

Los Angeles County
Metropolitan Transportation Authority

Regional Connector Transit Project

East Los Angeles ↔ Santa Monica

Azusa ↔ Long Beach



Metro[®]

REGIONAL CONNECTOR TRANSIT PROJECT

QUARTERLY PROJECT STATUS REPORT

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September 2017

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PROJECT OVERVIEW & STATUS

The Regional Connector Transit Project (Project) will link the current terminus of the Blue and Expo Lines at 7th/Metro Center to the Gold Line near the Little Tokyo/Arts District Station in a new underground alignment along Flower Street and 2nd Street in Downtown Los Angeles. The Project has been re-sequenced to become operational in a single phase. It will link to the existing Eastside Gold Line along 1st Street and the existing Gold Line to Pasadena along Alameda Street toward Union Station. The Revenue Service Date (RSD) is planned for December 24, 2021.

The alignment will extend underground from the 7th Street/Metro Center Station under Flower Street to 2nd Street. It will then proceed east underneath the 2nd Street tunnel to just west of Central Avenue where the alignment will veer northeast under privately-held property, Japanese Village Plaza. At 1st Street and Central, the tracks continue underground heading northeast under 1st and Alameda Streets. A junction (“Wye”) will be constructed beneath the 1st and Alameda intersection. To the north and east of the junction, trains will rise to the surface through two new portals to connect to the Metro Gold Line heading north to Pasadena and east to East Los Angeles. The north portal will be located northeast of the current Little Tokyo/Arts District Station and tracks. This portal will rise to connect to the existing LRT bridge over the US-101 freeway. The portal will be connected to the 1st and Alameda junction by a new cut and cover box structure crossing beneath Temple Street and Alameda Streets, running immediately east of the existing Little Tokyo/Arts District Station and tracks. The east portal will be located within 1st Street between Alameda and Vignes Streets. Tracks will rise to the east within this second portal and connect at-grade to the existing Metro Gold Line tracks toward East Los Angeles.

Major Contract Procurement

The Board authorized to solicit a major Design/Build (D/B) contract, C0980, in August 2011. Metro staff recommended to award contract C0980 to the Regional Connector Constructors (RCC), a joint venture of Skanska USA Civil West California District, Inc. and Traylor Brothers, Inc. and Metro Board authorized award of the contract on April 24, 2014; Notice to Proceed (NTP) to RCC, issued July 7, 2014. Solicitation of an Advanced Utility Relocations Contract, C0981R, completed February 2014 after Metro’s Procurement team awarded the contract to Pulice Construction, Inc. in January 2014 and issued NTP on February 18, 2014. Contract C0981R was terminated for convenience on April 14, 2015 and remaining AUR work has been transferred to the C0980 D/B Contractor, RCC.

PROJECT OVERVIEW & STATUS (Cont.)

Construction

Varied operations are underway throughout the alignment to include: guideway and station box support of excavation, excavation, TBM mining, settlement monitoring, and utility relocations. Operations are currently active seven days with some being performed on a multiple-shift basis.

Systems

The existing functional operations at the Rail Operations Center (ROC) necessitate an expansion to accommodate the central control functions associated with five new rail lines and extensions including the Regional Connector Transit Project. Design for the ROC Reconfiguration Project was completed to reconfigure the second floor to prepare for Expo II and Foothill Rail Line extensions, and the design will be further updated with each successive integration of the Crenshaw/LAX, Regional Connector and Purple Line projects.

Light Rail Vehicle

Metro is procuring four (4) Light Rail Vehicles (LRVs) for the Project. The vehicles will be procured and delivered by Kinkisharyo International, LLC under Option 2 of Contract P3010. The base contract includes 78 LRVs and options of 157 for a total of 235. The manufacturer continued performing qualification and post shipment tests on prototype cars 1 and 2 at LACMTA's Green Line shop.

Program Management

In January 2017, the Metro Board revised the Life of Project (LOP) Budget for Regional Connector Project 860228 to \$1.756 billion. The LOP budget for Concurrent Non-FFGA activities related to Project 861228 remains at \$39.9 million.

Funding for the Project comes from a variety of sources to include Federal New Starts, TIFIA Loan, State repayment of capital project loan, State Proposition 1B, State Proposition 1A (High Speed Rail), local agency and lease revenues, and from the Congestion Mitigation and Air Quality Improvement Program. The bulk of the funding - 56% - comes from federal sources.

Project commitments through *September* 2017 increased by \$0.7 million to \$1.44 billion or 81.5% of the Current Budget. The increase reflects RCC executed modifications, Environmental, Legal and Community Relations. Project expenditures through *September* 2017 are \$826.4 million or 46.7% of the budget. The expenditures to date cover all cost elements including: engineering management, construction management support services, third party utility relocation work, agency administration, design build contract (C0980), right of way, various master cooperative agreements, and other professional services.

PROJECT OVERVIEW & STATUS (Cont.)

The project master schedule forecasts revenue service in 2021 through a simultaneous opening of both the Azusa and East LA legs of the Metro Gold Line.

A comprehensive risk refresh process was undertaken in late 2016 by both Metro and the FTA/PMOC to evaluate current schedule and cost forecasts. Outcomes for total project costs were compatible and contributed to establishing an increased LOP Budget. The Project's Risk Register is reviewed and updated monthly.

MANAGEMENT ISSUES / OPPORTUNITIES

Concern No. 1: *Utility congestion at 6th & Flower continues to interfere with placement of piles and DWP duck banks.*

Status/Action: *The Project has performed extensive additional potholing to confirm conflicts and has completed redesign with a shoring system. Piling operations were diverted to other productive areas to mitigate schedule impacts.*

Concern No. 2: Complex Systems Integration could delay the project's planned Revenue Service Date, if not managed well.

Status/Action: Project has conducted an initial high level management discussion to address system-wide operating policies and potential capital projects needed to support an integrated LRT system with the completion of the Regional Connector Project. Working-level system integration teams have also been established *with regular meetings scheduled to address issues as they arise.*

Concern No. 3: Managing and responding to stakeholder needs during cut-and-cover activities along Flower Street has the potential to impact both schedule and budget.

Status/Action: Project is engaged in active stakeholder outreach and construction impact mitigation. Working closely with the contractor to ensure concerns are addressed and that MMRP requirements are fully complied with.

Concern No. 4: TBM component failures and differing site conditions have resulted in delays to mining operations and the project schedule.

Status/Action: Replacement of three screw drives on the TBM have been completed during the TBM re-setting, which has been accelerated, between the first and second tunnel bores. Actions to accelerate the second tunnel bore, *through 24-hour mining operations*, continue to mitigate experienced delays.

PROJECT ALIGNMENT



BASE PROJECT SCOPE

Engineering

This phase consists of Preliminary Engineering (PE), Advanced PE (APE) and Final Design. During PE, The Connector Partnership, a joint venture between AECOM, Inc. and Parsons Brinkerhoff (CPJV), was responsible for engineering, design, and development of fixed facilities, stations, guideways, tunnels, and related facilities for the Project to a level sufficient to provide the basis for final design. CPJV was also responsible for documentation necessary to support the Environmental Assessment process and the engineering and final design for advanced utility relocations.

Alignment modifications and Value Engineering were developed during Advanced PE to accommodate environmental mitigations and further develop the design to better accommodate rail operations and reduce the cost of the Project. PE and APE were completed in March 2013.

Final design for advanced utility relocations performed by Metro and CPJV was completed during Advanced PE and it included DWP water and power lines as well as City of LA sewer lines. AUR final design for other utilities was performed by individual utility companies. The balance of Final Design is being performed by the RCC as part of the C0980 Contract.

Metro Furnished Equipment

Metro is procuring four (4) LRVs for the Project. The vehicles will be procured and delivered by Kinkisharyo International, LLC under Option 2 of Contract P3010. The vehicles will be tested and accepted at the Gold Line Yard and put in service when the line is open for Revenue Service. Metro will also furnish Universal Fair System (UFS) equipment, which will be designed, fabricated and installed under a Metro contract.

Construction

The scope of work in this phase is performed by third party utility companies and RCC as follows:

Third Party Advanced Utility Relocations

Several utility owners have already relocated many of their assets and will continue to do so through 2018. The utilities include fiber optic, telephone, cable television, electrical (power cable pulling and splicing), and natural gas lines. Utility work started in late 2012 and has progressed throughout the alignment.

BASE PROJECT SCOPE (Cont.)

Contract C0980 Regional Connector Design Builder

This is the largest contract of the project that includes: final design and construction of underground guideway; station structures; miscellaneous underground structures; trackwork; traction power; overhead conductor rail; train control; communications; and all electrical and mechanical equipment, and testing. The contractor will restore the Mangrove site and impacted streets to their previous condition at the end of the project.

The design-build contractor also must meet sensitive noise and vibration standards at Disney Music Hall and the Colburn Music School, control subsidence along the alignment, and meet various other requirements for the various stakeholders along the alignment. This contract was awarded to Regional Connector Constructors, JV (RCC) on May 6, 2014 and NTP was issued July 7, 2014. Metro has exercised several contract options and has added the remaining Advanced Utility Relocation work (C0981R Contract) to the C0980 Contract.

Contract C0981R Regional Connector Advanced Utility Relocations

Metro awarded the design-bid-build Advanced Utility Relocations Contract (Metro Contract No. C0981R) to Pulice Construction, Inc. to complete specific relocations at each of the future stations and along Flower Street in advance of the main D/B Contract C0980. The relocated utilities were long-lead construction tasks that were known to conflict with cut and cover excavations.

The scope of this work included the following relocations: LADWP water lines, LADWP power lines, and City of Los Angeles sewer lines. Metro assisted the contractor in obtaining exemptions as necessary for the City of LA nighttime work as well as for Peak Hour work hours.

Contract C0981R was terminated for convenience on April 14, 2015 and all remaining work was transferred to C0980 Contract. Contract C0981R was closed out and final payment processed.

BASE PROJECT SCOPE (Cont.)

Professional Services

Contract MC070 – Construction Management Support Services

Metro awarded the contract for Construction Management Support Services (CMSS) to ARCADIS, Inc. ARCADIS' Project Manager and other staff are co-located with Metro at the Integrated Project Management Office (IPMO) located at the Mangrove site. The service commitment has been extended through June 2018.

Contract E0119 – Preliminary Engineering and Design Support Services During Construction

Metro awarded this contract to CPJV. CPJV provided preliminary engineering services to support the EIR/EIS, prepared project definition documents for Contract C0980, and prepared the basis for final design development for Contract C0981. CPJV is currently performing design support during construction (DSDC) for the C0980 contract. The service commitment has been extended through June 2018.

KEY MILESTONES SIX-MONTH LOOK AHEAD

| | Milestone Date | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Jan-18 | Feb-18 |
|---|----------------|--------|--------|--------|--------|--------|--------|
| Initiated Temp Decking Installation along Flower Street between 4th St and 6th St | 9/8/17 A | | | | | | |
| Civil Segment B - 100% Design Submitted | 9/14/17 A | | | | | | |
| Completed TBM Assembly & Test (2nd - Right) | 9/22/17 A | | | | | | |
| Began TBM mining (2nd - Right) | 9/25/17 A | | | | | | |
| Complete Storm Drain Relocation and Bracing at Historic Broadway Sta | 10/27/17 | | | | | | |
| DU2 Cut & Cover - AFC Design submitted | 10/13/17 | | | | | | |
| Civil Segment A - AFC approved | 11/06/17 | | | | | | |
| DU2 Cut & Cover - AFC Design Approved | 11/10/17 | | | | | | |
| Complete Pile Intallation along Flower St (West, 5th ~ 6th) | 11/13/17 | | | | | | |
| Civil Segment B - AFC approved | 11/17/17 | | | | | | |
| Complete Flower South Temp Decking (Between 5th and 6th) | 12/10/17 | | | | | | |
| Initiate excavation of Flower South (Between 5th and 6th) | 12/11/17 | | | | | | |
| Complete DWP Power conduit and vault relocation (RCC work) | 12/26/17 | | | | | | |
| Complete Ancillary excavation of Historic Broadway Station | 12/26/17 | | | | | | |
| Complete excavation of Flower North (Between 4th and 5th) | 01/16/18 | | | | | | |
| Complete TBM mining to Grand Av Arts/Bunker Hill Station | 01/18/18 | | | | | | |
| Complete Ancillary CIP Invert of Historic Broadway Station | 02/28/18 | | | | | | |

MTA Staff

MTA Board Action

FTA (Federal Transit Administration)

Utility Company

Other Agencies

Contractors

Design Consultant

C0980 D/B Contractor

"A" following date is actual and completed

* New

PROJECT SUMMARY SCHEDULE

| Regional Connector Master Schedule Current | | Regional Connector Level 1 Schedule | | | | | | | | | | | | MASTER SCHEDULE SEPTEMBER 2017 | | | | | | | | | | | |
|---|------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|--------------------------------|------|------|------|------|------|--|--|--|--|--|--|
| Activity / Activity Name | Finish | 2014 | 2014 | 2015 | 2015 | 2016 | 2016 | 2017 | 2017 | 2018 | 2018 | 2019 | 2019 | 2020 | 2020 | 2021 | 2021 | 2022 | 2022 | | | | | | |
| Activity ID | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | | | | | | |
| Regional Connector Master Schedule Current (September) | 24-Dec-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Planning & Development | 29-Jun-12 A | | | | | | | | | | | | | | | | | | | | | | | | |
| FFGA / TIFIA Loan Approved | 20-Feb-14 A | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | 30-May-18 | | | | | | | | | | | | | | | | | | | | | | | | |
| Preliminary Engineering | 29-Mar-13 A | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Design | 30-May-18 | | | | | | | | | | | | | | | | | | | | | | | | |
| Right of Way | 15-Aug-18 | | | | | | | | | | | | | | | | | | | | | | | | |
| Metro Furnished Equipment | 12-Feb-20 | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction | 24-Dec-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Design/Builder C0980 NTP | 07-Jul-14 A | | | | | | | | | | | | | | | | | | | | | | | | |
| General Requirements | 24-Dec-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Site Work & Temporary Facilities | 27-Oct-16 A | | | | | | | | | | | | | | | | | | | | | | | | |
| Utilities (Including 3rd Parties) | 23-Nov-20 | | | | | | | | | | | | | | | | | | | | | | | | |
| Guideway & Track | 21-Jun-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Tunneling | 23-Mar-18 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cut & Cover Flower | 03-Sep-20 | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Cut & Cover / Cut & Trench | 21-Jun-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Track Construction | 02-Oct-20 | | | | | | | | | | | | | | | | | | | | | | | | |
| SEM | 20-Mar-20 | | | | | | | | | | | | | | | | | | | | | | | | |
| Stations | 18-May-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Systems | 26-Aug-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Testing | 24-Nov-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Up | 24-Dec-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Pre-Revenue Operations | 24-Dec-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| Substantial Completion | 26-Oct-21 | | | | | | | | | | | | | | | | | | | | | | | | |
| RSD | 24-Dec-21 | | | | | | | | | | | | | | | | | | | | | | | | |

