0 |
| | MS 3 (NTP + 2700): Ready for Systems Integration Testing | 09/16/24 | 0 | 09/16/24 | 09/16/24 | 0 |
| | MS 4 (NTP + 3100): Demobilization | 10/21/25 | 0 | 10/21/25 | 10/21/25 | 0 |
| Physical Percent Complete: | Cost Summary: 1. Award Value: | | | \$ In millions 1,376.5 | | |
| Physical completion: 5.67% | 2. Executed Modifications:(22.1)3. Approved Change Orders:2.5 | | | | | |
| | 4. Current Contract | | | | | |

CONTRACT C1120 STATUS



CONSTRUCTION PHOTOGRAPHS

AT&T Conduit Installation in Century City



Southern California Edison (SCE) Relocation Work in Beverly Hills

COST AND BUDGET TERMINOLOGY

Project Cost Descriptions

| ORIGINAL BUDGET | The Original Project Budget as authorized by the Metropolitan Transportation Authority (Metro) Board. |
|------------------|---|
| CURRENT BUDGET | The Original Budget plus all budget amendments approved by formal Metro Board action. Also referred to as Approved Budget. |
| COMMITMENTS | The total of actual contracts awarded, executed change orders or amendments, and approved work orders of Master Cooperative Agreements, offers accepted for purchase of real estate, and other Metro actions which have been spent or result in the obligation of specific expenditures at a future time. |
| EXPENDITURES | The total dollar amount of funds expended by Metro for contractor or consultant services, third party services, staff salaries, real estate and other expenses that is reported in Metro's Financial Information System (FIS). |
| CURRENT FORECAST | The best estimate of the final cost of the Project when all checks have been issued and the Project is closed out. Current Forecast is composed of actual costs incurred to date, the best estimate of work remaining and a current risk assessment for each budgeted cost item. |

Cost Report by Element Descriptions

| CONSTRUCTION | Includes construction contracts. Cost associated with Guideways, Stations, Southwestern Yard, Sitework/Special Conditions and Systems. |
|--------------------------|---|
| RIGHT-OF-WAY | Includes purchase cost of parcels, easements, right-of-entry permits, escrow fees, contracted real estate appraisals and tenant relocation. |
| VEHICLES | Includes the purchase of Heavy Rail Vehicles and spare parts for the Project. |
| PROFESSIONAL SERVICES | Includes design engineering, project management assistance, construction management support services, legal counsel, agency staff costs, and other specialty consultants. |
| CONTINGENCY | A fund established at the beginning of a project to provide for anticipated but unknown additional costs that may arise during the course of the Project. |
| PROJECT REVENUE | Includes all revenue received by Metro as a direct result of project activities. This includes cost sharing construction items, insurance premium rebates, and the like. |

LIST OF ACRONYMS AND ABBREVIATIONS

| ATC | Automatic Train Control |
|----------|---|
| ATSAC | Automated Traffic Surveillance and Control |
| BAFO | Best and Final Offer |
| BIM | Building Information Modeling |
| BNSF | Burlington Northern Santa Fe Railway Company |
| BRT | Bus Rapid Transit |
| CADD | Computer Aided Drafting and Design |
| CALTRANS | California Department of Transportation |
| CCTV | Closed Circuit Television |
| CD | Calendar Day |
| CEQA | California Environmental Quality Act |
| CM | Construction Manager |
| CMAQ | Congestion Mitigation and Air Quality Improvement Program |
| CMSSC | Construction Management Support Services Consultant |
| CN | Change Notice |
| CO | Change Order |
| COBH | City of Beverly Hills |
| COLA | City of Los Angeles |
| СРМ | Critical Path Method |
| CPUC | California Public Utilities Commission |
| CR | Camera Ready |
| CRMMP | Cultural Resource Monitoring and Mitigation Plan |
| CSPP | Construction Safety Phasing Plan |
| CTC | California Transportation Commission |
| CUD | Contract Unit Description |
| D/B | Design/Build |
| DBB | Design Bid Build |
| DOT | Department of Transportation |
| DWP | Department of Water and Power |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| EMS | Engineering Management Services |
| EPBM | Earth Pressure Balance Machine |
| FAA | Federal Aviation Administration |
| FAR | Federal Acquisition Regulation |
| FD | Final Design |
| FEIS | Final Environmental Impact Statement |
| FEIR | Final Environmental Impact Report |
| FIS | Financial Information System |
| FLSR | Fire Life Safety Report |
| FONSI | Finding of No Significant Impact |
| FRA | Federal Railroad Administration |
| FSEIR | Final Supplemental Environmental Impact Report |
| FSEIS | Final Supplemental Environmental Impact Statement |

