

# Westside Purple Line Extension Section 1 Project



**Metro**

# **WESTSIDE PURPLE LINE EXTENSION SECTION 1 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).

**OCTOBER 2016**

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# Westside Purple Line Extension Section 1 Project Monthly Project Status Report

October 2016

## PROJECT SUMMARY

|   |                |  |                  |
|---|----------------|--|------------------|
| <b>LOCATION:</b> Los Angeles / Beverly Hills<br><b>DESIGN CONSULTANT:</b> Parsons / Brinckerhoff  |                | <b>CONSTRUCTION MANAGEMENT CONSULTANT:</b> WEST, a Joint Venture<br><b>CONTRACTOR:</b> Skanska, Traylor and Shea, a Joint Venture  |                  |
| <b>Wilshire/La Brea Tie-Back Installation North Shaft</b>   |                | <b>WORK COMPLETED PAST MONTH</b>   |                  |
|    |                | <ul style="list-style-type: none"> <li>- C1045 Wilshire/La Brea Station excavation continues</li> <li>- C1045 Tunnel jet grouting at cross passage 9, started cross passage 10</li> <li>- C1045 Wilshire/La Brea tie-back installation continues</li> <li>- C1045 Wilshire/La Brea water treatment system installation underway</li> <li>- C1045 Wilshire/Fairfax Station north side pile installation continues</li> <li>- C1045 Wilshire/Fairfax Station Ogden yard work continues</li> <li>- C1045 Wilshire/La Brea Geotech Instrumentation - complete installation east of La Brea</li> <li>- C1045 Wilshire/La Brea install dewatering discharge line at south muck shaft</li> <li>- C1045 Wilshire/Fairfax Station Stage 1 inclinometers</li> <li>- C1045 Wilshire/La Cienega SCE to begin cable pulling and splicing work at Wilshire/La Cienega</li> <li>- C1045 DU 6 Systems – 100% design submittal</li> </ul> |                  |
| <b>EXPENDITURE STATUS</b><br>(\$ In Millions)   |                | <b>SCHEDULE ASSESSMENT</b>   |                  |
| ACTIVITIES  | CURRENT BUDGET | EXPENDED AMOUNT  | PERCENT EXPENDED |
| DESIGN  | \$159.2        | \$137.0  | 86.0%            |
| RIGHT-OF-WAY  | \$175.6        | \$158.8  | 90.4%            |
| CONSTRUCTION  | \$1,740.3      | \$459.5  | 26.4%            |
| OTHER   | \$1,079.3      | \$118.6  | 11.0%            |
| TOTAL   | \$3,154.4      | \$873.9  | 27.7%            |
| Current Budget includes Environmental/Planning and Finance Costs.   |                | <b>Environmental</b><br>FEIS / FEIR      N/A      05/31/12      Complete   |                  |
|   |                | <b>Design</b><br>PE Notice to Proceed      N/A      01/12/11      Complete<br>Final Design complete      03/22/17      03/22/17      0   |                  |
|   |                | <b>Right-of-Way</b><br>All parcels available*      12/31/15      12/31/15      0   |                  |
| <b>AREAS OF CONCERN</b>   |                | <b>Construction - Main Design / Build Contract</b><br>Notice to Proceed      01/12/15      01/12/15      Complete<br>Construction complete      11/08/23      11/08/23      0  |                  |
|   |                | * Parcels related to main D/B Contract C1045   |                  |
| ROW ACQUISITION   | PLAN           | AVAILABLE  | REMAINING        |
| PERMANENT PARCELS   | 15             | 14   | 1                |
| TEMPORARY PARCELS   | 4              | 4  | 0                |
| TOTAL PARCELS   | 19             | 18   | 1                |
| <b>CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD</b>   |                |  |                  |
| <ul style="list-style-type: none"> <li>- C1045 DU 2 Wilshire/La Brea Station – AFC complete</li> <li>- C1045 DU 5 Tunnels – AFC complete</li> <li>- C1045 DU 3 Wilshire/Fairfax AFC Complete</li> <li>- C1045 Wilshire/La Brea Station excavation continues</li> <li>- C1045 Wilshire/Fairfax pile installation continues</li> <li>- C1045 Wilshire/Fairfax pile installation switch to south side of Wilshire Blvd.</li> <li>- C1078 Complete site utilities and building foundation 100% design</li> <li>- C1045 Wilshire/Fairfax LADWP Power to complete relocations at Wilshire/Fairfax Station</li> <li>- C1045 Wilshire/La Brea underdeck utility hanging completes</li> <li>- C1045 Wilshire/La Cienega demolition of buildings at staging areas complete</li> <li>- LADWP Power relocations to complete at Wilshire/Fairfax</li> <li>- AT&amp;T Relocations to complete at Wilshire/La Cienega</li> </ul> |                |  |                  |

## **PROJECT OVERVIEW & STATUS**

*Section 1 of the Westside Purple Line Extension Project is the first 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 1 will extend the existing Purple Line by 3.92 miles beginning at the Wilshire/Western Station. From this station, the twin tunnel alignment will travel westerly within the existing Wilshire Boulevard right-of-way. Stations will be located at the intersections of Wilshire/La Brea, Wilshire/Fairfax, and Wilshire/La Cienega. All three of the station boxes will be located within the Wilshire Boulevard right-of-way with station portals extending to off-street entrances. Two of the stations, Wilshire/La Brea and Wilshire/Fairfax are within the jurisdiction of the City of Los Angeles. The Wilshire/La Cienega Station is within the City of Beverly Hills jurisdiction.*

### **Design**

The Engineering Management Services (EMS) team continues to provide design support to the Wilshire/La Cienega Advanced Utility Relocations (AUR) contract, the Design/Build Contract, and the Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building 61S Contract.

For the Wilshire/La Cienega Station AUR Contract (C1056), the contractor achieved substantial completion on August 5, 2016. *Final red line drawings were received and were approved by the construction management support services consultant. The production of the as-built record drawings has begun.*

For the Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building 61S Contract (C1078), support to Metro continues with responding to RFI's and submittals and design updates. *Participated in comment resolution meeting with the contractor on the design units for Building 61S, the parts storage building and systems/communication.*

The team continues to attend design task force meetings with Metro and the C1045 Contractor for Tunnels, Stations, Trackwork, Systems and Systems Integration Testing in preparation for the design development and reviews. Support continues in the review of final design submittals, responding to RFI's, and assisting in preparation of change notices.

The C1045 Contractor, Skanska, Traylor and Shea (STS), and their final design team, Parsons Transportation Group (PTG), have identified the design work into six distinct design units. They are:

1. Design Unit 1 – Wilshire/Western Interface Chamber (Shaft)
2. Design Unit 2 – Wilshire/La Brea Station
3. Design Unit 3 – Wilshire/Fairfax Station
4. Design Unit 4 – Wilshire/La Cienega Station
5. Design Unit 5 – Tunnels
6. Design Unit 6 – Systems/Traffic/Trackwork

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 activities are well underway with the involvement of every discipline and design task force meetings are occurring weekly related to each design unit.

“Over-the-shoulder” design reviews and design comment resolution meetings are occurring with STS, PTG, Metro and the EMS team prior to each major design submittal. Monthly Metro Fire/Life/Safety meetings are occurring.