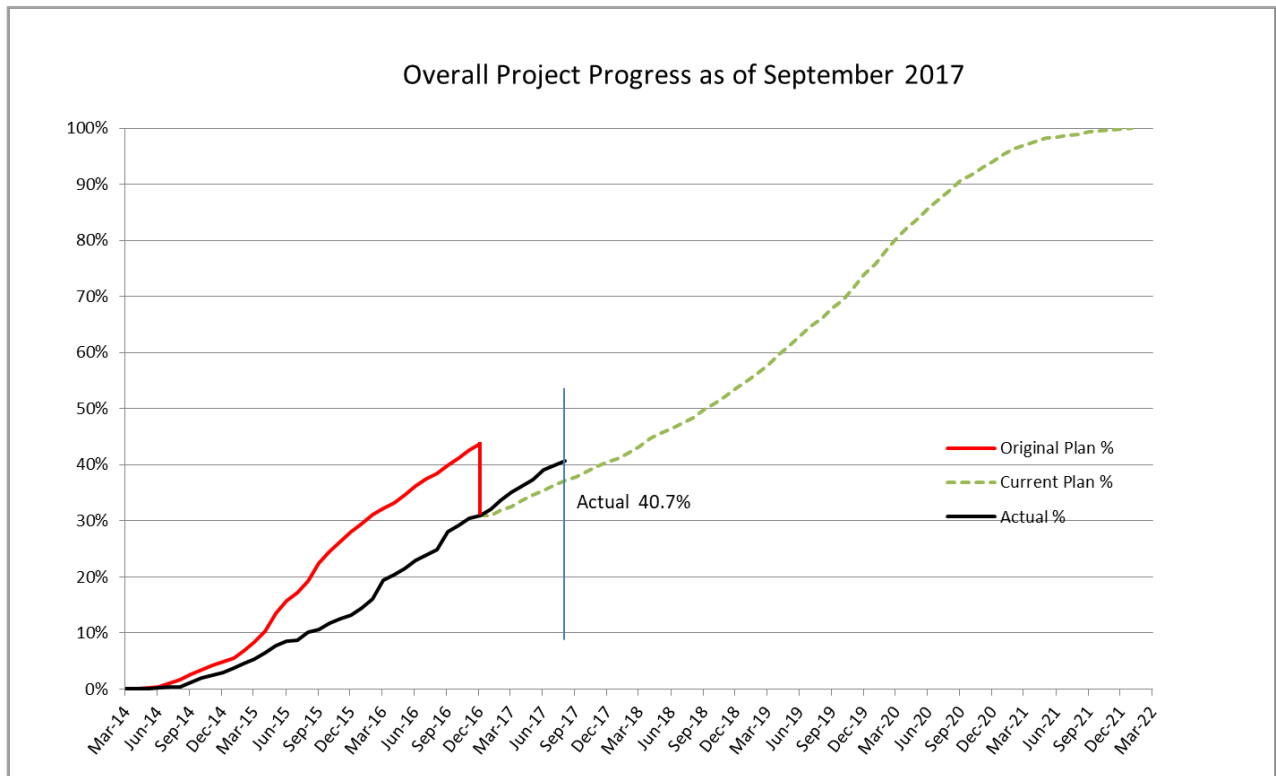
| | | |
|---|--------|---|
| <ul style="list-style-type: none"> Remaining Work Milestone | 1 of 1 | Data Date : 30-Sep-17 Current Date : 16-Oct-17 |
| Regional Connector Level 1 Summary Schedule Los Angeles County Metropolitan Transportation Authority | | |

SCHEDULE MEASUREMENTS

| | Status | Change from Last Period | Comment |
|---|------------|-------------------------|--|
| Forecast Revenue Service | 12/24/2021 | 3 CD | |
| TIFIA Revenue Service | 2/25/2023 | None | |
| FFGA Revenue Service | 2/25/2023 | None | |
| | | | |
| Final Design Progress: | | | |
| Contract C0980 | 98.9% | 0.6% | Not impacting the critical path of the project |
| | | | |
| | | | |
| Construction Contracts Progress: | | | |
| Contract C0981R & C0980 | 37.0% | 0.8% | |
| | | | |

Note: Construction Progress Measurement has been modified to reflect current methodology: excluding all General Requirements, Construction Mobilization, Design Mobilization, Final Design and Provisional Sum (Schedule C). Progress values include executed modifications and change orders.

PROJECT PROGRESS STATUS

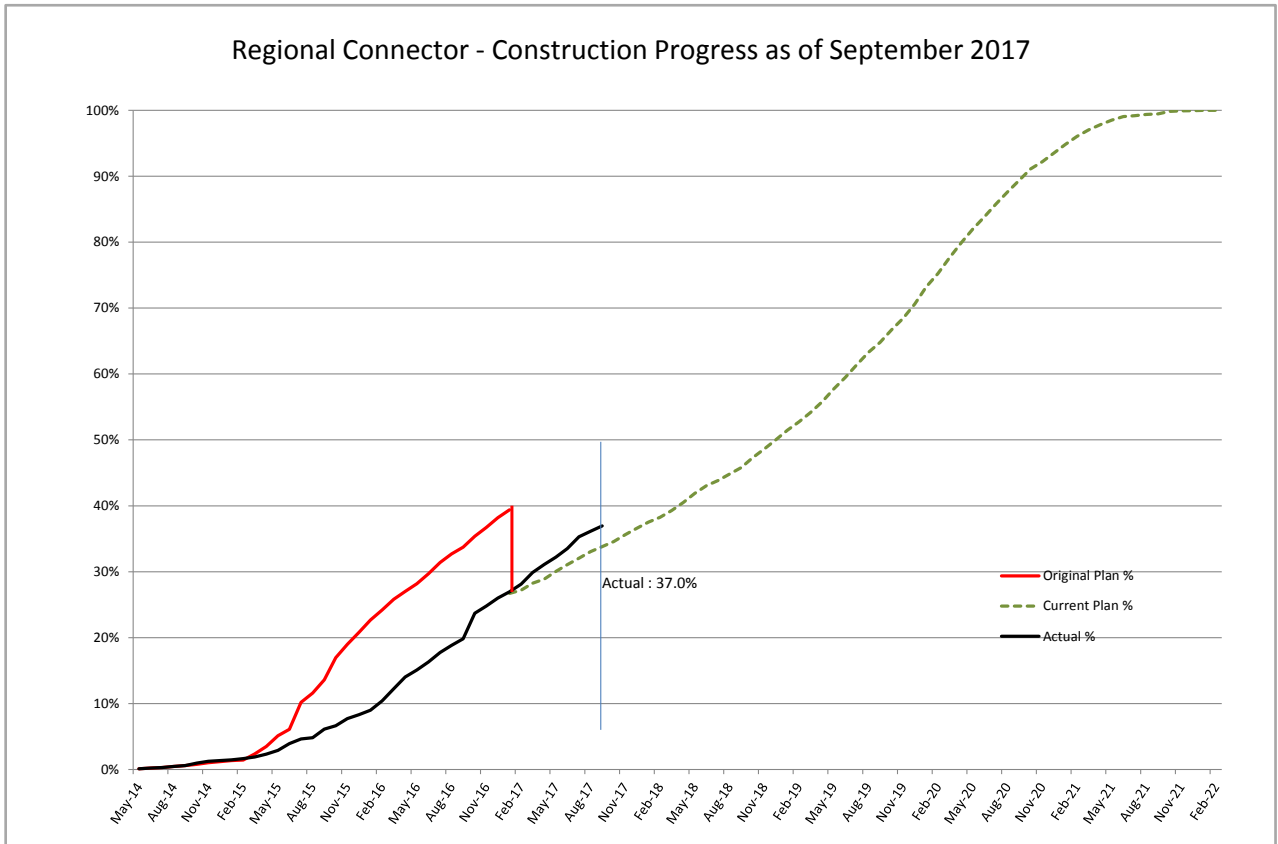
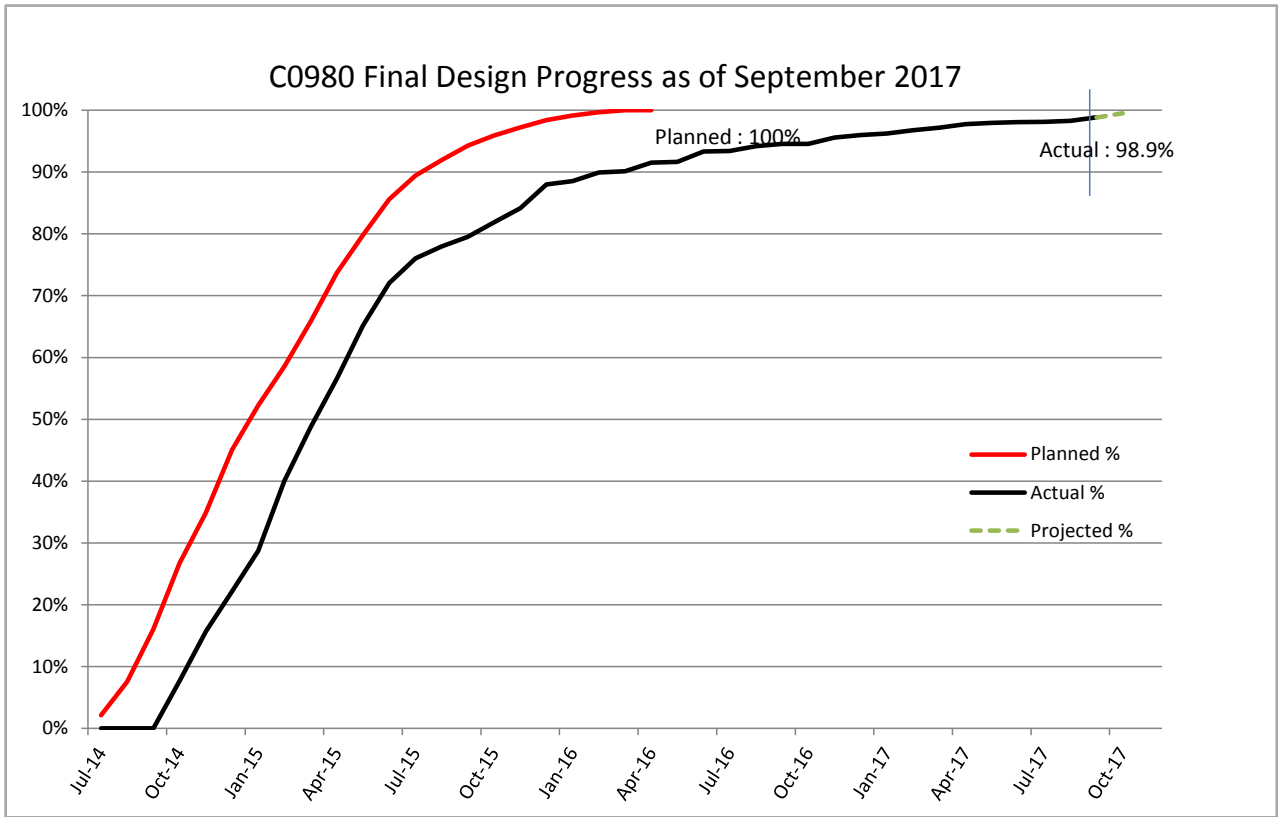


The above is based on the planned and actual progress of C0980 (Design-Build) as reflected in *the* re-baselined *project* schedule, and the C0981 (AUR) as-built schedule.

The cumulative overall project progress is 40.7%.

Note: Overall Project Progress Measurement was modified in January 2016 to reflect current methodology: excluding all General Requirements, Construction Mobilization, Design Mobilization and Provisional Sum (Schedule C). Values include executed modifications and change orders.

PROJECT PROGRESS STATUS (Cont.)



MAJOR EQUIPMENT DELIVERY STATUS

Tunnel Boring Machine

RCC designed, procured and delivered the tunnel boring machine (TBM) and equipment.

Light Rail Vehicles

Metro is procuring four (4) LRVs for the Project. The vehicles will be procured and delivered by Kinkisharyo International, LLC under Option 2 of Contract P3010. LRV design and design reviews as well as manufacturing of the prototype vehicles continued this period. The manufacturer continued performing qualification and post shipment tests on prototype cars 1 and 2 at LACMTA's Green Line shop. Project deliveries are anticipated no later than February 2020.