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

| FTA | Federal Transit Administration |
|--------|--|
| FTE | Full Time Equivalent |
| GBR | Geotechnical Baseline Report |
| GDSR | Geotechnical Design Summary Report |
| HRT | Heavy Rail Transit |
| HRV | Heavy Rail Vehicle |
| IFB | Invitation for Bid |
| IPMO | Integrated Project Management Office |
| JV | Joint-Venture |
| LA | Los Angeles |
| LABOE | Los Angeles Bureau of Engineering |
| LABOS | Los Angeles Bureau of Sanitation |
| LABSL | Los Angeles Bureau of Street Lighting |
| LACFCD | Los Angeles County Flood Control District |
| LACMTA | Los Angeles County Metropolitan Transportation Authority |
| LADOT | Los Angeles Department of Transportation |
| LADPW | Los Angeles Department of Public Works |
| LADWP | Los Angeles Department of Water and Power |
| LAUSD | Los Angeles Unified School District |
| LAWA | Los Angeles World Airports |
| LAX | Los Angeles International Airport |
| LNTP | Limited Notice To Proceed |
| LONP | Letter Of No Prejudice |
| LOP | Life-of-Project |
| LPA | Locally Preferred Alternative |
| LRTP | Long Range Transportation Plan |
| MCA | Master Cooperative Agreement |
| MIS | Major Investment Study |
| MMRP | Mitigation Monitoring and Reporting Plan |
| MOU | Memorandum of Understanding |
| MPSR | Monthly Project Status Report |
| N/A | Not Applicable |
| NEPA | National Environmental Protection Act |
| NOD | Notice of Determination |
| NPDES | National Pollution Discharge Elimination System |
| NTE | Not to Exceed |
| NTP | Notice To Proceed |
| 000 | Operations Control Center |
| OSHA | Occupational Health and Safety Administration |
| PA/VMS | Public Address/Visual Messaging Sign |
| PE | Preliminary Engineering |
| PEER | Permit Engineering Evaluation Report |
| PIP | Project Implementation Plan |
| PLA | Project Labor Agreement |

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

| | ACICONTINIS AND ABBILE VIA HOINS (COIL |
|--------|---|
| PM | Project Manager |
| PMIP | Project Management Implementation Plan |
| PMOC | Project Management Oversight Consultant |
| PMP | Project Management Plan |
| P&P | Policies & Procedures |
| PR | Project Report |
| PRMMP | Paleontological Resource Monitoring Mitigation Plan |
| PSR | Project Study Report |
| QA | Quality Assurance |
| QAR | Quality Assurance Report |
| QC | Quality Control |
| QPSR | Quarterly Project Status Report |
| QTIB | Qualified Transit Improvement Bonds |
| RAMP | Real Estate Acquisition Management Plan |
| RCHAR | Rail Crossing Hazards Analysis Report |
| RCMP | Risk Assessment Management Plan |
| RFC | Request For Change |
| RFP | Request For Proposals |
| RFSC | Request for Special Consideration |
| RHA | Risk Hazard Analysis |
| ROC | Rail Operations Center |
| ROD | Record Of Decision |
| ROM | Rough Order of Magnitude |
| ROW | Right-Of-Way |
| RPZ | Runway Protection Zone |
| RSD | Revenue Service Date |
| SAV | Stand Alone Validator |
| SCAQMD | Southern California Air Quality Management District |
| SCADA | Supervisory Control and Data Acquisition |
| SCC | Standard Cost Category |
| SCE | Southern California Edison |
| SCG | Southern California Gas Company |
| SCRRA | Southern California Regional Rail Authority |
| SHA | State Highway Account |
| SHPO | State Historic Preservation Office |
| SIT | System Integration Testing |
| SOQ | Statement of Qualification |
| SOV | Schedule Of Value |
| SOW | Statement Of Work |
| SP | Special Provision |
| SSMP | Safety and Security Management Plan |
| STB | Surface Transportation Board |
| STIP | State Transportation Improvement Program |
| STP | Surface Transportation Program |

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

| STV | STV Group |
|-------|--|
| SWPPP | Storm Water Pollution Prevention Plan |
| TBD | To Be Determined |
| ТВМ | Tunnel Boring Machine |
| TCE | Temporary Construction Easement |
| TCRP | Traffic Congestion Relief Program |
| TIFIA | Transportation Infrastructure Finance and Innovation Act |
| TIGER | Transportation Investment Generating Economic Recovery |
| TPOG | Tutor Perini/O&G a Joint Venture |
| TPSS | Traction Power Substation |
| TRACS | Transit Automatic Control System |
| TVA | Threat Vulnerability Analysis |
| TVM | Ticket Vending Machine |
| UFS | Universal Fare System |
| USDOT | United States Department Of Transportation |
| VE | Value Engineering |
| WBS | Work Breakdown Structure |
| WP | Work Package |
| YOE | Year of Expenditure |