The status of the design submittals are as follows:

| <b>Design Unit</b> | <b>Percentage</b> | <b>Submittal Date</b> |
|--------------------|-------------------|-----------------------|
| DU# 1 - Western    | AFC               | 10/27/2016            |
| DU# 2 - La Brea    | AFC               | 12/5/2016             |
| DU# 3 - Fairfax    | AFC               | 12/29/2016            |
| DU# 4 - La Cienega | AFC               | 3/31/2017             |
| DU# 5 - Tunnels    | AFC               | 11/2/2016             |
| DU# 6 - Systems    | AFC               | 2/8/2017              |

*The design unit under review this period was the 100% Systems design. Over-the-shoulder reviews continued for the APDU's on water and gas-proofing.*

*The Fire/Life Safety Security Committee approved this period the station ventilation reports for the Wilshire/La Brea and Wilshire/Fairfax Stations.*

STS is continuing with the required contractual submittals.

**Major Contract Procurement**

All contracts for the Project have been awarded.

**Construction**

*Follow-on work in the Wilshire/Fairfax Station area by LADWP Power is anticipated to complete in November 2016. This will complete all AUR work at this location, prior to giving full access to the C1045 Design/Build contractor to construct the Wilshire/Fairfax Station.*

On August 5, 2016, the C1056 contractor achieved substantial completion prior to the contractual substantial completion date of December 8, 2016. *Remaining punch list items are anticipated to complete in November 2016.* AT&T work within the same location is scheduled to complete in December 2016.

Southern California Edison crews began the cable pulling and splicing work at Wilshire/La Cienega Station on August 4, 2016 and are anticipating completing in November 2016.

The C1045 contractor began pile installation for the Wilshire/La Brea Station in mid-December 2015. The contractor had focused his efforts on the north side of the station, before making the traffic control switch to begin pile installation on the south side of Wilshire Boulevard. The traffic control switch to the south side occurred on the weekend of April 15, 2016 and pile installation began on May 4, 2016. The installation of the remaining two piles at this station location was completed on August 28, 2016.

Weekend closures began on June 10, 2016 for the installation of deck beams and concrete deck panels for the Wilshire/La Brea Station. *This work was completed on October 17, 2016, six weeks ahead of schedule. Station excavation began on October 12, 2016.* The hanging and supporting of utilities under the concrete deck panels are well underway.

Traffic reconfiguration work began in early July 2016 at the Wilshire/Fairfax Station site in preparation of station pile installation. Pile installation began on the north side of Wilshire Boulevard on August 24, 2016. *The traffic control switch to the south side of Wilshire Boulevard is scheduled to occur on November 19, 2016 to support the start of pile operations on the south side in early December 2016.*

*Building demolition at the Wilshire/La Cienega Station site is well underway.*

The contractor has completed the construction of the Tunnel Boring Machine (TBM) power substation. The substation has been energized by LADWP Power. The manufacturing of the two TBMs by Herrenknecht Tunneling Systems USA, Inc. is underway. Delivery is expected in late 2017 to support the start of tunneling in early 2018.

The Beverly Hills City Council staff is reviewing the Memorandum of Agreement for the construction of the Wilshire/La Cienega Station. *Approvals by the Beverly Hills City Council and the MTA Board are expected in the first quarter of 2016.*

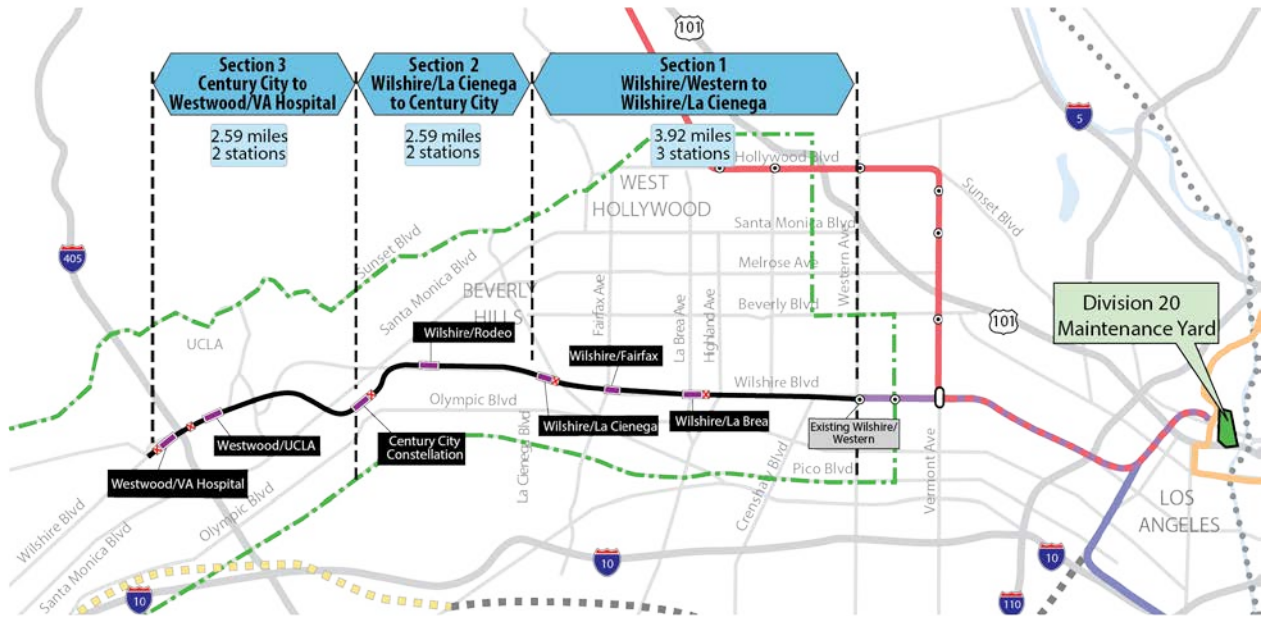
The C1045 contractor has access to all properties to construct the Project.