UFS (Universal Fare System) & TVM (Ticket Vending Machines)

Procurement of UFS and TVM will commence after RCC completes the final design. Metro is coordinating with RCC for installation and testing schedules, which is expected to be complete by October 2020. *The addition of fare transfer equipment in the three Regional Connector stations was made in September 2017.*

DESIGN-BUILDER'S (C0980) LONG LEAD ITEM LIST

| Activity Name | Early Finish | Need Date |
|--|---------------------|------------------|
| FAB/DELIV 2ND/HOPE UNIT SUBSTATION AND TRANSFORMER | 14-Sep-17 | 28-Jun-19 |
| FAB/DELIV 2ND/BROADWAY UNIT SUBSTATION AND TRANSFORMER | 14-Sep-17 | 19-Sep-19 |
| PROCURE LIGHTWEIGHT BACKFILL SUBCONTRACTOR | 29-Sep-17 | 13-Nov-20 |
| FAB/DELIV ELEVATORS - 1ST/CENTRAL | 31-Dec-17 | 25-Jan-21 |
| FAB/DELIV TRAIN CONTROL CABLE | 16-Jan-18 | 16-Jan-20 |
| FAB/DELIV ESCALATORS - 1ST/CENTRAL | 21-Mar-18 | 3-Oct-21 |
| PROCURE FIRE PROTECTION SUBCONTRACTOR | 22-Mar-18 | 17-Jun-19 |
| FAB/DELIV EMERGENCY VENTILLATION FANS - HOPE (4) | 1-Jun-18 | 28-Jun-19 |
| FAB/DELIV EMERGENCY VENTILLATION FANS - BROADWAY (4) | 1-Jun-18 | 12-Dec-19 |
| FAB/DELIV ELEVATORS - 2ND/BROADWAY | 4-Jun-18 | 21-Mar-21 |
| FAB/DELIV 2ND/HOPE TPSS | 8-Jun-18 | 17-Apr-19 |
| FAB/DELIV OCS POLES / EQUIPMENT | 8-Jun-18 | 29-Dec-20 |
| FAB/DELIV OCR FOR TUNNEL | 8-Jun-18 | 29-Jan-21 |
| FAB/DELIV ESCALATORS - 2ND/BROADWAY | 9-Jun-18 | 25-Feb-21 |
| FAB/DELIV ELEVATORS - 2ND/HOPE | 23-Aug-18 | 26-Aug-21 |
| FAB/DELIV ESCALATORS - 2ND/HOPE | 28-Aug-18 | 2-Mar-21 |
| FAB/DELIV TRAIN CONTROL EQUIPMENT | 31-Jan-19 | 1-Feb-21 |
| FAB/DELIV 2ND/BROADWAY TPSS | 5-Mar-19 | 10-Jan-20 |
| PROCURE MASONRY SUBCONTRACTOR | 24-Jun-19 | 21-Oct-20 |
| PROCURE STEEL (PERMANENT) SUBCONTRACTOR | 24-Jun-19 | 12-Mar-21 |
| PROCURE DOORS & HARDWARE SUBCONTRACTOR | 1-Jul-19 | 19-Feb-21 |
| PROCURE TRACK SUBCONTRACTOR - PERMANENT | 2-Jul-19 | 28-Jan-20 |
| PROCURE GLAZING SUBCONTRACTOR | 15-Jul-19 | 29-Apr-21 |
| PROCURE ARCHITECTURAL PRECAST PAVER SUBCONTRACTOR | 18-Jul-19 | 21-Apr-21 |
| PROCURE STATION SIGNS SUBCONTRACTOR | 23-Jul-19 | 22-Oct-21 |
| PROCURE PRECAST COMM STRUCTURE PURCHASE ORDER | 26-Jul-19 | 19-Apr-21 |
| PROCURE STAINLESS STEEL SUBCONTRACTOR | 2-Aug-19 | 18-Feb-21 |
| PROCURE CAULKING & SEALANTS SUBCONTRACTOR | 9-Aug-19 | 21-Jan-21 |
| PROCURE METAL CEILING SUBCONTRACTOR | 14-Aug-19 | 8-Apr-21 |
| PROCURE SHEET METAL SUBCONTRACTOR | 22-Aug-19 | 10-Jun-21 |
| PROCURE PAINT SUBCONTRACTOR | 4-Sep-19 | 8-Apr-21 |
| PROCURE FLUID APPLIED WATERPROOFING SUBCONTRACTOR | 4-Sep-19 | 3-Feb-21 |
| PROCURE DRYWALL & FRAMING SUBCONTRACTOR | 18-Sep-19 | 6-Oct-21 |
| PROCURE FLOORING SUBCONTRACTOR | 27-Sep-19 | 28-Oct-21 |
| PROCURE TILE SUBCONTRACTOR | 27-Sep-19 | 8-Mar-21 |
| PROCURE SPRAY ON ACCOUSTICAL FINISH SUBCONTRACTOR | 7-Oct-19 | 5-Mar-21 |
| PROCURE NEW 115RE RAIL - HIGH STRENGTH RAIL | 24-Oct-19 | 20-May-20 |
| PROCURE RAIL – JOBWIDE | 24-Oct-19 | 20-May-20 |
| PROCURE SPECIAL TRACK - JOBWIDE | 24-Oct-19 | 25-Jun-20 |
| PROCURE NEW 115RE RAIL - STANDARD RAIL | 24-Oct-19 | 20-May-20 |
| FAB/DELIV EMERGENCY VENTILLATION FANS - CENTRAL (4) | 11-Nov-19 | 16-Sep-20 |
| PROCURE TERRAZZO SUBCONTRACTOR | 11-Nov-19 | 10-Nov-21 |

DESIGN-BUILDER'S (C0980) LONG LEAD ITEM LIST (Cont.)

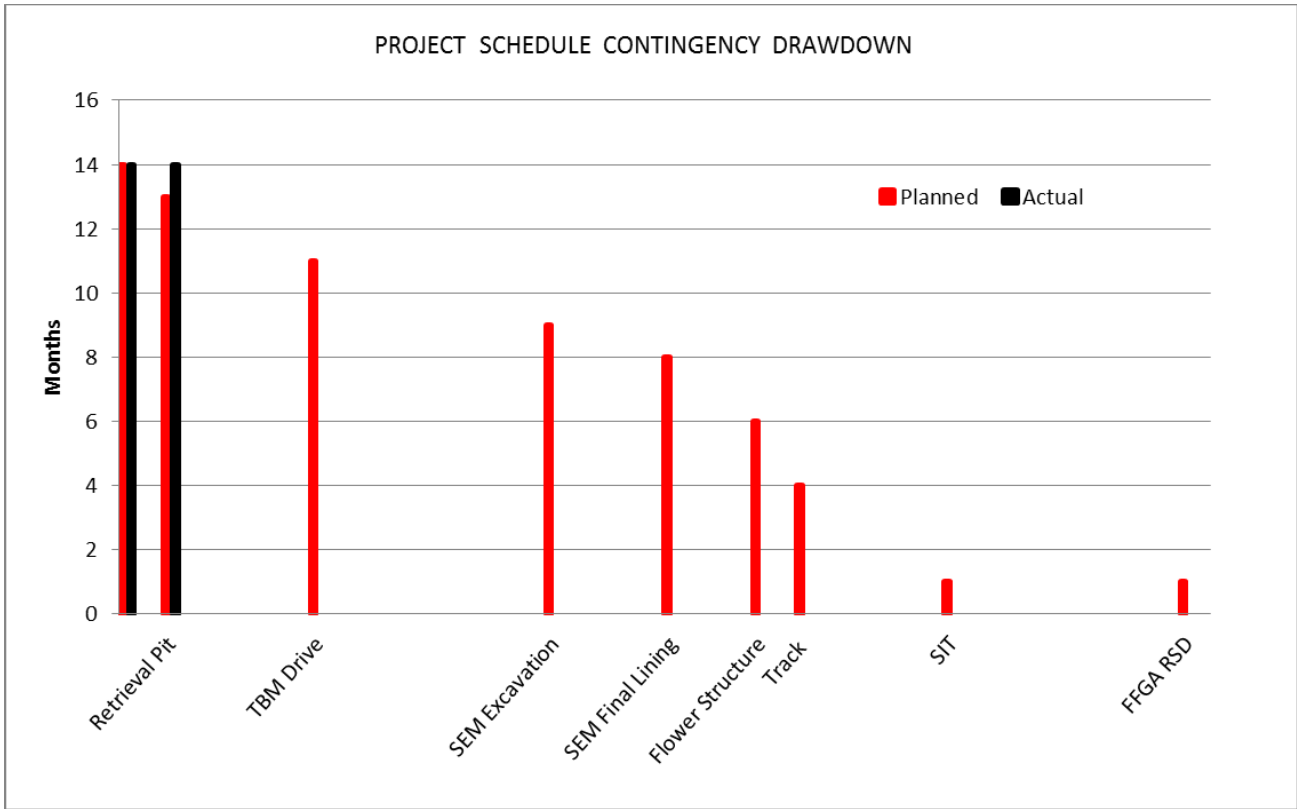
| Activity Name | Early Finish | Need Date |
|---|---------------------|------------------|
| PROCURE PRECAST STRUCTURAL ELEMENTS SUBCONTRACTOR | 18-Nov-19 | 11-Aug-21 |
| PROCURE ARCHITECTURAL CONCRETE PAVING SUBCONTRACTOR | 25-Nov-19 | 7-Apr-21 |
| PROCURE AC SUBCONTRACTOR | 12-Dec-19 | 28-May-21 |
| PROCURE MILLING SUBCONTRACTOR | 12-Dec-19 | 28-May-21 |
| PROCURE PCC PAVING SUBCONTRACTOR | 12-Dec-19 | 28-May-21 |
| FAB/DELIV GLAZING SPIDERS - ALL STATIONS | 18-Dec-19 | 19-May-21 |
| PROCURE BALLASTED TRACK - NORTH ALAMEDA LEG | 23-Dec-19 | 15-Sep-21 |
| PROCURE GRANITE STONework SUBCONTRACTOR | 29-Jan-20 | 4-Oct-21 |
| FAB/DELIV EMERGENCY BOOSTER FANS (12) | 6-Feb-20 | 26-Aug-21 |
| PROCURE PLATE PURCHASE ORDER | 11-Aug-20 | 16-Oct-20 |
| PROCURE MSE PANEL PURCHASE ORDER | 11-Aug-20 | 16-Oct-20 |

CRITICAL PATH NARRATIVE

Critical Path (C0980):

The critical path remained the same for the month of *September*. The critical path runs through the TBM mining of the second tunnel. After TBM mining, the SEM crossover structure east of the Historic Broadway Station will commence. Once the crossover structure is complete, track work installation will follow. The critical path continues through systems installation and testing from 1st/Alameda to 7th/Flower, followed by systems integration testing and pre-revenue operations.

PROJECT SCHEDULE CONTINGENCY DRAWDOWN



PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS

The project schedule contingency drawdown curve is based on the anticipated FFGA RSD date of February 25, 2023.

PROJECT COST STATUS

REGIONAL CONNECTOR TRANSIT CORRIDOR PROJECT
COST REPORT
DOLLARS IN THOUSANDS

| SCC CODE | | FFGA BUDGET | ORIGINAL BUDGET | CURRENT BUDGET | | COMMITMENTS | | EXPENDITURES | | CURRENT FORECAST | | BUDGET/ FORECAST VARIANCE |
|----------|--|-------------|-----------------|----------------|-----------|-------------|-----------|--------------|---------|------------------|-----------|---------------------------|
| | | | | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | |
| 10 | GUIDEWAYS & TRACK ELEMENTS | 280,622 | 204,691 | 0 | 250,041 | 0 | 242,446 | 1,658 | 106,277 | -1,905 | 250,845 | 804 |
| 20 | STATIONS, STOPS, TERMINALS, INTERMODAL | 354,268 | 219,477 | 0 | 230,615 | 0 | 223,869 | 167 | 34,796 | 1 | 230,691 | 76 |
| 30 | SUPPORT FACILITIES: YARDS, SHOPS, ADMIN, BLDGS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | SITWORK & SPECIAL CONDITIONS | 141,785 | 422,453 | 0 | 597,239 | 575 | 529,861 | 5,185 | 364,585 | 3,082 | 617,539 | 20,299 |
| 50 | SYSTEMS | 69,667 | 73,848 | 0 | 73,599 | 0 | 63,693 | 457 | 6,434 | 256 | 73,805 | 206 |
| | CONSTRUCTION SUBTOTAL (10-50) | 846,343 | 920,468 | 0 | 1,151,495 | 575 | 1,059,869 | 7,467 | 512,091 | 1,434 | 1,172,881 | 21,385 |
| 60 | ROW, LAND, EXISTING IMPROVEMENTS | 115,889 | 74,208 | 0 | 92,742 | 0 | 70,848 | 24 | 51,541 | 0 | 77,972 | -14,769 |
| 70 | VEHICLES | 16,275 | 16,275 | 0 | 16,275 | 0 | 16,275 | 0 | 1,678 | 0 | 16,275 | 0 |
| 80 | PROFESSIONAL SERVICES | 261,455 | 257,973 | 0 | 378,883 | 156 | 269,351 | 1,664 | 236,103 | 2,066 | 381,098 | 2,215 |
| | SUBTOTAL (10-80) | 1,239,963 | 1,268,925 | 0 | 1,639,395 | 731 | 1,416,344 | 9,155 | 801,414 | 3,500 | 1,648,227 | 8,831 |
| 90 | UNALLOCATED CONTINGENCY | 135,399 | 126,892 | 0 | 89,946 | 0 | 0 | 0 | 0 | -3,500 | 81,114 | -8,831 |
| 100 | FINANCE CHARGES | 27,571 | 7,115 | 0 | 14,301 | 0 | 0 | 0 | 0 | 0 | 14,301 | 0 |
| | TOTAL PROJECTS 460228 & 860228 (10-100) | 1,402,932 | 1,402,932 | 0 | 1,743,642 | 731 | 1,416,344 | 9,155 | 801,414 | 0 | 1,743,642 | 0 |
| | ENVIRONMENTAL/PLANNING - 400228 | | 6,075 | 0 | 6,075 | 0 | 6,075 | 0 | 6,075 | 0 | 6,075 | 0 |
| | ENVIRONMENTAL/PLANNING - 460228 | | 18,125 | 0 | 20,425 | 0 | 20,425 | 15 | 18,873 | 0 | 20,425 | 0 |
| | TOTAL PROJECTS 400228 & 460228 (EVN/PLAN'G) | 0 | 24,200 | 0 | 26,500 | 0 | 26,500 | 15 | 24,948 | 0 | 26,500 | 0 |
| | 400228, 460228, 860228 TOTAL | 1,402,932 | 1,427,132 | 0 | 1,770,142 | 731 | 1,442,844 | 9,170 | 826,362 | 0 | 1,770,142 | 0 |

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 09/30/2017.

PROJECT COST ANALYSIS – 860228

Original Budget:

The Original Budget of \$1.427 billion reflects the April 2014 Board Approved Life-of-Project (LOP), plus finance costs of \$7.1 million.

Current Budget:

In January 2017, the Metro Board revised the LOP Budget for the Regional Connector Project 860228 to \$1.756 billion. Finance costs, estimated at \$14.3 million, are also reflected leading to a total of \$1.770 billion. Budgets were adjusted throughout the SCC structure reflecting revised values as of December 2016. The total current budget remains the same as of *September 2017*.

Commitments:

Commitments increased by \$0.7 million this period to \$1.44 billion which represents 81.5% of the Current Budget. The increase is due to procurement actions associated with Contract C0980 Modifications and services related to Community Relations.

Expenditures:

Expenditures are cumulative through *September 2017*. Expenditures increased by \$9.2 million this period for costs associated with C0980 Design Build contract, Engineering Management Support, Metro Project Administration, Construction Management Support Service, Legal Services, Third Party Master Cooperative Agreements with the City of LA, Community Relations, and Environmental Consultant Services. The \$826.4 million in expenditures to date represents 46.7% of the Current Budget.

Current Forecast:

The total current forecast remains the same as the total current budget.

PROJECT COST STATUS (Cont.)

CONCURRENT NON-FFGA ACTIVITIES (861228)

PROJECT COST STATUS BY FTA SCC
DOLLARS IN THOUSANDS

| SCC CODE | Description | ORIGINAL BUDGET | CURRENT BUDGET | | COMMITMENTS | | EXPENDITURES | | CURRENT FORECAST | | BUDGET / FORECAST VARIANCE |
|----------|--|-----------------|----------------|---------------|-------------|---------------|--------------|---------------|------------------|---------------|----------------------------|
| | | | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | |
| 10 | GUIDEWAYS & TRACK ELEMENTS | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | STATIONS, STOPS, TERMINALS, INTERMODAL | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | SUPPORT FACILITIES: YARDS, SHOPS, ADMIN, BLDGS | 10,480 | 0 | 10,480 | 0 | 10,480 | 0 | 0 | 0 | 10,480 | 0 |
| 40 | SITWORK & SPECIAL CONDITIONS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 | SYSTEMS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | CONSTRUCTION SUBTOTAL (10-50) | 10,480 | 0 | 10,480 | 0 | 10,480 | 0 | 0 | 0 | 10,480 | 0 |
| 60 | ROW, LAND, EXISTING IMPROVEMENTS | 27,748 | 0 | 27,748 | 0 | 27,748 | 0 | 22,498 | 0 | 27,748 | 0 |
| 70 | VEHICLES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80 | PROFESSIONAL SERVICES | 650 | 0 | 650 | 0 | 650 | 0 | 203 | 0 | 650 | 0 |
| | SUBTOTAL (10-80) | 38,878 | 0 | 38,878 | 0 | 38,878 | 0 | 22,701 | 0 | 38,878 | 0 |
| 90 | UNALLOCATED CONTINGENCY | 1,113 | 0 | 1,113 | 0 | 0 | 0 | 0 | 0 | 1,113 | 0 |
| 100 | FINANCE CHARGES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL PROJECTS 861228 (10-100) | 39,991 | 0 | 39,991 | 0 | 38,878 | 0 | 22,701 | 0 | 39,991 | 0 |
| | 861228 TOTAL | 39,991 | 0 | 39,991 | 0 | 38,878 | 0 | 22,701 | 0 | 39,991 | 0 |

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 09/30/2017.

PROJECT COST ANALYSIS – 861228

Original Budget:

The Original Budget, Current Budget, and Current Forecast reflect the Board Approved Life-of-Project (LOP) budget on April 24, 2014.

Current Budget:

There is no change to the Budget for this period.

Commitments:

Commitments reflect actions through *September* 2017.

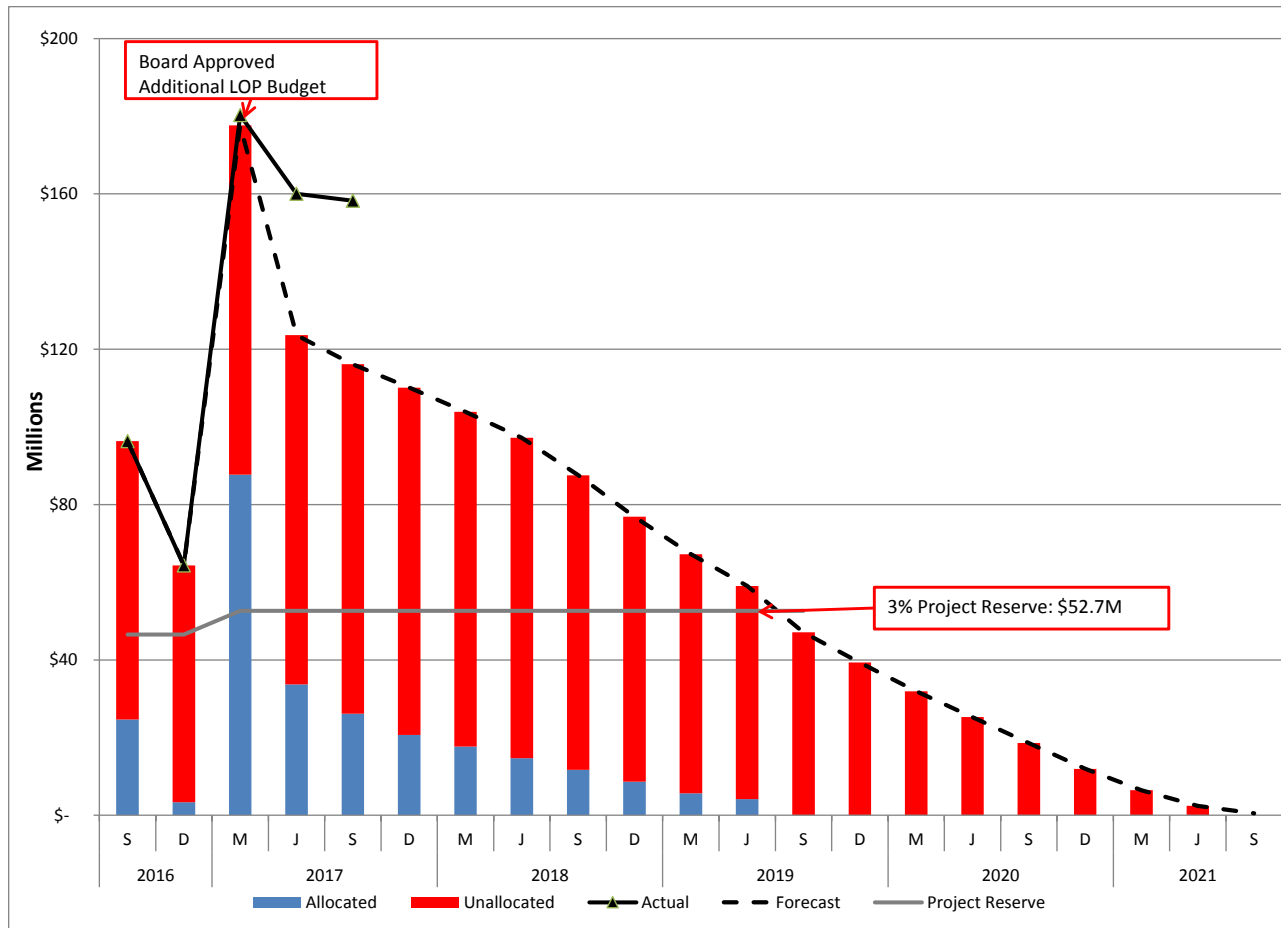
Expenditures:

Expenditures are cumulative through *September* 2017. Expenditures for the period remained unchanged. The \$22.7 million in expenditures through *September* 2017 represents 56.8% of the Current Budget.

Current Forecast:

There was no change to the Forecast for this period.

COST CONTINGENCY DRAWDOWN



COST CONTINGENCY DRAWDOWN ANALYSIS

In January 2017, the Metro Board revised the Life-of-Project Budget to \$1.756 billion, which included increasing the unallocated contingency to \$89 million and allocated contingency to \$92.8 million. A revised drawdown plan for unallocated contingency, correlated to anticipate risk trends, was developed to monitor and measure drawdowns moving forward.

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

The project cost contingency drawdown curve is based on a 2021 Revenue Service date.

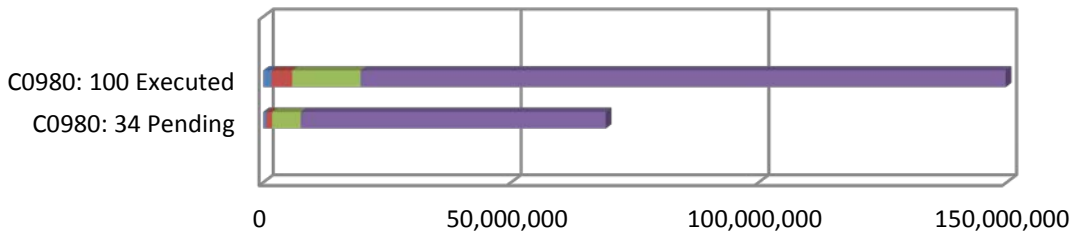
This month there was a drawdown of \$484k from contingency due to D/B modifications. The remaining total project contingency (allocated and unallocated) is \$158.2 million.

COST CONTINGENCY DRAWDOWN ANALYSIS (Cont.)

| PROJECT COST CONTINGENCY DOLLARS IN THOUSANDS | | | | | |
|--|----------------|-----------------|----------------|-----------------|----------------------------------|
| | Contingency | Previous Period | Current Period | To-Date | Remaining Contingency (Forecast) |
| Unallocated Contingency | 89,946 | 0 | 0 | 0 | 89,946 |
| Allocated Contingency | 92,809 | (24,031) | (484) | (24,515) | 68,294 |
| Total Contingency | 182,754 | (24,031) | (484) | (24,515) | 158,239 |

SUMMARY OF CONTRACT MODIFICATIONS

Contract Modifications (MODs) by Cost Level



| | C0980 | | Total |
|------------------------------|--------------------|--------------------|--------------------|
| | 100 Executed | 34 Pending | |
| ■ Under \$100K | 1,619,440 | 551,819 | 2,171,259 |
| ■ \$100K to \$250K | 4,190,404 | 1,208,864 | 5,399,268 |
| ■ \$250K to \$1M | 13,817,024 | 5,772,950 | 19,589,974 |
| ■ Over \$1M | 130,179,875 | 61,543,383 | 191,723,258 |
| Total Contract MODs | 149,806,743 | 69,077,016 | 218,883,759 |
| Contract Award Amount | 927,226,995 | 927,226,995 | |
| % of Contract MODs | 16.2% | 7.4% | |

Note:

1. Percent of Contract MODs equals the Total Contract MODs divided by the Contract Award Amount.
2. Pending Mods are under negotiation.

One hundred (100) changes with a total value of \$149.81 million have been executed since NTP of Contract C0980. An additional thirty-four (34) changes, with a total estimated value of \$69.08 million are pending.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

Contract C0980 Regional Connector Transit Project Design-Build

As of August 2017:

- **DBE Goal – Design**
A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area: 20%
 - **Current DBE Commitment Design**
Total DBE Committed Dollars divided by Total Contract Value for Design or Construction \$13.4M (22.63%)
 - **Current DBE Participation**
Total amount paid to date to DBEs divided by the amount paid to date to Prime: 26.15%
- Twelve (12) Design DBE sub-consultants have been identified to date.

- **DBE Goal – Construction**
A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area: 18%
 - **Current DBE Commitment Construction**
Contract commitment divided by current contract value for Construction: \$180.7M (18%)
 - **Current DBE Participation**
Total amount paid to date to DBEs divided by the amount paid to date to Prime: 11.43%
- Sixty (60) Construction DBE sub-contractors have been identified to date.

PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C0980 Regional Connector Transit Project Design-Build

- **Targeted Worker Goal**
Construction work to be performed by residents from Economically Disadvantaged Area in the United States 40.00%
- **Targeted Worker Current Attainment** 58.06%
- **Apprentice Worker Goal**
Construction work to be performed by Apprentices 20.00%
- **Apprentice Worker Current Attainment** 17.03%
- **Disadvantaged Worker Goal**
Construction work to be performed by Disadvantaged Workers who are residents of the United States 10.00%
- **Disadvantaged Worker Current Attainment** 7.32%

FINANCIAL/GRANT STATUS

Status of Funds Anticipated

September 2017

| | |
|--|---|
| FEDERAL - CMAQ | METRO SUBMITTED ON NOVEMBER 25, 2013 A GRANT APPLICATION OF \$64.0M TO THE FTA. GRANT APPROVAL WAS EXECUTED ON SEPTEMBER 24, 2014. FUNDS ARE AVAILABLE FOR DRAW DOWN. ADDITIONAL CMAQ FUNDS WILL BE OBLIGATED IN FY2018/2019. |
| FEDERAL - SECTION 5309 NEW STARTS | METRO SUBMITTED ON NOVEMBER 25, 2013 A GRANT APPLICATION OF \$65.0 M TO THE FTA. GRANT APPROVAL WAS EXECUTED ON SEPTEMBER 23, 2014. METRO SUBMITTED ON JUNE 11, 2015 A GRANT AMENDMENT OF \$100M. GRANT AWARDED AUGUST 2015. FUNDS ARE AVAILABLE FOR DRAW DOWN. METRO SUBMITTED A GRANT AMENDMENT OF \$100M IN JULY 2016. GRANT AMENDMENT WAS EXECUTED ON AUGUST 18, 2016. FUNDS ARE AVAILABLE FOR DRAW DOWN. METRO SUBMITTED A GRANT AMENDMENT OF \$100M IN JULY 2017. GRANT AMENDMENT WAS EXECUTED ON SEPTEMBER 22, 2018 AND FUNDS ARE AVAILABLE FOR DRAWDOWN |
| MEASURE R - TIFIA LOAN: (Transportation Infrastructure Finance & Innovation Act) | A TIFIA LOAN AGREEMENT BETWEEN THE DEPARTMENT OF TRANSPORTATION AND METRO FOR \$160M WAS EXECUTED ON FEBRUARY 20, 2014. THE FIRST DISBURSEMENT OF \$61,864,368 WAS SPLIT INTO TWO PARTS. RECEIVED THE FIRST PAYMENT OF \$25.2 MILLION 4TH QUARTER FY2016. RECEIVED THE SECOND PAYMENT OF \$36.7 MILLION 1ST QUARTER FY2017. THE SECOND DISBURSEMENT OF \$55.9 MILLION IS AVAILABLE AND WILL BE SPLIT INTO TWO PARTS. WE RECEIVED THE FIRST PAYMENT OF \$29.8 MILLION FIRST QUARTER FY2018 WE EXPECT TO RECEIVE THE SECOND PAYMENT OF \$26.1 MILLION SECOND QUARTER FY2018 |
| CITY OF LA | FUNDING AGREEMENT OF \$42M WITH THE CITY OF LA WAS APPROVED IN JUNE 2014. THE FIRST PAYMENT DRAWDOWN OF \$5.0M WAS IN JUNE 2016. THE SECOND PAYMENT DRAWDOWN OF \$7.0M WAS BILLED IN JUNE 2017 AND THE PAYMENT WAS RECEIVED IN JULY 2017. |