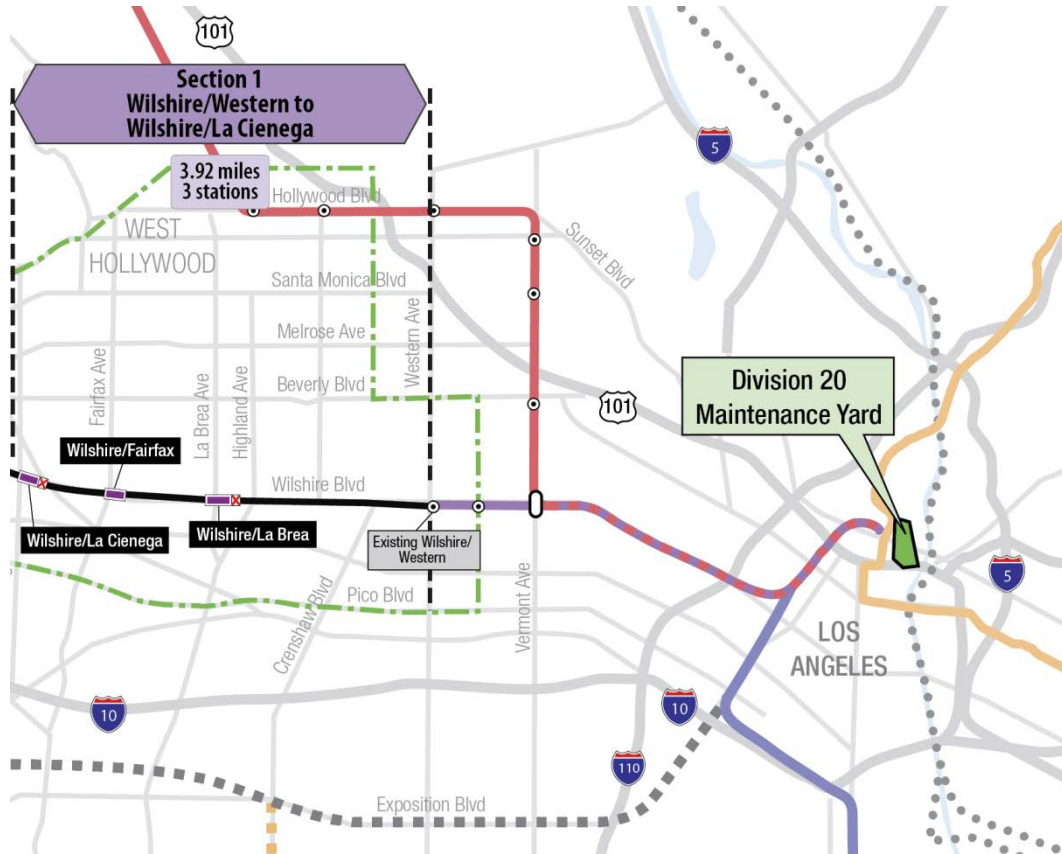
**MANAGEMENT ISSUES**

No Management Issues this period.

## PROJECT ALIGNMENT by SECTIONS



### PROJECT ALIGNMENT SECTION 1



## **BASE PROJECT SCOPE**

Section 1 of the Westside Purple Line Extension Project is the first 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 1 will extend the existing Purple Line by 3.92 miles beginning at the Wilshire/Western Station. From this station, the twin tunnel alignment will travel westerly within the existing Wilshire Boulevard right-of-way. Stations will be located at the intersections of Wilshire/La Brea, Wilshire/Fairfax, and Wilshire/La Cienega. All three of the station boxes will be located within the Wilshire Boulevard right-of-way with station portals extending to off-street entrances. Two of the stations, Wilshire/La Brea and Wilshire/Fairfax are within the jurisdiction of the City of Los Angeles. The Wilshire/La Cienega Station is within the City of Beverly Hills jurisdiction.

The Wilshire/La Brea Station box will be located under the center of Wilshire Boulevard in between Detroit Street and Orange Drive. A double crossover will be located east of the station box. The station entrance will be on the northwest corner of Wilshire Boulevard and La Brea Avenue.

The Wilshire/Fairfax Station box will be located under the center of Wilshire Boulevard west of Fairfax Avenue to west of Ogden Drive. The station entrance will be on the southeast corner of Wilshire Boulevard and Orange Grove Avenue.

The Wilshire/La Cienega Station box will be located under the center of Wilshire Boulevard immediately east of La Cienega Boulevard. A double crossover will be located east of the station box. The station entrance will be on the northeast corner of Wilshire Boulevard and La Cienega Boulevard. Since the station will be the terminus station for Section 1, tail tracks will be located west of the station box.

### **Contract C1034 – Wilshire/Fairfax Exploratory Shaft**

Metro constructed an exploratory shaft to observe ground conditions prior to the award of Contract C1045. The location of the exploratory shaft was adjacent to the future Wilshire/Fairfax Station. The construction of the shaft included furnishing and installing monitoring instruments, ventilation, and record and report instrumentation data during the excavation of the shaft. After construction of the shaft, the shaft was maintained for an observation time period. Afterwards, the shaft was dismantled and the site backfilled in a condition acceptable to the property owner. The contract was substantially completed on October 31, 2014.

### **Contract C1048 – Wilshire/La Brea Advanced Utility Relocations**

The work scope of this contract included the relocation of existing LADWP power, water utilities and a sewer line within the construction limits of the Wilshire/La Brea Station. The contractor was responsible for working in streets, procuring materials, and coordinating with the utility owner. The contractor constructed the new facilities in accordance with the utility plans and specifications, provided traffic control, restored streets, and supported utility crews installing cabling and during cut-over of the existing utilities. The contract was substantially completed on October 27, 2014.

**Contract C1055 – Wilshire/Fairfax Advanced Utility Relocations**

The work scope of this contract included the relocation of existing LADWP power and water utilities within the construction limits of the Wilshire/Fairfax Station. The contractor was responsible for working in streets, procuring materials, and coordinating with the utility owner. The contractor constructed the new facilities in accordance with utility plans and specifications, provided traffic control, restored streets, and supported utility crews installing cabling and during cut-over of the existing utilities. The contract was substantially completed on October 7, 2015.

**Contract C1056 – Wilshire/La Cienega Advanced Utility Relocations**

The work scope of this contract included the relocation of existing City of Beverly Hills water, storm drain and sewer utilities within the construction limits of the Wilshire/La Cienega Station. The contractor was responsible for working in streets, procuring materials, and coordinating with the utility owner. The contractor constructed the new facilities in accordance with utility plans and specifications, provided traffic control, restored streets, and supported utility crews during cut-over of the existing utilities. The contract was substantially completed on August 5, 2016.

**Contract C1045 – Tunnels, Stations, Trackwork, Systems and Systems Integration Testing**

The procurement of this contract utilizes 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 3.92 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 finish work. A retrieval shaft will be constructed to the west of the existing Wilshire/Western Station for extraction of the tunnel boring machines. Three underground stations are to be constructed, two with double-crossovers, and the terminus station to include tail tracks. Each station has a single entrance plaza with stairs, escalators and elevators which meet ADA requirements. The scope of work includes all architectural finishes, mechanical, electrical, systems and equipment including train control, traction power, communications, trackwork and the system tie-in to the existing Metro Purple Line, testing and commissioning.

**Contract C1078 – Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building 61S**

The Design/Build contract provides for final design and construction of a new Maintenance-Of-Way (MOW) stores and Non-Revenue Vehicle (NRV) building at the south end of the existing Division 20 Yard (Location 61S). The displacement of the existing MOW stores building and NRV facility are due to the proposed turn-back facility site in the yard.

## **BASE PROJECT SCOPE (Continued)**

### **Metro Furnished Equipment**

Metro will procure separate contracts to provide the 34 Heavy Rail Vehicles (HRV) and the Universal Fare System (UFS) necessary to operate the extension to the Purple Line. The scope of the HRV contract includes design, manufacturing, testing and delivery of the vehicles. The scope of the UFS contract includes design, fabrication and installation of equipment at the three 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; as well as abnormal and emergency scenarios in which random combinations of system interactions are tested; equipment “burned-in”; and training of Metro personnel who will eventually operate and maintain the extension and for emergency services personnel. 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 | Nov-16                   | Dec-16                   | Jan-17                   | Feb-17                   | Mar-17 | Apr-17                   |
|---|----------------|--------------------------|--------------------------|--------------------------|--------------------------|--------|--------------------------|
| C1045 DU #5 Tunnels AFC Submittal   | 11/02/16       | <input type="checkbox"/> |                          |                          |                          |        |                          |
| C1045 Wilshire/La Brea North Muck Shaft Whalers                                 | 11/07/16       | <input type="checkbox"/> |                          |                          |                          |        |                          |
| C1045 Wilshire/Fairfax Station Traffic Control South Side for Pile Installation | 11/19/16       | <input type="checkbox"/> |                          |                          |                          |        |                          |
| C1045 Wilshire/Fairfax Station South Side Pile Installation Begins              | 12/05/16       |                          | <input type="checkbox"/> |                          |                          |        |                          |
| C1045 DU #2 Wilshire/La Brea Station AFC Submittal                              | 12/05/16       |                          | <input type="checkbox"/> |                          |                          |        |                          |
| C1045 Wilshire/La Brea Station Dewatering Begins                                | 12/15/16       |                          | <input type="checkbox"/> |                          |                          |        |                          |
| C1045 DU #3 Wilshire/Fairfax Station AFC Submittal                              | 12/29/16       |                          | <input type="checkbox"/> |                          |                          |        |                          |
| C1045 Wilshire/Fairfax Decking Begins   | 01/06/17       |                          |                          | <input type="checkbox"/> |                          |        |                          |
| C1045 Wilshire/La Cienega Substation Installation Begins                        | 02/05/17       |                          |                          |                          | <input type="checkbox"/> |        |                          |
| C1045 Wilshire/La Cienega SOE Pile Installation Begins                          | 02/22/17       |                          |                          |                          | <input type="checkbox"/> |        |                          |
| C1045 Wilshire/Fairfax Excavation Begins  | 04/03/17       |                          |                          |                          |                          |        | <input type="checkbox"/> |
| C1045 Final Design Completes  | 04/10/17       |                          |                          |                          |                          |        | <input type="checkbox"/> |