Status of Funds by Source

September 2017

| SOURCE | (A) | (B) | (C) | (D) | (D/B) | (E) | (E/B) | (F) | (F/B) |
|--|--------------------|-------------------------|-----------------------|--------------------|--------------|------------------|--------------|-----------------------------|--------------|
| | ORIGINAL BUDGET | TOTAL FUNDS ANTICIPATED | TOTAL FUNDS AVAILABLE | COMMITMENTS \$ | % | EXPENDITURES \$ | % | BILLED TO FUNDING SOURCE \$ | % |
| FEDERAL - CMAQ | \$64.000 | \$227.000 | \$64.000 | \$64.000 | 28% | \$53.974 | 24% | \$45.250 | 20% |
| FEDERAL - SECTION 5309 NEW STARTS | \$669.900 | \$669.900 | \$265.000 | \$669.900 | 100% | \$240.936 | 36% | \$258.174 | 39% |
| FEDERAL - RIP | \$0.000 | \$14.400 | \$0.000 | \$14.400 | 100% | \$0.000 | 0% | \$0.000 | 0% |
| MEASURE R - TIFIA LOAN | \$160.000 | \$160.000 | \$117.803 | \$160.000 | 100% | \$103.834 | 65% | \$95.930 | 60% |
| STATE PROPOSITION 1A HSRB * | \$114.874 | \$114.874 | \$114.874 | \$114.874 | 100% | \$114.874 | 100% | \$114.874 | 100% |
| STATE PROPOSITION 1B PTMISEA ** | \$149.500 | \$135.163 | \$135.163 | \$135.163 | 100% | \$135.163 | 100% | \$135.163 | 100% |
| STATE STIP RIP | \$2.590 | \$2.590 | \$2.590 | \$2.590 | 100% | \$2.590 | 100% | \$2.590 | 100% |
| STATE CAPITAL PROJECT LOANS - OTHERS *** | \$132.466 | \$274.871 | \$274.871 | \$264.137 | 96% | \$162.991 | 59% | \$145.510 | 53% |
| MEASURE R | \$27.571 | \$0.000 | \$0.000 | \$0.000 | 0% | \$0.000 | 0% | \$0.000 | 0% |
| CITY OF LOS ANGELES | \$41.984 | \$41.984 | \$12.000 | \$17.780 | 42% | \$12.000 | 29% | \$12.000 | 29% |
| LEASE REVENUE | \$64.247 | \$115.058 | \$0.000 | \$0.000 | 0% | \$0.000 | 0% | \$0.000 | 0% |
| TOTAL | \$1,427.132 | \$1,755.840 | \$986.301 | \$1,442.844 | 82.2% | \$826.362 | 47.1% | \$809.491 | 46.1% |

EXPENDITURES ARE CUMULATIVE THROUGH SEPTEMBER 30, 2017
ORIGINAL BUDGET BASED ON FUNDING PLAN INCLUDED IN THE APPROVED FULL FUNDING GRANT AGREEMENT

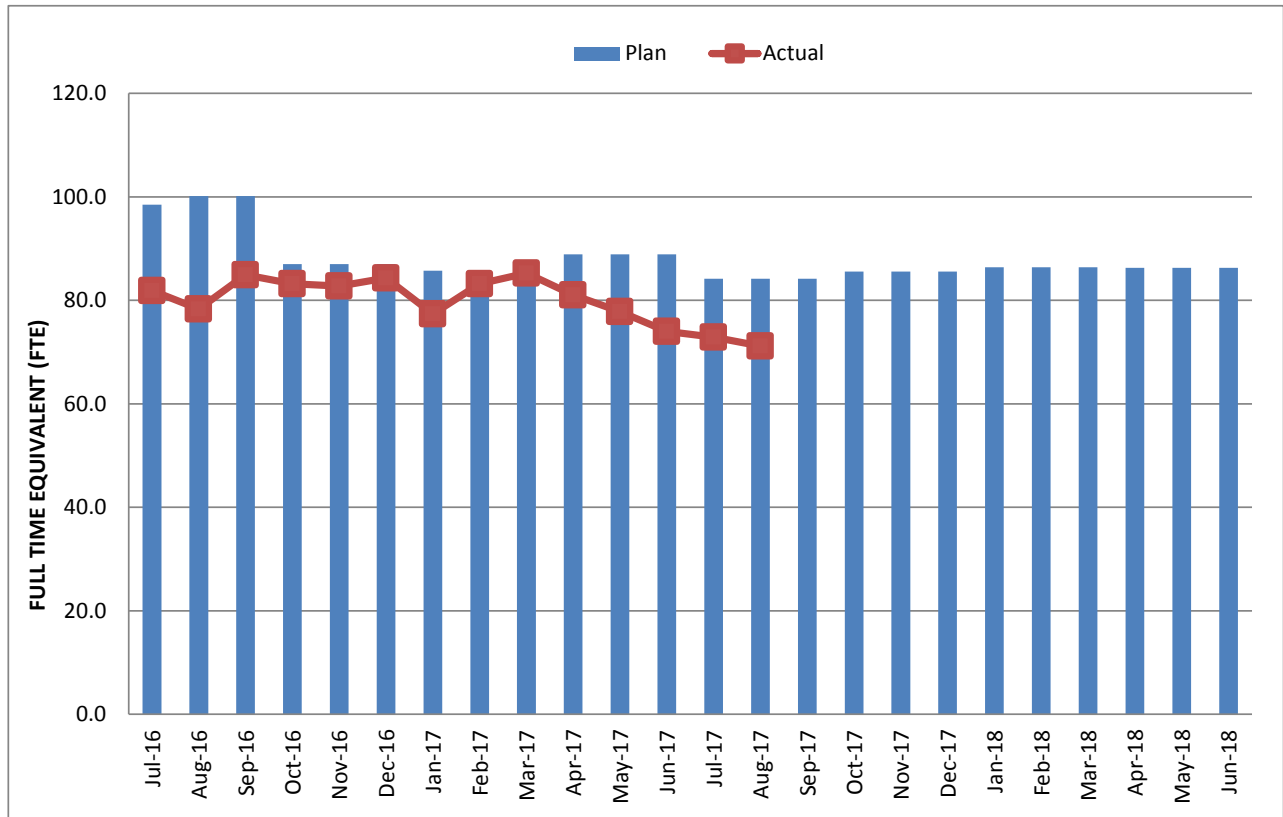
* STATE PROPOSITION 1A HIGH SPEED RAIL BONDS

** STATE PROPOSITION 1B PUBLIC TRANSPORTATION MODERNIZATION, IMPROVEMENT AND SERVICE ENHANCEMENT ACCOUNT

*** OTHERS INCLUDE TDA ADMINISTRATION, AND NB PROPOSITION A ADMINISTRATION (FOR A TOTAL OF \$.255M)

STAFFING STATUS

TOTAL PROJECT STAFFING – METRO AND CONSULTANTS



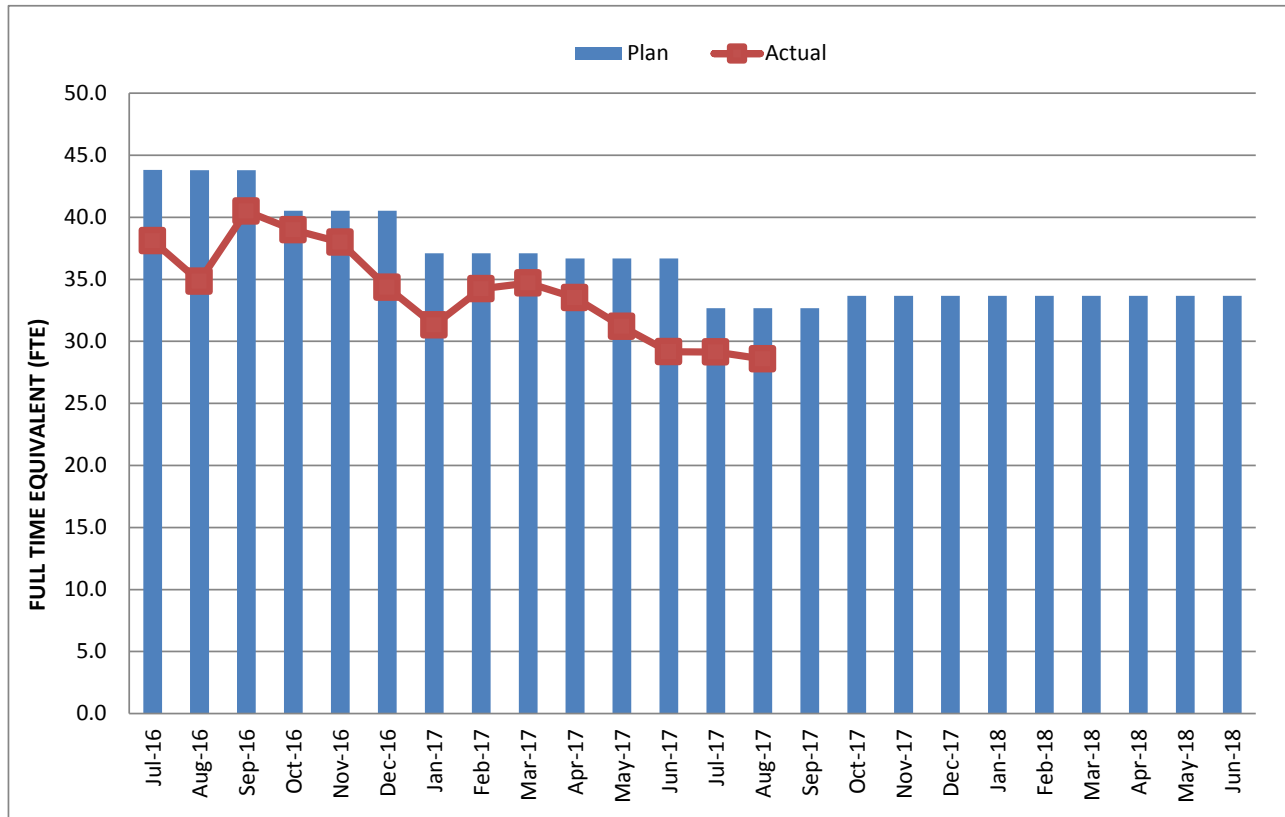
TOTAL PROJECT STAFFING

The overall FY18 Total Project Staffing plan averages 85.6 FTE's per month.

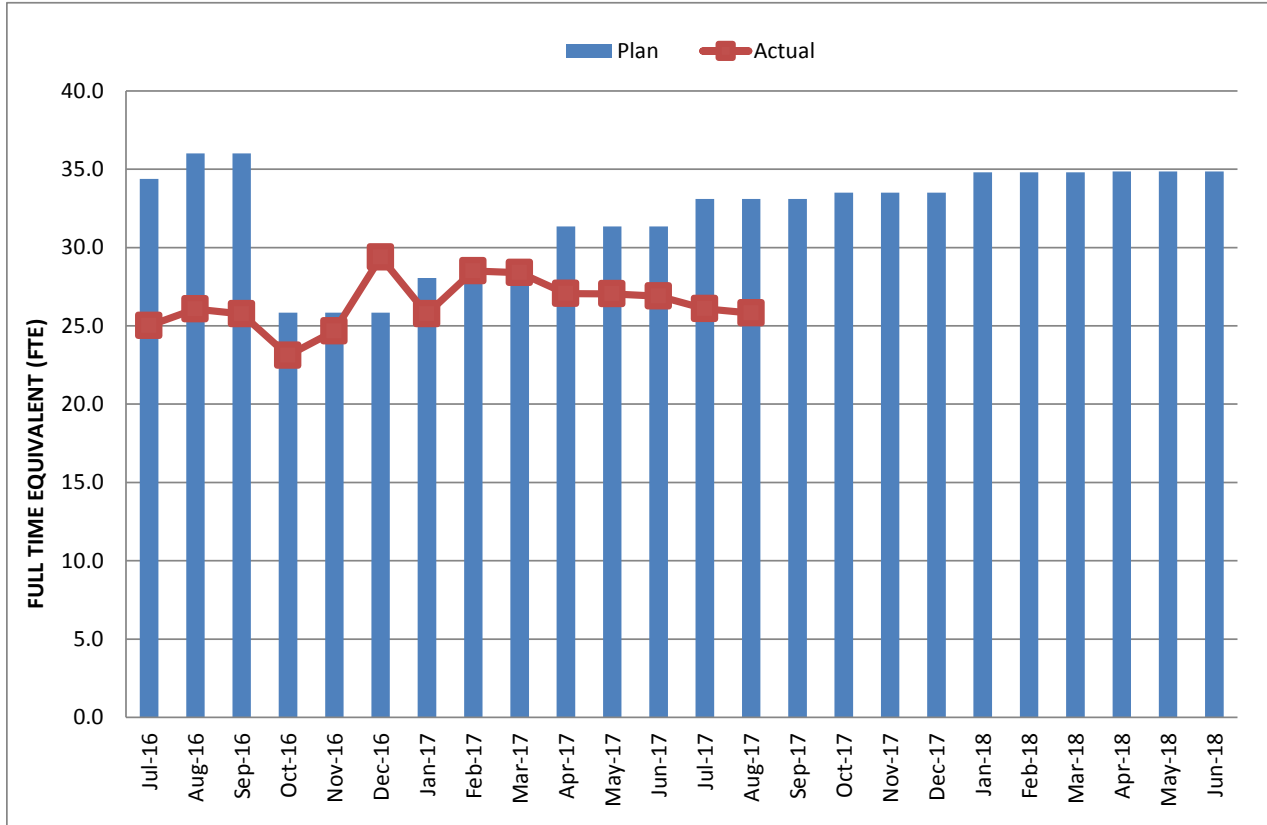
For *August* 2017, there were a total of 28.6 actual FTEs for Metro's Project Administration staff and 42.6 FTEs for consulting staff. The total actual project staffing for *August* 2017 was 71.1 FTEs versus FTEs planned (84.2).

The shortfall in staffing has not impacted Metro's ability to effectively manage the Project. Review of staffing plans is on-going to ensure needs are addressed.

**STAFFING STATUS (Cont.)
METRO STAFF**



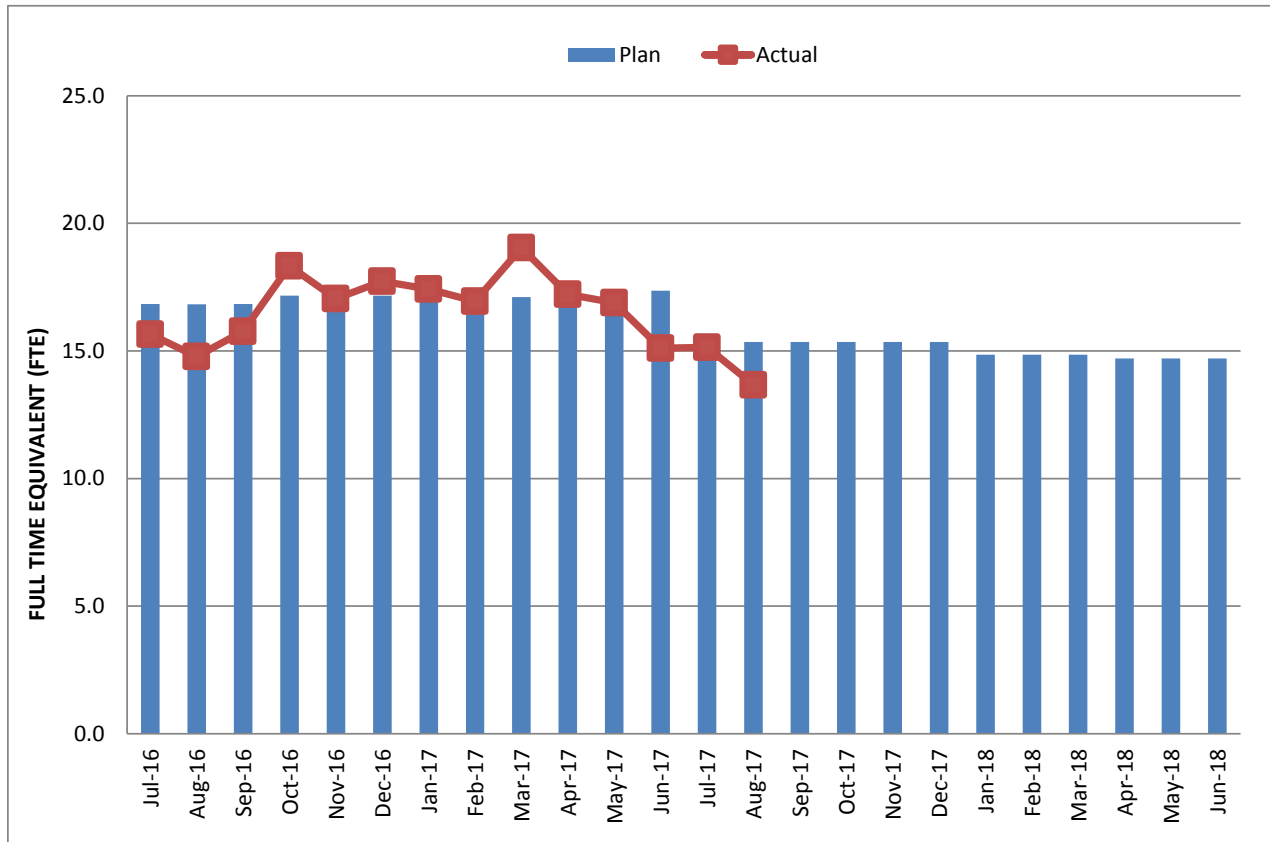
**STAFFING STATUS (Cont.)
CONSTRUCTION MANAGEMENTSUPPORT SERVICES CONSULTANT**



Note:

- a) The Actual FTEs for the month are based on the FTE hours submitted in the invoice for that month.

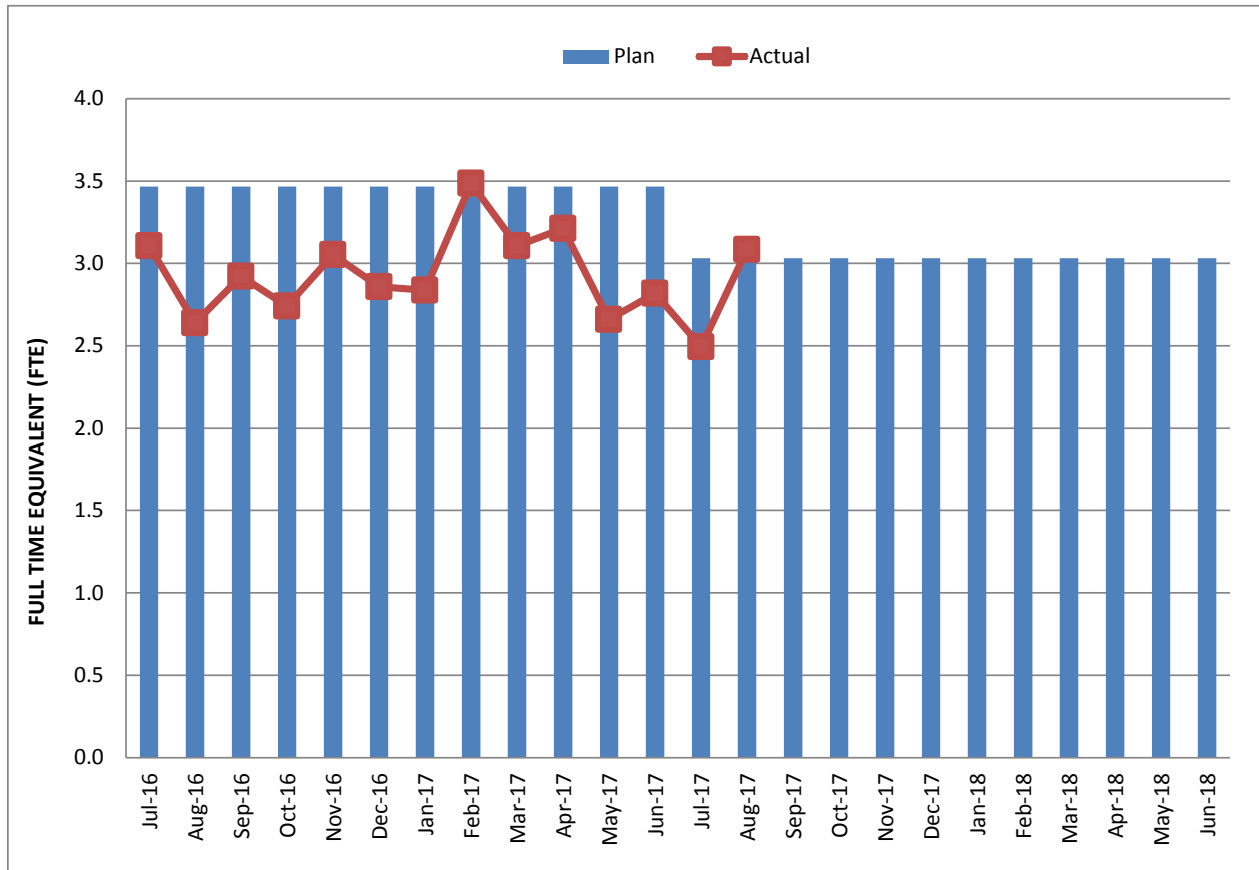
**STAFFING STATUS (Cont.)
ENGINEERING SERVICES CONSULTANTS**



Note:

- a) The Actual FTEs for the month are based on the FTE hours submitted in the invoice for that month.

**STAFFING STATUS (Cont.)
PROJECT MANAGEMENT SERVICES CONSULTANTS**



REAL ESTATE STATUS

Regional Connector - Real Estate Status Summary April 30, 2017

| Type of Take | Number of Parcels | Certified | Decertified | Appraisals In Process / Completed | Offers Made | Escrow Closed | Effective OIP | Parcels Available | Remaining |
|--------------------|------------------------|-----------|-------------|-----------------------------------|-------------|---------------|---------------|-------------------|-----------|
| Full Takes | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Part Takes | 3 | 3 | | 3 | 3 | | | 2 | 1 |
| SSE | 12 | 8 | 4 | 9 | 9 | 6 | 2 | 7 | |
| TCE/ROE | 14 | 5 | 3 | 6 | 6 | 4 | 1 | 5 | |
| PE | 3 | 3 | | 3 | 3 | 2 | | 3 | |
| Sub Total | 34 | 21 | 7 | 23 | 23 | 12 | 5 | 20 | 1 |
| Pedestrian Bridge | 420-1, 420-2, 420-3 | | | | | | | | 1 |
| Mangrove Fan Plant | TBD | | | | | | | | 1 |
| Grand Total | 36 | 21 | 7 | 23 | 23 | 12 | 5 | 20 | 3 |

REAL ESTATE ACQUISITION

OPEN REAL ESTATE MATTERS

City of Los Angeles (Mangrove Parcels)

- The appraisal to value the additional right of way required for the Fan Plant *has been reviewed. Both Metro and the City obtained appraisals. Discussions are now underway to reconcile the two appraisals. The Project has indicated that there could be construction over the Fan Plant easement which may have the effect of limiting any severage damaged assigned to the value of the easement.* Real Estate will seek FTA's approval of the recommended compensation for the Fan Plant easements. The Project requested that Real Estate delay exercising the option to extend the 5-year easement for an additional three (3) years until closer to the expiration date.

City of Los Angeles Department of Water and Power 'Duco Yard' – DWP (RC-473)

- LADWP has agreed to a compromise in the valuation of the Property. The Board approved the recommended purchase price at its June 22nd meeting. Staff is working with County Counsel and LADWP on the Purchase and Sale Agreement.
- LADWP submitted its estimate of the modification required to their yard to continue their operations. The estimate is being reviewed by the Project. Follow-up interface between the parties continues.

QUALITY ASSURANCE STATUS

C0980 Regional Connector D/B

- Metro QA reviewed and provided comments on RCC's quality-related submittals;
- Performed oversight verification of RCC's design and construction activities;
- Reviewed test results for Portland cement concrete;
- Attended Readiness Review meetings with RCC; and
- Continues ongoing surveillance of the power relocation activities at 6th and Flower Street. This activity will be in progress until the pre-cast and cast-in-place vaults have been installed along with their associated components and accessories. To date the invert has been placed for Vault 805 by RCC for DWP. *The roof for the cast-in-place vault is scheduled to be placed the first week of October. The pre-cast vault was installed during the month of September. Metro QA issued Surveillance Report C0980-SUR2017-015 for the placement of the pre-cast vault.*
- Metro QAR C0980-QAR2016-S07-01 remains open until the re-shoring plan for Grand Av Arts/Bunker Hill Station is reviewed and approved by Metro. The plan was rejected by Metro due to an excessive number of unresolved comments by the Engineer of Record for the plan. This plan will be reviewed after resubmittal by RCC. If all comments are resolved QAR C0980-QAR2016-S07-01 will then be closed.
- *A workshop for Underpinning at the LA Times Building at Historic Broadway Station was held in September. Work will take place in November or December.*
- *Metro and RCC QA visited Alamillo Rebar in Bakersfield to confirm that Alamillo has received the rebar and is ready to fabricate.*
- *Metro is performing ongoing surveillance of the activities for the Concourse Level slab at Grand Av Arts/Bunker Hill Station. These activities will be ongoing throughout the month of October.*
- RCC testing performed to date are as follows:
 1. Portland cement concrete 28-day test results: 893; number accepted: 893
 2. Asphalt concrete density tests results: 203; number accepted: 203
 3. Soil compaction (in-situ density) tests performed to date: 168; number accepted: 168
 4. Welding MT/UT testing to date is: 8632; number accepted: 8632

ENVIRONMENTAL STATUS

- SWPPP inspections of all project areas are conducted weekly by RCC to observe site conditions and report on performance of stormwater protection Best Management Practices. *A two-hour rain event occurred on September 21, 2017, which did not produce runoff; however, sites required extra street sweeping.*
- Metro prepared the 18th Quarterly Mitigation Monitoring and Reporting Plan covering May 2017 to July 2017, and submitted the report to the FTA on August 14, 2017. *Metro will begin to prepare the 19th Quarterly Mitigation Monitoring and Reporting Plan covering August 2017 to October 2017, which will be submitted to the FTA no later than November 14, 2017.*
- Metro completed the preparation of the 5th Semi-Annual Cultural Resources Report, documenting cultural resources monitoring from January 2017 to June 2017. The report was submitted to the FTA and the SHPO on July 31, 2017. *Metro is preparing the 6th Semi-Annual Cultural Resources Report, which will be submitted by January 31, 2018.* Reporting will continue a semi-annual basis until ground-disturbing activities conclude.
- Vibration and noise spot checks are being conducted weekly at multiple sensitive locations along Flower Street between 5th and 6th Streets to monitor vibration and noise compliance with increased work activity such as drilling piles and utility relocation.
- A small quantity of Asbestos Containing Material (ACM) found on Flower Street was contained and removed from the site, and taken to a proper handling facility.
- Due to the presence of a mosquito habitat at the Temporary Storage Area (TSA) Laydown Yard, field staff performed some minimal vector control on-site.

CONSTRUCTION AND COMMUNITY RELATIONS STATUS

Construction Relations

- Responded and addressed project related inquiries from the public received on the project hotline, email and during office hours at the Little Tokyo Community Office.
- Performed public outreach and construction coordination to impacted area stakeholders regarding the following construction activities throughout the alignment: geotechnical instrument installation and maintenance, cut & cover activities and weekend closures, and utility work at 6th Street. Distributed *fourteen (14)* construction notices to the public on these activities through email and made it available on the project website and social media outlets.
- Coordinated construction activities with *eighteen (18)* stakeholders throughout the project alignment on the above activities.
- *Held a project wide construction update community meeting to update Community Leadership Council members* on Flower Street activities, including, utility relocation progress, *ongoing* weekend decking closures and reported on business mitigation efforts to support Flower Street businesses.
- Continued standing meetings with: LA City Councilmember District 14, the Mayor's Office, Common Wealth Partners, The Westin Bonaventure Hotel, Charles Dunn, Citigroup Center, the Central Library/Hines, The Standard Hotel, Pegasus Apartments and the California Club.

Social Media Outreach and Marketing Efforts

- The monthly E-Newsletter e-blast for the month of *September decreased slightly*, with an open rate of 20%.
- Engagement on Facebook and Twitter *provided a unique lens into decking and TBM activities, with over 60k combined expressions.*



CONSTRUCTION AND COMMUNITY RELATIONS STATUS (Cont.)