◆ MTA Staff



MTA Board Action

FTA (Federal Transit Administration)

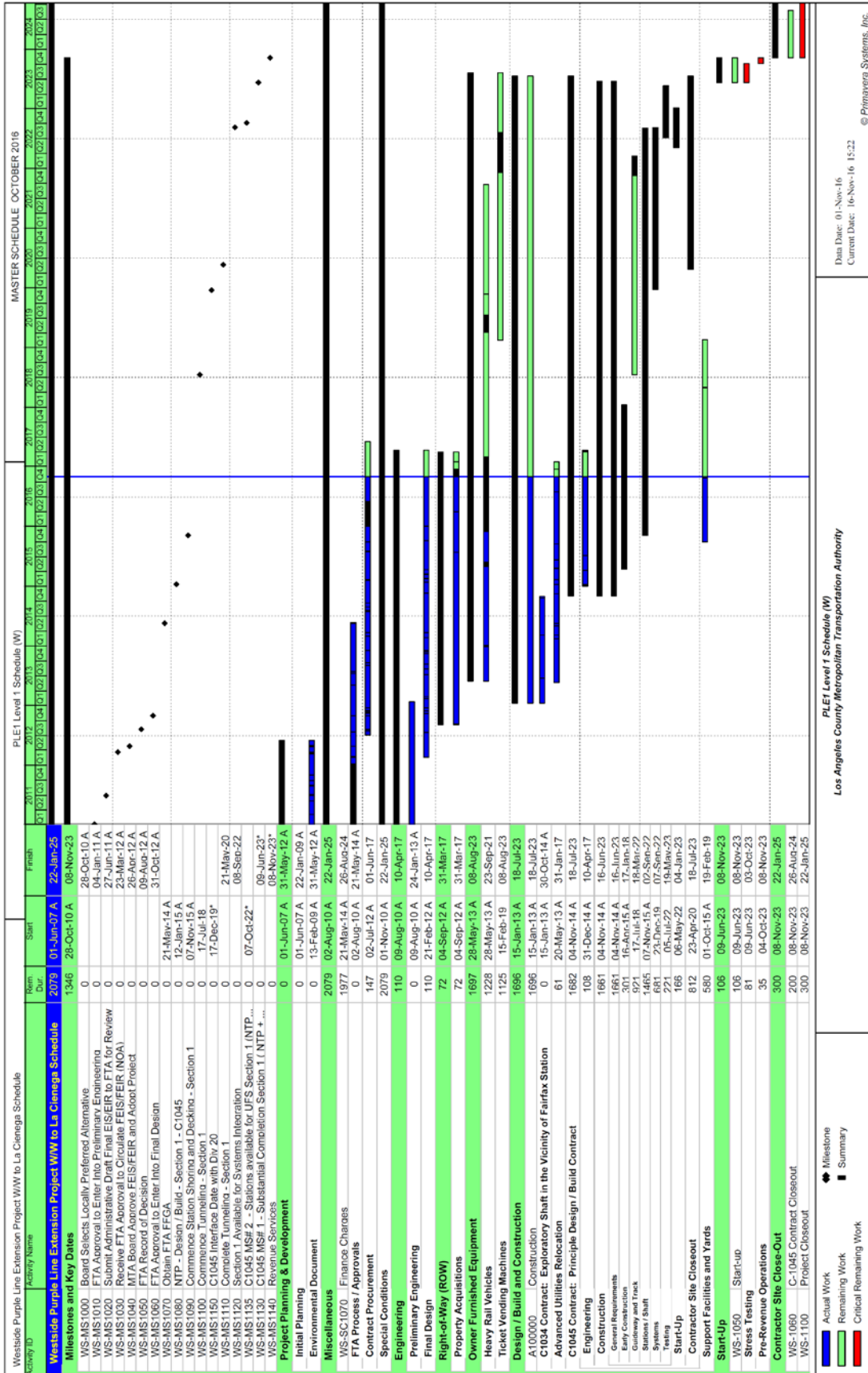


Other Agencies



Contractors

PROJECT SUMMARY SCHEDULE



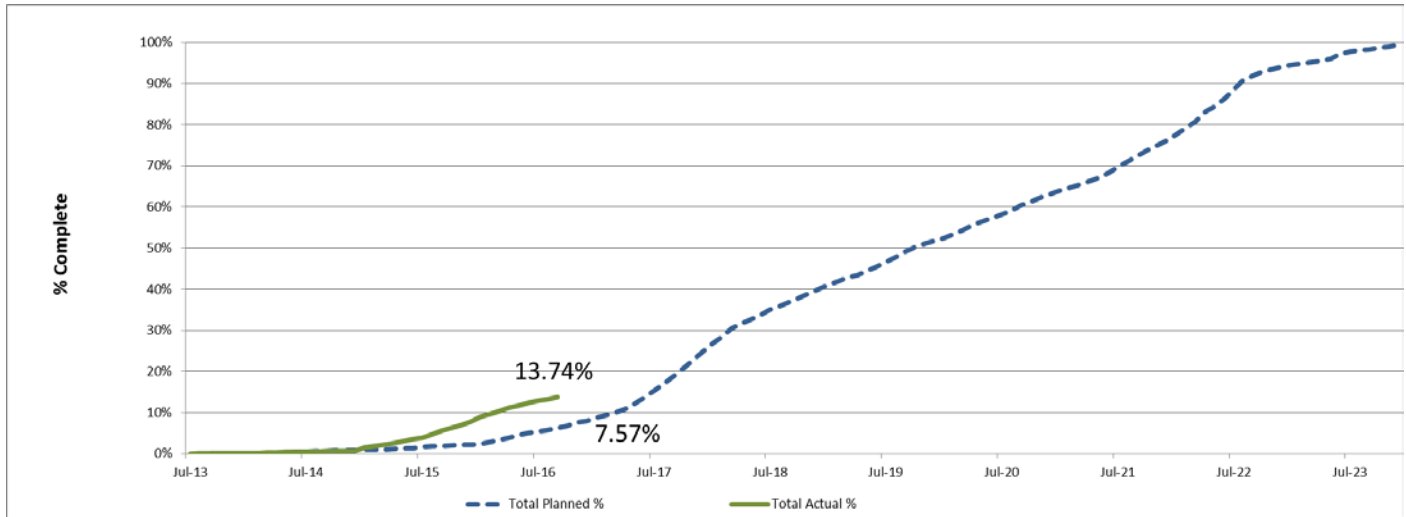


**SCHEDULE MEASUREMENTS**

|  | Status     | Change from Last Period | Comment  |
|--|------------|-------------------------|--|
| Forecast Revenue Service                 | 11/8/2023  | None                    |  |
| FFGA Revenue Service                     | 10/31/2024 | None                    |  |
| <b>Final Design Progress:</b>            |            |                         |  |
| Contract C1045                           | 91.72%     | 1.46%                   |  |
| Contract C1078                           | 44.34%     | 9.20%                   | CO-00003 – 30% to IFC pending negotiations and execution   |
| <b>Construction Contracts Progress*:</b> |            |                         |  |
| Contract C1048                           | 100.00%    | 0.00%                   | Completed on schedule  |
| Contract C1045                           | 11.27%     | 0.42%                   |  |
| Contract C1055                           | 100.00%    | 0.00%                   | Completed on schedule  |
| Contract C1056                           | 82.86%     | 0.00%                   | Substantial completion was achieved on August 5, 2016, four months prior to the contractual date of December 8, 2016. Contract closeout is underway. |
| Contract C1078                           | 9.50%      | 1.14%                   |  |

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

### OVERALL CONSTRUCTION PROGRESS CURVE



*The actual overall construction progress is 13.74% versus a planned of 7.57% through October 2016. The progress curves represent a composite percentage for the physical progress of work performed to complete the Project’s construction contracts, including the major Design-Build (C1045), the three Advanced Utility Relocations (C1048, C1055 & C1056), and the Division 20 MOW & NRV Building 61S (C1078).*

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**

|                                       | <b>Initial Procurement</b> | <b>Submittal</b> | <b>Delivery</b> | <b>Installation</b> |
|---------------------------------------|----------------------------|------------------|-----------------|---------------------|
| <b>Tunnel Boring Machine</b>          | 1/29/16                    | 5/30/16          | 7/29/17         | 4/19/18             |
| Deliver to Site - Station HVAC System | 8/13/18                    | 1/21/19          | 4/21/19         | 6/18/20             |
| Deliver to Site - Ventilation Fans    | 2/16/18                    | 3/17/19          | 6/15/19         | 8/3/20              |
| Deliver to Site - Elevators           | 8/2/18                     | 10/1/18          | 8/3/19          | 7/17/20             |
| Deliver to Site - Escalators          | 11/30/18                   | 1/29/19          | 10/1/19         | 4/19/21             |
|                                       |                            |                  |                 |                     |
| <b>Heavy Rail Vehicles</b>            | 7/16/15                    | 3/1/19           | 8/1/21          | 1/1/22              |
|                                       |                            |                  |                 |                     |
| <b>Ticket Vending Machines</b>        | 2/15/19                    | 10/8/21          | 9/8/21          | 9/8/22              |
|                                       |                            |                  |                 |                     |

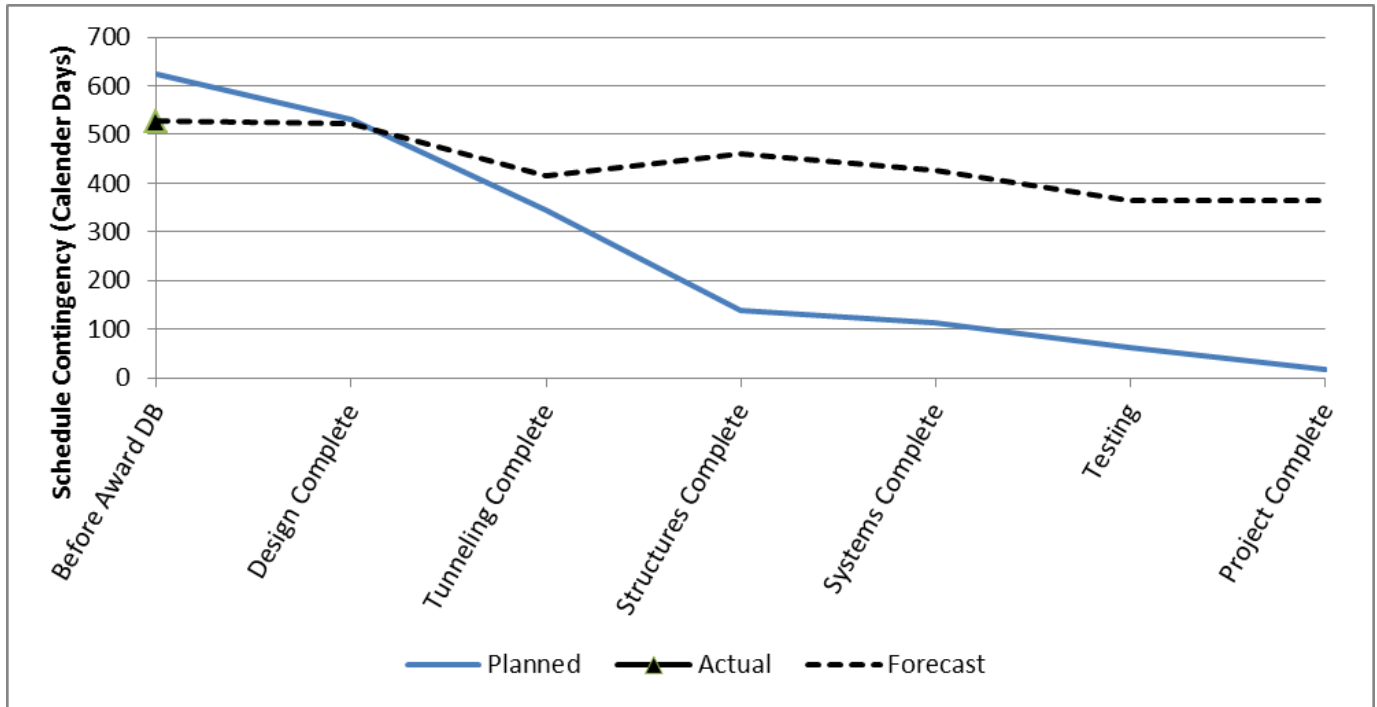
**DESIGN BUILDER'S (C1045) LONG LEAD ITEM LIST**

| Item   | Initial Procurement | Approved Submittal | Delivery  | Installation Date |
|--|---------------------|--------------------|-----------|-------------------|
| Procure / Deliver Fiber Optic Cable  | 2-Sep-16            | 21-Aug-16          | 19-Nov-16 | 8-Oct-20          |
| Procure / Deliver Innerduct  | 2-Sep-16            | 21-Aug-16          | 19-Nov-16 | 5-Aug-20          |
| Procure / Deliver Radio Cable  | 21-Aug-16           | 11-Aug-16          | 9-Nov-16  | 15-Sep-20         |
| SCADA: Procure / Deliver Devices   | 21-Aug-16           | 6-Aug-16           | 4-Nov-16  | 21-May-21         |
| Procure / Deliver SCADA Cable  | 21-Aug-16           | 6-Aug-16           | 4-Nov-16  | 5-Aug-20          |
| Procure / Deliver TPS Bonding Cable  | 23-Mar-17           | 19-Apr-17          | 18-Jul-17 | 8-Oct-21          |
| Procure / Deliver Traction Power Cable   | 23-Mar-17           | 19-Apr-17          | 18-Jul-17 | 2-Sep-20          |
| TPS: Procure/Deliver BLS Equipment & Devices                                   | 23-Mar-17           | 19-Apr-17          | 18-Jul-17 | 26-Aug-20         |
| Mfgr/Assemble/Wire DC Rectifier/Transformer - La Cienega TPSS                  | 27-Jun-17           | 19-Jul-17          | 17-Oct-17 | 2-Feb-22          |
| Mfgr/Assemble/Wire HV Metering Switchgear - La Cienega TPSS                    | 27-Jun-17           | 19-Jul-17          | 17-Oct-17 | 2-Feb-22          |
| Mfgr/Assemble/Wire DC Switches - Fairfax GBS                                   | 18-Oct-17           | 10-Nov-17          | 8-Feb-18  | 30-Jul-21         |
| Mfgr/Assemble/Wire HV Metering Switchgear - Fairfax GBS                        | 18-Oct-17           | 10-Nov-17          | 8-Feb-18  | 30-Jul-21         |
| Mfgr/Assemble/Wire DC Rectifier/Transformer - La Brea TPSS                     | 17-Oct-17           | 16-Nov-17          | 14-Feb-18 | 18-Nov-20         |
| Mfgr/Assemble/Wire HV Metering Switchgear - La Brea TPSS                       | 12-Feb-18           | 14-Mar-18          | 12-Jun-18 | 18-Nov-20         |
| CCTV: Assemble/Rack & Stack/Factory Test COM Equipment for Western             | 26-Jan-17           | 10-Nov-16          | 8-Feb-17  | 2-Mar-22          |
| CCTV: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea             | 26-Jan-17           | 1-Mar-17           | 30-May-17 | 22-Feb-22         |
| CCTV: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax             | 17-May-17           | 29-Jun-17          | 27-Sep-17 | 8-Oct-21          |
| CCTV: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega          | 28-Sep-17           | 28-Oct-17          | 26-Jan-18 | 26-Feb-22         |
| CTS: Assemble/Rack & Stack/Factory Test COM Equipment for Western              | 14-Jul-16           | 13-Aug-16          | 11-Nov-16 | 12-Mar-22         |
| CTS: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea              | 12-Nov-16           | 11-Dec-16          | 11-Mar-17 | 23-Sep-21         |
| CTS: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax              | 14-Mar-17           | 15-Apr-17          | 14-Jul-17 | 10-Jul-21         |
| CTS: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega           | 15-Jul-17           | 16-Aug-17          | 14-Nov-17 | 15-Dec-21         |
| EMER MGMT: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea        | 21-Oct-16           | 20-Nov-16          | 18-Feb-17 | 6-Jul-22          |
| EMER MGMT: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax        | 21-Feb-17           | 25-Mar-17          | 23-Jun-17 | 25-Feb-22         |
| EMER MGMT: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega     | 24-Jan-17           | 23-Jul-17          | 21-Oct-17 | 1-Jun-22          |
| FIRE ALARM: Assemble/Rack & Stack/Factory Test COM Equipment for Western       | 14-Jul-16           | 13-Aug-16          | 11-Nov-16 | 21-Mar-22         |
| FIRE ALARM: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea       | 12-Nov-16           | 11-Dec-16          | 11-Mar-17 | 20-Jan-22         |
| FIRE ALARM: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax       | 14-Mar-17           | 15-Apr-17          | 14-Jul-17 | 4-Sep-21          |
| FIRE ALARM: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega    | 15-Jul-17           | 16-Aug-17          | 14-Nov-17 | 24-Feb-22         |
| GAS DETECTION: Assemble/Rack & Stack/Factory Test COM Equipment for Western    | 8-Sep-16            | 9-Oct-16           | 7-Jan-17  | 26-Jan-21         |
| GAS DETECTION: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea    | 10-Jan-17           | 11-Feb-17          | 12-May-17 | 15-Mar-22         |
| GAS DETECTION: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax    | 13-May-17           | 10-Jun-17          | 8-Sep-17  | 30-Oct-21         |
| GAS DETECTION: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega | 9-Sep-17            | 12-Oct-17          | 10-Jan-18 | 4-Mar-22          |
| INTRUSION: Assemble/Rack & Stack/Factory Test COM Equipment for Western        | 8-Sep-16            | 9-Oct-16           | 7-Jan-17  | 6-Jan-21          |
| INTRUSION: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea        | 10-Jan-17           | 12-Jan-17          | 22-Mar-17 | 5-Apr-22          |
| INTRUSION: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax        | 13-May-17           | 10-Jun-17          | 8-Sep-17  | 19-Nov-21         |
| INTRUSION: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega     | 9-Sep-17            | 12-Oct-17          | 10-Jan-18 | 15-Mar-22         |
| RADIO: Assemble/Rack & Stack/Factory Test COM Equipment for Western            | 31-Aug-16           | 30-Sep-16          | 29-Dec-16 | 9-Oct-20          |
| RADIO: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea            | 30-Dec-16           | 3-Feb-17           | 4-May-17  | 16-Dec-21         |
| RADIO: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax            | 5-May-17            | 2-Jun-17           | 31-Aug-17 | 7-Aug-21          |
| RADIO: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega         | 1-Sep-17            | 1-Oct-17           | 30-Dec-17 | 14-Oct-21         |