Community Relations

- Continued work with the monthly Little Tokyo Marketing & Business Task Force. Held Small Business workshop with Little Tokyo Service Center Partner and Asian Pacific Islander Small Business program.
- Hosted a delegation of students from Kyoto, Japan for a 3-day work-experience program where students learned about the agency and becoming global leaders.

CREATIVE SERVICES STATUS

Art Program

- Participated in Design Build document reviews
- Responded to RFIs and Submittals
- Continued to support mitigation efforts

Signage & Environmental Graphic Design

- Responded to RFIs and Submittals
- Participated in Design Build document reviews

SAFETY & SECURITY STATUS

C0980 Regional Connector

- Monitored RCC's pre-employment drug/alcohol testing and new employee safety orientation to insure compliance with contract specifications.
- Participated in weekly progress meetings with RCC's management personnel and Metro's Construction Manager to discuss safety/security/quality related issues and construction work schedules.
- Conducted Project Safety Orientation for new Metro/Consultants, visitors, and IPMO project staff. Training sessions included Safety Orientation, Underground Safety, and Self Rescuer Training.
- Participated in work plan reviews, daily crew safety meetings, and the RCC 'Safety Stand Down' sessions.
- Monitored construction field activities daily to insure compliance with contract specifications. Participated with RCC staff in field safety inspection walks of multiple project worksites, laydown, and storage yards.
- Monitored Third Party contractor's work activities to insure safety compliance.
- Made recommendations to utility crews regarding contract activities and improving overall traffic control and pedestrian safety.
- RCC reported no injuries or major incidents during the month of *September* 2017.
- RCC reported 57,759 work-hours for the month of *August* 2017 (work-hours are reported with a one-month lag time). The total C0980 Contract to Date work hours through *August* 2017 are 1,792,720 with a total of nine (9) recordable injuries and no Lost Workday case injuries. The C0980 Contract Recordable Injury Rate is 1.00. The Bureau of Labor Statistics National Average Recordable Injury Rate is 2.8 for heavy civil construction projects.

Total Project

- *Total* Project to Date Work Hours including both the C0980 and the C0981 Advanced Utility Relocation contract through *August* 2017 is now 1,903,779 hours with ten (10) recordable injuries. *Total* Project Recordable Injury Rate is now 1.05. There have been no *Days Away* injury cases on the project.

THIRD PARTY AGREEMENT STATUS

| Agency | Type of Agreement | Status/Comments |
|---|---|---|
| City of Los Angeles | Amendment to Master Cooperative Agreement | Parties will work under 2003 MCA. |
| Los Angeles Department of Water and Power | Amendment to Memorandum of Understanding | Metro and LADWP will continue to work under the terms of the previous Cooperative Agreement. |
| Los Angeles County Public Works | Letter of Agreement | Executed in April 2011 |
| Caltrans | Amendment | Executed in August 2011 |
| Private Utilities | LOA, MOU or UCA | All agreements in place with exception of Level 3, Qwest, XO Comm, Zayo and Time Warner. Metro is in discussion with those utilities to establish agreements. |

ADVANCED UTILITY RELOCATION STATUS

LADWP-Power Services anticipated completion dates for cable pulling, splicing and removal of old facilities including the following:

- RCC is continuing to coordinate with LADWP and the City of Los Angeles in preparation for the relocation of the local LADWP electrical system in the 6th and Flower area. Metro continues to work with all parties to facilitate coordination of the relocation design and construction in preparation for future decking installation.
- RCC has completed *approximately 90% of the electrical conduit (Mainline A) work that runs along 6th Street, between Figueroa and Hope Street. The remaining work for Mainline A, located at the intersection of 6th/Flower, is not accessible due to adjacent partial closure. RCC is reviewing options for implementing a WATCH traffic control plan that would allow access to install the remaining work. The remaining work includes the conduit (Mainline B) work, which runs down Flower Street between Wilshire Blvd. and 5th Street, and the two vaults, one (Vault 621) located on Flower Street north of Wilshire Blvd. and the other (Vault 805) located on 6th Street west of Flower Street. RCC completed the installation of Vault 621 in late September. RCC has excavated the trench, poured the invert, and all four walls for Vault 805, which is a cast-in-place unit. The remaining work consists of installing the top of the vault and the manhole rings. RCC is currently trenching and tentatively scheduled to begin installing conduit in mid-October 2017 for Mainline B.*
- LADWP is running and installing conduit (lateral Intercepts) to the live vaults. Once RCC completes Mainline A and B, LADWP will complete the remaining three laterals to complete the inceptor work.

C0980 UTILITY WORK STATUS

RCC is currently coordinating with all affected utility owners to relocate their utilities by lowering in place or support and protect to accommodate the Project.

PEAK HOUR CONSTRUCTION VARIANCES

Metro is actively pursuing extended hour variances/exemptions to accommodate Project needs by working with the City of Los Angeles, Bureau of Engineering, the Los Angeles Police Commission, the City of Los Angeles Department of Transportation and the City Council District 14th Office to obtain Peak Hour Exemptions.

Historic Broadway and Grand Av Art/Bunker Hill Stations:

- As of May 8, 2017, Historic Broadway Station has entered steady state condition in which soldier piling/decking operations have been completed in the City ROW. Emphasis is primarily on underground station construction until approximately the year 2021.

Flower Street Cut & Cover Area

- Metro obtained an AM and PM peak hour exemption to place k-rail on the eastside of Flower Street (between 4th and 5th Sts.) to support above and below ground construction operations for decking along Flower Street. Approval was granted by the Board of Public works from October 1, 2016 to November 9, 2019.
- Metro obtained a Board of Public Works exemption to allow construction work during AM and PM peak hours on 6th Street between Figueroa Street and Hope Street and on Flower Street between 5th Street and Wilshire Boulevard from June 5, 2017 through November 3, 2017. This exemption was granted as part of the Board's June 2, 2017 approval of the five-month closure of 6th Street between Flower Street and Hope Street.

POLICE COMMISSION CONSTRUCTION VARIANCES

Metro continues to work closely with the Los Angeles Police Commission and actively pursue new night/Sunday work hour variances as well as expanded geographic limits and time extensions for existing variances to accommodate Project needs.

In *September* 2017, LAPD approved time extensions for *two* (2) existing variances for the following location:

- At the 2nd/Hope work area, *one* (1) variance was for concrete work within the station box.
- At the Flower work area, *one* (1) variance was extended for the *retrieval of the tunnel boring machine at the 4th and Flower work area through January 15, 2018.*

CPUC CROSSING SUMMARY

In July 2016, Metro and RCC finalized the items that needed to be included in the checklist for the Safety Certification Status. Metro is in the process of reviewing the Safety Certification Checklist submitted by RCC in October 2016. The list involves both design and construction items below:

- Passenger Stations, Train Control and Signals, Traction Power, Overhead Catenary, Communications, Track and Structures, Vertical Transportation (elevators, escalators), Fire Life Safety Systems, Security Systems, and CPUC Specific Requirements.
- Metro and RCC staff have reached a consensus of each Systems Safety Certification item per discipline that needs to be included in the plan. These items have been inserted into a Microsoft Access Database for tracking, sorting, and distribution to key staff members for alerting of any potential issues that must be resolved. This will ensure that the completion of the Safety Certification Plan will be completed in a timely manner and not impact the Revenue Operation Date (ROD).

As of January 2017, the Safety Certification Checklist has been approved by Metro.

CHRONOLOGY OF EVENTS

| | |
|----------------|--|
| June 2007 | Began Alternatives Analysis study |
| January 2009 | Board approval of Alternatives Analysis study and next phase |
| February 2009 | Began Draft Environmental Impact Statement / Report (EIS / EIR) |
| October 2010 | Board approval of Draft EIS / EIR and selection of locally preferred alternative |
| January 2011 | FTA approval to Enter into Preliminary Engineering |
| January 2011 | Began Preliminary Engineering |
| August 2011 | Board authorized to solicit major D/B contract C0980 |
| October 2011 | Issued RFQs for D/B contract C0980 |
| December 2011 | Began Real Estate Acquisition |
| March 2012 | Completed PE and began Advanced PE |
| April 2012 | Board certification of Final EIS / EIR and adoption of project |
| April 2012 | Began Final Design - Advanced Utility Relocations (AUR) |
| June 2012 | FTA Record of Decision |
| August 2012 | Issued RFQs for D/B contract C0980 |
| January 2013 | Issued RFPs for D/Build contract C0980 |
| March 2013 | Completed Final Design - Advanced Utilities Relocation (AUR) |
| May 2013 | NTP for Construction Management Services contract MC070 |
| June 2013 | Beginning of AUR contract C0981R Bid Period |
| July 2013 | Submitted TIFIA loan application |
| July 2013 | Submitted first draft FFGA application to FTA for review |
| September 2013 | Received proposals for D/B Contract C0980 |

CHRONOLOGY OF EVENTS (Cont.)

| | |
|----------------|--|
| September 2013 | Submitted second draft FFGA application to FTA, incorporating FTA comments |
| October 2013 | Submitted Application to FTA Requesting an FFGA |
| November 2013 | Started Emergency Generator Replacement Tank at 2 nd Street and Historic Broadway Station (LA Times Building) |
| December 2013 | Issued "Notice of Intent to Award" letter to contract C0981R contractor Pulice Construction Inc. |
| January 2014 | Awarded AUR contract C0981R to Pulice Construction Inc. |
| February 2014 | Issued Notice to Proceed for AUR Contract C0981R |
| February 2014 | FTA issued Full Funding Grant Agreement to Metro |
| March 2014 | Issued Amendment # 11 for D/B Contract C0980 |
| March 2014 | Started Survey for AUR Contract C0981R |
| April 2014 | Metro Board approved the award of D/B Contract C0980 and established a LOP Budget |
| May 2014 | Awarded D/B Contract C0980 to Regional Connector Constructors, Joint Venture |
| June 2014 | Obtained possession of the Mangrove property form the City of Los Angeles |
| July 2014 | Issued Notice to Proceed for D/B contract C0980 |
| August 2014 | C0980 D/B Contractor (RCC) began Final Design |
| September 2014 | Metro performed the ground-breaking ceremony for C0980 D/B Contract |
| October 2014 | EN077 Contractor, Arcadis, removed the underground storage tank at LA Times Parking Lot |
| November 2014 | C0981R AUR Contractor completed DWP power work at 1 st St. and Alameda |
| December 2014 | Metro completed Field Vibration Testing for existing Expo and Gold Lines |
| January 2015 | Demolish Buildings at 1 st /Central Station |
| February 2015 | Metro approved the Baseline Schedule for C0980 D/B Contract |
| March 2015 | RCC started Historic Broadway Station Site Move-In |

CHRONOLOGY OF EVENTS (Cont.)

| | |
|----------------|---|
| April 2015 | Metro terminated C0981R Contract for convenience |
| May 2015 | RCC started pile installation at Mangrove Launch Pit |
| June 2015 | RCC started decking for shoofly bridge (Pile Cap & Grade Beam) |
| July 2015 | DWP Water started installing 36" Water Valve at Alameda St. |
| August 2015 | RCC completed DWP Power work at Flower & 5th Street |
| September 2015 | RCC started Phase 2 DWP Power Relocation work at Broadway (Behind K Rail). |
| October 2015 | RCC started pile installation at 1 st /Central Station |
| November 2015 | RCC completed Central Ave Full Closure (Pile & Decking) |
| December 2015 | Metro Board approved the increase (\$131.8M) of the Project LOP Budget to \$1,589.9 million. |
| January 2016 | RCC began implementation of Bus Bridge # 1 (Shoofly Tie-In Work at Little Tokyo). |
| February 2016 | RCC began implementation of full closure at 2 nd /Broadway intersection. |
| March 2016 | RCC completed Bus Bridge # 1 (Shoofly Tie-In at Little Tokyo) work. |
| March 2016 | Excavation of 1 st /Central Station was initiated. |
| April 2016 | TBM (Tunnel Boring Machine) was delivered to the temporary storage site. |
| May 2016 | Closed 1st Street between Alameda and Central Streets. Opened northbound 1 st East of Alameda Street. |
| June 2016 | RCC completed excavation at 1 st /Central Station Box |
| June 2016 | RCC began pile installation on west side of Flower Street between 4th and 5th Street |
| July 2016 | RCC initiated pile installation at Historic Broadway Station (West Hammer Head) |
| July 2016 | RCC Initiated CIP invert at 1 st /Central Station Box |
| August 2016 | RCC completed 36" waterline replacement at 1 st /Alameda |
| September 2016 | RCC completed temporary decking at 1 st /Alameda intersection (Wye) |

CHRONOLOGY OF EVENTS (Cont.)

| | |
|----------------|--|
| October 2016 | Metro performed TBM lowering ceremony |
| October 2016 | RCC completed CIP invert at 1 st /Central Station Box |
| November 2016 | RCC completed CIP invert at Mangrove Launch Pit and Wye |
| December 2016 | RCC completed Phase 1, 2 nd Street Decking in front of LA Times Bldg. |
| January 2017 | Metro Board approved a LOP Budget increase |
| February 2017 | RCC initiated TBM mining (1 st – Left) |
| March 2017 | RCC completed TBM mining under JVP (first 500 ft.) |
| March 2017 | RCC completed temporary decking on Flower St. (between 4th and 5th) |
| April 2017 | RCC completed sub-invert at TBM retrieval pit |
| April 2017 | RCC completed CIP invert at Grand Av Arts/Bunker Hill Station Box |
| May 2017 | RCC completed temporary decking at Historic Broadway Station |
| May 2017 | RCC completed water relocation work along Flower Street |
| June 2017 | RCC completed mining and broke through at Grand Av Arts/Bunker Hill Station |
| June 2017 | Five-month full closure of 6th Street approved by LADOT, Caltrans and LADWP |
| July 2017 | RCC completed TBM mining of the first tunnel |
| August 2017 | RCC extracted TBM shields from the Retrieval Shaft |
| September 2017 | RCC began TBM mining of the second tunnel (right) |