| SCADA: Assemble/Rack & Stack/Factory Test COM Equipment for Western            | 14-Jul-16           | 13-Aug-16          | 11-Nov-16 | 27-Jan-21         |
| SCADA: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea            | 12-Nov-16           | 11-Dec-16          | 11-Mar-17 | 1-Dec-21          |
| SCADA: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax            | 14-Mar-17           | 15-Apr-17          | 14-Jul-17 | 21-Jul-21         |
| SCADA: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega         | 15-Jul-17           | 16-Aug-17          | 14-Nov-17 | 17-Dec-21         |
| SEISMIC: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea          | 8-Sep-16            | 9-Sep-16           | 22-Nov-16 | 14-Jul-22         |
| SEISMIC: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax          | 10-Jan-17           | 11-Feb-17          | 12-May-17 | 5-Mar-22          |
| SEISMIC: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega       | 13-May-17           | 10-Jun-17          | 8-Sep-17  | 22-Jun-22         |
| TELEPHONE: Assemble/Rack & Stack/Factory Test COM Equipment for Western        | 8-Sep-16            | 9-Oct-16           | 7-Jan-17  | 7-Jan-21          |
| TELEPHONE: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea        | 10-Jan-17           | 11-Feb-17          | 12-May-17 | 9-Jun-22          |
| TELEPHONE: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax        | 13-May-17           | 10-Jun-17          | 8-Sep-17  | 7-Jan-22          |
| TELEPHONE: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega     | 9-Sep-17            | 12-Oct-17          | 10-Jan-18 | 4-May-22          |
| TPIS: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea             | 24-Sep-16           | 27-Oct-16          | 25-Jan-17 | 20-May-22         |
| TPIS: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax             | 26-Jan-17           | 1-Mar-17           | 30-May-17 | 24-Feb-22         |
| TPIS: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega          | 31-May-17           | 29-Jun-17          | 27-Sep-17 | 9-Jun-22          |
| UPS: Manufacture/Factory Test COM Equipment for La Brea                        | 1-Sep-16            | 1-Oct-16           | 30-Dec-16 | 7-Jan-22          |
| UPS: Manufacture/Factory Test COM Equipment for Fairfax                        | 31-Dec-16           | 4-Feb-17           | 5-May-17  | 14-Oct-21         |
| UPS: Manufacture/Factory Test COM Equipment for La Cienega                     | 6-May-17            | 3-Jun-17           | 1-Sep-17  | 21-Dec-21         |
| PROCURE GAS/WATERPROOFING MATERIALS FOR LA BREA STATION                        | 2-Jul-17            | 1-Jul-17           | 29-Sep-17 | 15-Dec-17         |
| FABRICATE CANOPY STRUCTURE - FAIRFAX STATION                                   | 24-Feb-17           | 23-Feb-17          | 24-May-17 | 4-Nov-22          |
| FABRICATE CANOPY STRUCTURE - LA CIENEGA STATION                                | 25-May-17           | 24-May-17          | 22-Aug-17 | 30-Nov-22         |
| Mfgr/Assemble/Wire DC Switchgear - La Cienega TPSS                             | 27-Jun-17           | 31-Aug-17          | 29-Nov-17 | 2-Feb-22          |
| Mfgr/Assemble/Wire AC Switchgear - La Cienega TPSS                             | 27-Jun-17           | 31-Aug-17          | 29-Nov-17 | 15-Feb-22         |
| Mfgr/Assemble/Wire DC Switchgear - La Brea TPSS                                | 30-Nov-17           | 8-Feb-18           | 9-May-18  | 18-Nov-20         |
| Mfgr/Assemble/Wire AC Switchgear - Fairfax GBS                                 | 30-Nov-17           | 8-Feb-18           | 9-May-18  | 30-Jul-21         |
| Mfgr/Assemble/Wire AC Switchgear - La Brea TPSS                                | 10-May-18           | 13-Jul-18          | 11-Oct-18 | 13-Aug-21         |
| ATC: Procure/Deliver Switch Machines   | 31-Jul-16           | 16-Oct-16          | 14-Jan-17 | 17-Feb-22         |
| COMPLETE MOCK-UP, FABRICATE CANOPY STRUCTURE - LA BREA STATION                 | 27-Oct-16           | 24-May-17          | 22-Aug-17 | 21-Dec-22         |
| FAB/DELIVER SOLDIER PILES / BEAMS - TBM RETRIEVAL SHAFT                        | 9-Oct-16            | 12-Nov-16          | 10-Feb-17 | 14-Nov-17         |
| FAB/DELIVER SOLDIER PILES / BEAMS - FAIRFAX STATION                            | 27-Aug-16           | 30-Sep-16          | 29-Dec-16 | 8-Nov-16          |
| FAB/DELIVER SOLDIER PILES / BEAMS - LA CIENEGA STATION                         | 9-Feb-17            | 15-Mar-17          | 13-Jun-17 | 24-Jun-17         |
| ATC: Assemble/Rack & Stack TC&C Equipment for Western                          | 3-Nov-17            | 23-Feb-18          | 24-May-18 | 8-Oct-20          |
| ATC: Assemble/Rack & Stack ATC Equipment for La Brea                           | 3-Nov-17            | 23-Feb-18          | 24-May-18 | 9-Nov-21          |
| ATC: Assemble/Rack & Stack ATC Equipment for Fairfax                           | 20-Jan-18           | 11-May-18          | 9-Aug-18  | 10-Aug-21         |
| ATC: Assemble/Rack & Stack ATC Equipment for La Cienega                        | 12-Jun-18           | 27-Sep-18          | 26-Dec-18 | 28-Jan-22         |
| FABRICATE TRACK MATERIALS  | 7-Feb-19            | 5-Sep-19           | 4-Dec-19  | 20-Feb-21         |
| ATC: Procure/Deliver WS Equipment & Devices                                    | 30-Mar-16           | 17-Sep-16          | 16-Dec-16 | 28-Jan-22         |
| ATC: Procure/Deliver Components & Materials - Western                          | 5-Jan-17            | 4-Aug-17           | 2-Nov-17  | 8-Oct-20          |
| ATC: Procure/Deliver Components & Materials - La Brea                          | 5-Jan-17            | 4-Aug-17           | 2-Nov-17  | 9-Nov-21          |
| ATC: Procure/Deliver Components & Materials - Fairfax                          | 5-Jan-17            | 4-Aug-17           | 2-Nov-17  | 10-Aug-21         |
| ATC: Procure/Deliver Components & Materials - La Cienega                       | 5-Jan-17            | 4-Aug-17           | 2-Nov-17  | 28-Jan-22         |