CONSTRUCTION CONTRACTS

| | |
|--|---|
| <p>Description: Design-Build Contract Contractor: Regional Connector Constructors</p> | <p>Contract No. C0980 Status as of: September 29, 2017</p> |
| <p>Work Completed:</p> <p>Design</p> <ul style="list-style-type: none"> • DU5 Civil Segment B 100% design package submitted • Sewer protection package at 4th Street prepared <p>Construction</p> <p>1st/Central/Tunneling</p> <ul style="list-style-type: none"> • Completed assembly and testing of the TBM • Began TBM mining for the second bore (right tunnel) <p>2nd/Hope</p> <ul style="list-style-type: none"> • Completed Concourse Level SOG • Initiated exterior CIP wall at track level <p>Flower</p> <ul style="list-style-type: none"> • Began decking on Flower Street (5th to 6th) | <p>Major Activities (In Progress):</p> <p>Design</p> <ul style="list-style-type: none"> • Coordination with Tribune for the overbuild structure • Preparation of SEM Resequencing AFC package • Preparation of DU2 WYE Fan Plant and Flower Cut & Cover AFC design submittal • Preparation of DU4 Civil Segment A AFC design submittal • Preparation of DU5 Civil Segment B AFC design submittal • Preparation of DU6 Pedestrian Bridge 30% design • Preparation of DU12 Communications AFC design submittal <p>Construction</p> <p>1st/Central/Tunneling</p> <ul style="list-style-type: none"> • Continue TBM mining <p>2nd/Broadway</p> <ul style="list-style-type: none"> • Complete Level 3 tiebacks • Continue Level 4 excavation • Complete storm drain (Hobas Pipe) bracing <p>2nd/Hope</p> <ul style="list-style-type: none"> • Continue Concourse Level invert • Continue exterior CIP wall <p>Flower</p> <ul style="list-style-type: none"> • Continue pile installation on Flower Street south (5th to 6th) • Continue excavation of Flower Street north (4th to 5th) • Continue temporary decking installation along Flower Street south (5th to 6th) • Continue utility relocations at 6th/Flower <p>Project-wide</p> <ul style="list-style-type: none"> • Geotechnical equipment installation and monitoring across the project alignment • Pre-con surveys (photograph existing conditions) at various locations, as needed • Underground investigation – potholing Hydrovac and exploratory trenching at various locations project wide • Preparation of submittals and traffic control plans, including weekly meetings with LADOT and City Council District 14 |

CONSTRUCTION CONTRACTS (Cont.)

| | | | | | | |
|---|--|---|-------------------------------|-------------------------|-------------------|---------------------|
| <p>Description: Design-Build Contract Contractor: Regional Connector Constructors</p> | <p>Contract No. C0980 Status as of: September 29, 2017</p> | | | | | |
| <p>Areas of Concern: TBM component failures and differing site conditions have resulted in delays to mining operations and the project schedule. Replacement of three screws drives on the TBM are complete. Actions to accelerate the second tunnel bore, through 24-hour mining operations, continue to mitigate experienced delays.</p> | <p>Upcoming Interim Milestones:</p> <p>Design</p> <ul style="list-style-type: none"> • DU2 WYE Fan Plant and Flower Cut & Cover AFC package to be approved • DU4 and DU5 Civil AFC package to be approved • DU12 Communications AFC package to be approved • DU12.1 Radio 100% package to be submitted <p>Construction</p> <p>1st/Central/Tunneling</p> <ul style="list-style-type: none"> • Complete TBM mining under JVP (first 500 ft.) <p>2nd/Broadway</p> <ul style="list-style-type: none"> • Complete excavation at Historic Broadway station • Initiate underpinning at Historic Broadway Station <p>2nd/Hope</p> <ul style="list-style-type: none"> • Complete Concourse Level invert • Complete exterior CIP wall <p>Flower</p> <ul style="list-style-type: none"> • Complete pile installation on Flower Street • Complete temporary decking installation on Flower Street • Complete excavation of Flower Street north • Complete DWP Power relocation at 6th/Flower <p>Project-wide</p> <ul style="list-style-type: none"> • Complete placement of geotechnical monitoring instrumentation along the alignment | | | | | |
| <p>Description: Design-Build Contract Contractor: Regional Connector Constructors</p> | <p>Contract No. C0980 Status as of: September 29, 2017</p> | | | | | |
| <p>Schedule Summary:</p> <p>Date of Award: 5/6/2014</p> <p>Notice to Proceed: 7/7/2014</p> <p>Original Contract Duration: 2430 CD</p> <p>Current Contract Duration: 2579 CD</p> <p>Elapsed Time from NTP: 1181 CD</p> | | <p>Original Contract Dates/Duration</p> | <p>Time Extension (CD)</p> | <p>Current Contract</p> | <p>Forecast</p> | <p>Variance CDs</p> |
| | <p>Notice to Proceed</p> | <p>07/07/14</p> | | <p>07/07/14</p> | | |
| | <p>Milestone 1:</p> | <p>10/22/20</p> | <p>150</p> | <p>03/21/21</p> | <p>02/28/22</p> | <p>-344</p> |
| | <p>Milestone 2:</p> | <p>06/14/20</p> | <p>To be deleted (Mod#74)</p> | | | |
| | <p>Milestone 5:</p> | <p>08/19/19</p> | <p>To be deleted (Mod#74)</p> | | | |
| | <p>Milestone 6:</p> | <p>09/18/19</p> | <p>To be deleted (Mod#74)</p> | | | |
| | <p>Milestone 7:</p> | <p>10/10/15</p> | <p>To be deleted (Mod#74)</p> | | | |
| | <p>Milestone 8:</p> | <p>8 Weekends</p> | <p>0</p> | <p>8 Weekends</p> | <p>8 Weekends</p> | <p>0</p> |
| | <p>Milestone 9A:</p> | <p>200 Days</p> | <p>To be deleted (Mod#74)</p> | | | |
| | <p>Milestone 9B:</p> | <p>100 Days</p> | <p>To be deleted (Mod#74)</p> | | | |
| | <p>Milestone 10:</p> | <p>115 Days</p> | <p>To be deleted (Mod#74)</p> | | | |
| | <p>Milestone 11:</p> | <p>15 Days</p> | <p>To be deleted (Mod#74)</p> | | | |
| | <p>Milestone 12:</p> | <p>03/01/21</p> | <p>149</p> | <p>07/28/21</p> | <p>04/29/22</p> | <p>-275</p> |
| | | | | | | |
| <p>Physical Percent Complete as of : 09/30/17</p> <p>Design 98.9%</p> <p>Construction 35.6%</p> <p>* Note: Physical completion assessment excludes mobilization, general mobilization and Provisional Sum.</p> | <p>Cost Summary: \$ In millions</p> <p>1. Award Value: 927.2</p> <p>2. Executed Modifications: 183.8</p> <p>3. Approved Change Orders: 8.7</p> <p>4. Current Contract Value (1+2+3): 1,119.8</p> <p>5. Incurred Cost: 543.7</p> | | | | | |

CONSTRUCTION PHOTOS



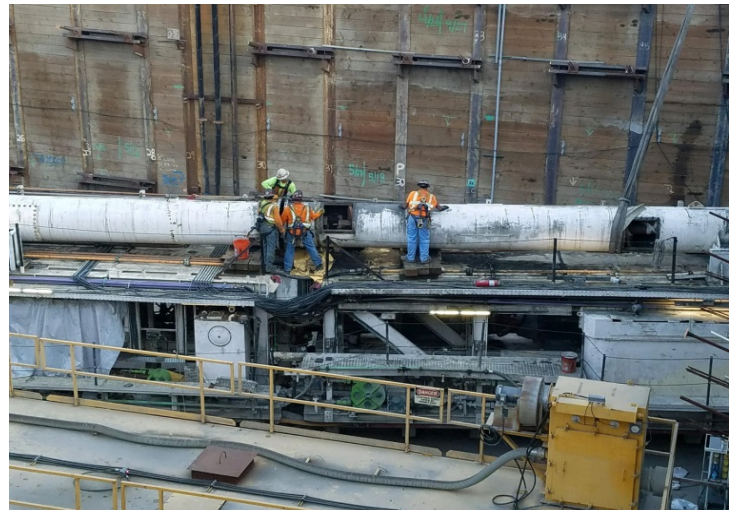
Welding TBM Shield in preparation for re-launch



Hobas rebar cage forming at Historic Broadway



Grouting tie-backs at Level 3 Wall F



TBM screw replacement installation



Installation of Vault 621 on Flower north of Wilshire



Excavation in preparation for deck beam installation

APPENDIX COST AND BUDGET TERMINOLOGY

Project Cost Descriptions

| | |
|------------------|--|
| ORIGINAL BUDGET | The Original Project Budget established upon Board approval of Life-of-Project (LOP) budget, plus Finance Costs. |
| CURRENT BUDGET | The Original Budget plus all approved budget amendments. Also referred to as Approved Budget. |
| COMMITMENTS | The total of actual contracts awarded, executed change orders or amendments, approved work orders of Master Cooperative Agreements, 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 invoices, third party invoices, 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 VEHICLES | Includes purchase cost of parcels, easements, right-of-entry permits, escrow fees, contracted real estate appraisals and tenant relocation. Includes the purchase of LRT 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 receivable to the Metro as a direct result of project activities. This includes cost sharing construction items, insurance premium rebates, and the like. |

**APPENDIX
LIST OF ABBREVIATIONS AND ACRONYMS**

| | |
|----------|---|
| AFC | Approved for Construction |
| APE | Advanced Preliminary Engineering |
| ATC | Automatic Train Control |
| ATSAC | Automated Traffic Surveillance and Control |
| AUR | Advanced Utility Relocation |
| BAFO | Best and Final Offer |
| BIM | Building Information Modeling |
| CADD | Computer Aided Drafting and Design |
| CALTRANS | California Department of Transportation |
| CAR | Corrective Action Request |
| CCTV | Closed Circuit Television |
| CD | Calendar Day |
| CEQA | California Environmental Quality Act |
| CM | Construction Manager |
| CMAQ | Congestion Mitigation and Air Quality Improvement Program |
| CN | Change Notice |
| CO | Change Order |
| COLA | City of Los Angeles |
| CPM | Critical Path Method |
| CPUC | California Public Utilities Commission |
| CQWP | Construction Quality Work Plan |
| CR | Camera Ready |
| CSPP | Construction Safety Phasing Plan |
| CTC | California Transportation Commission |
| CUD | Contract Unit Description |
| DB | Design Build |
| DBB | Design Bid Build |
| DDR | Design Deviation Request |
| DOT | Department of Transportation |
| DWP | Department of Water and Power |
| ECI | Engineering Change Instruction |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| EPB TBM | Earth Pressure Balance Tunnel Boring Machine |
| FAR | Federal Acquisition Regulation |
| FD | Final Design |
| FEIS | Final Environmental Impact Statement |
| FEIR | Final Environmental Impact Report |
| FFGA | Full Funding Grant Agreement |
| 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 |

APPENDIX

LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)

| | |
|-----------|--|
| FTA | Federal Transit Administration |
| FTE | Full Time Equivalent |
| GBN | Ground Borne Noise |
| GBR | Geotechnical Baseline Report |
| GDSR | Geotechnical Design Summary Report |
| HABS/HAER | Historical American Building Survey / Historical American Engineering Record |
| 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 |
| LAFD | Los Angeles Fire Department |
| LAPD | Los Angeles Police Department |
| LNTP | Limited Notice to Proceed |
| LONP | Letter of No Prejudice |
| LOP | Life-of-Project |
| LPA | Locally Preferred Alternative |
| LRT | Light Rail Transit |
| LRTP | Long Range Transportation Plan |
| LRV | Light Rail Vehicle |
| MCA | Master Cooperative Agreement |
| MIS | Major Investment Study |
| MMRP | Mitigation Monitoring and Reporting Program |
| MOU | Memorandum of Understanding |
| MPSR | Monthly Project Status Report |
| N/A | Not Applicable |
| NCR | Non-conformance Report |
| NEPA | National Environmental Protection Act |
| NOD | Notice of Determination |
| NPDES | National Pollution Discharge Elimination System |
| NTE | Not to Exceed |
| NTP | Notice to Proceed |
| OCC | Operations Control Center |
| OCR | Overhead Conductor Rail |
| OCS | Overhead Catenary System |
| OSHA | Occupational Health and Safety Administration |
| PA/VMS | Public Address/Visual Messaging Sign |

APPENDIX

LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)

| | |
|--------|--|
| PCTL | Precast Concrete Tunnel Lining |
| PE | Preliminary Engineering |
| PEER | Permit Engineering Evaluation Report |
| PIP | Project Implementation Plan |
| PLA | Project Labor Agreement |
| PM | Project Manager |
| PMOC | Project Management Oversight Consultant |
| PMP | Project Management Plan |
| PR | Project Report |
| PSR | Project Study Report |
| QA | Quality Assurance |
| QAR | Quality Assurance Report |
| QC | Quality Control |
| QPSR | Quarterly Project Status Report |
| RAMP | Real Estate Acquisition Management Plan |
| RCC | Regional Connector Contractors |
| RCMP | Risk and Contingency Management Plan |
| RFC | Request for Change |
| RFP | Request for Proposals |
| RHA | Risk Hazard Analysis |
| ROC | Rail Operations Center |
| ROD | Record of Decision |
| ROM | Rough Order of Magnitude |
| RON | Resolution of Necessity |
| ROW | Right-Of-Way |
| RSD | Revenue Service Date |
| SCAQMD | Southern California Air Quality Management District |
| SCADA | Supervisory Control and Data Acquisition |
| SCC | Standard Cost Category |
| SCG | Southern California Gas Company |
| SEIS | Supplemental Environmental Impact Statement |
| SHPO | State Historic Preservation Office |
| SIT | System Integration Testing |
| SOE | Support of Excavation |
| SOQ | Statement of Qualification |
| SOV | Schedule of Values |
| SOW | Statement of Work |
| SP | Special Provision |
| SSMP | Safety and Security Management Plan |
| TBD | To Be Determined |
| TBM | Tunnel Boring Machine |
| TCC | Train Control Center |
| TCE | Temporary Construction Easement |
| TCP | Traffic Control Plan |
| TIFIA | Transportation Infrastructure Finance and Innovation Act |

APPENDIX

LIST OF ABBREVIATIONS AND ACRONYMS (Cont.)

| | |
|-------|--|
| TIGER | Transportation Investment Generating Economic Recovery |
| TPSS | Traction Power Substation |
| TVA | Threat Vulnerability Analysis |
| TVM | Ticket Vending Machine |
| UFS | Universal Fare System |
| UST | Underground Storage Tank |
| USDOT | United States Department of Transportation |
| VE | Value Engineering |
| WATCH | Work Area Traffic Control Handbook |
| WBS | Work Breakdown Structure |
| WP | Work Package |
| WTCP | Worksite Traffic Control Plan |
| YOE | Year of Expenditure |