## **CRITICAL PATH NARRATIVE**

The critical path for the Westside Purple Line Extension Project begins with the procurement process for the C1045 Design/Build contract, mobilization of the design team for the selected contractor, and the start of final design for station boxes and tunnels. Final design is concurrent with the C1055 Wilshire/Fairfax Advanced Utility Relocation and C1056 Wilshire/ La Cienega Advanced Utility Relocation contracts being performed by Metro's AUR Contractors and by third party utility companies. Upon completion of advanced utility relocations, the Design/Build contractor begins installation of soldier piles, first on the north side of the Wilshire/La Brea Station box, and then on the south side. Street decking is then installed, the station structural box is excavated, and invert concrete is placed. Tunneling then begins, first driving eastbound from Wilshire/La Brea to Wilshire/Western. TBMs are removed through a retrieval shaft at Wilshire/Western, reassembled at Wilshire/La Brea, and then driven westbound to Wilshire/La Cienega. Following construction of cross passages, the critical path continues through construction of the Wilshire/La Brea station box, installation of track-work and traction power, systems integration and testing, and pre-revenue operations.

### PROJECT SCHEDULE CONTINGENCY DRAWDOWN



### PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS

The project schedule contingency drawdown curve is based on a November 8, 2023 Revenue Service Date (RSD).

**PROJECT COST STATUS**

DOLLARS IN THOUSANDS

| SCC CODE   | DESCRIPTION                                    | ORIGINAL BUDGET  | CURRENT BUDGET |                  | COMMITMENTS  |                  | EXPENDITURES  |                | CURRENT FORECAST |                  | CURRENT BUDGET / FORECAST VARIANCE |
|--|--|------------------|----------------|------------------|--------------|------------------|---------------|----------------|------------------|------------------|------------------------------------|
|  |  |                  | PERIOD         | TO DATE          | PERIOD       | TO DATE          | PERIOD        | TO DATE        | PERIOD           | TO DATE          |                                    |
| 10   | GUIDEWAY & TRACK ELEMENTS                      | 388,294          | -              | 388,294          | -            | 380,970          | 11            | 18,592         | -                | 387,938          | (356)                              |
| 20   | STATIONS, STOPS, TERMINALS, INTERMODAL         | 440,621          | -              | 440,621          | -            | 435,145          | 5,076         | 27,535         | -                | 440,621          | -                                  |
| 30   | SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS | 43,323           | -              | 43,323           | -            | 34,198           | 150           | 497            | (128)            | 41,761           | (1,562)                            |
| 40   | SITWORK & SPECIAL CONDITIONS                   | 751,566          | -              | 754,491          | -            | 770,743          | 7,430         | 403,743        | -                | 790,436          | 35,945                             |
| 50   | SYSTEMS  | 113,574          | -              | 113,574          | -            | 98,008           | -             | 9,156          | -                | 113,574          | -                                  |
| <b>CONSTRUCTION SUBTOTAL (10-50)</b>                     |  | <b>1,737,378</b> | <b>-</b>       | <b>1,740,303</b> | <b>-</b>     | <b>1,719,064</b> | <b>12,667</b> | <b>459,523</b> | <b>(128)</b>     | <b>1,774,329</b> | <b>34,027</b>                      |
| 60   | ROW, LAND, EXISTING IMPROVEMENTS               | 175,634          | -              | 175,634          | -            | 175,634          | 165           | 158,798        | -                | 202,980          | 27,346                             |
| 70   | VEHICLES                                       | 160,196          | -              | 160,196          | -            | -                | -             | -              | -                | 145,493          | (14,703)                           |
| 80   | PROFESSIONAL SERVICES                          | 412,710          | -              | 414,785          | 2,600        | 267,044          | 4,248         | 216,241        | 128              | 418,141          | 3,356                              |
| <b>SUBTOTAL (10-80)</b>                                  |  | <b>2,485,918</b> | <b>-</b>       | <b>2,490,918</b> | <b>2,600</b> | <b>2,161,742</b> | <b>17,080</b> | <b>834,561</b> | <b>-</b>         | <b>2,540,944</b> | <b>50,025</b>                      |
| 90   | UNALLOCATED CONTINGENCY                        | 248,592          | -              | 248,592          | -            | -                | -             | -              | -                | 242,972          | (5,620)                            |
| 100  | FINANCE CHARGES                                | 375,470          | -              | 375,470          | -            | -                | -             | -              | -                | 331,065          | (44,405)                           |
| <b>TOTAL PROJECTS 465518 &amp; 865518 (10-100)</b>       |  | <b>3,109,980</b> | <b>-</b>       | <b>3,114,980</b> | <b>2,600</b> | <b>2,161,742</b> | <b>17,080</b> | <b>834,561</b> | <b>-</b>         | <b>3,114,980</b> | <b>-</b>                           |
| ENVIRONMENTAL/PLANNING - 405518                          |  | 8,505            | -              | 8,505            | -            | 8,505            | -             | 8,505          | -                | 8,505            | -                                  |
| ENVIRONMENTAL/PLANNING - 465518                          |  | 30,865           | -              | 30,865           | -            | 30,865           | -             | 30,852         | -                | 30,865           | -                                  |
| <b>TOTAL PROJECTS 405518 &amp; 465518 (ENV / PLAN'G)</b> |  | <b>39,370</b>    | <b>-</b>       | <b>39,370</b>    | <b>-</b>     | <b>39,370</b>    | <b>-</b>      | <b>39,357</b>  | <b>-</b>         | <b>39,370</b>    | <b>-</b>                           |
| <b>TOTAL PROJECTS 405518, 465518 &amp; 865518</b>        |  | <b>3,149,350</b> | <b>-</b>       | <b>3,154,350</b> | <b>2,600</b> | <b>2,201,112</b> | <b>17,080</b> | <b>873,918</b> | <b>-</b>         | <b>3,154,350</b> | <b>-</b>                           |

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH SEPTEMBER 2016

**PROJECT COST ANALYSIS**

**Original Budget**

The Original Budget of \$3.2 billion reflects the Board approved Life of Project Budget, July 24, 2014, plus Finance Charges of \$0.4 billion.

**Current Budget and Current Forecast**

The Current Budget and Current Forecast remains the same this period at \$3.2 billion.

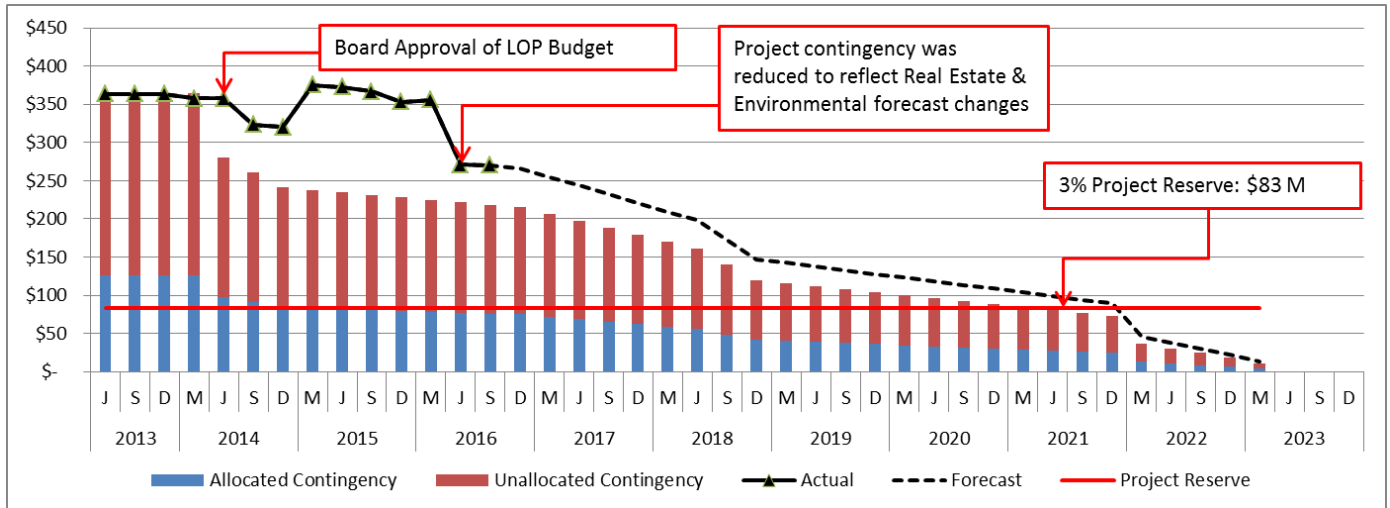
**Commitments**

*The Commitments increased by \$2.6 million primarily due to the Board Approved FY17 Annual Work Plan with the City of Los Angeles (Master Cooperative Agreement). The \$2.2 billion in Commitments to date represents 69.8% of the Current Budget.*

**Expenditures**

*The Expenditures are cumulative through September 2016. The Expenditures increased by \$17.1 million this period primarily for costs associated with the Design/Build Contract C1045, Advanced Utility Relocations, Environmental Services, Engineering Management Services, Construction Management Support Services, and Metro Project Administration. The \$873.9 million in Expenditures to date represents 27.7% of the Current Budget.*

**PROJECT COST CONTINGENCY DRAWDOWN**



**PROJECT COST CONTINGENCY DRAWDOWN ANALYSIS**

The Current Budget of \$3.2 billion (plus Finance Charges of \$0.4 billion) includes a project cost contingency of \$320.6 million or 10.2% of the total project. The project cost contingency of \$320.6 million is based upon the Life of Project (LOP) Budget that was approved by the Board in July 2014. The LOP Budget also included an allocated contingency amount of \$72.0 million. 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).

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 was adopted by the Metro Board of Directors in September 2012.

The project cost contingency drawdown curve is based on a November 8, 2023 Revenue Service date.

*The allocated contingency decreased this period by \$0.1 million due to an executed Change Order for the Design/Build Contract C1078 Division 20 Maintenance of Way/Non-Revenue Vehicle Building 61S for work associated with the Alternative A-1 Building design.*

| <b>PROJECT COST CONTINGENCY</b> |                                      |                        |                       |                 |   |
|---------------------------------|--------------------------------------|------------------------|-----------------------|-----------------|---|
| <b>DOLLARS IN THOUSANDS</b>     |                                      |                        |                       |                 |   |
|                                 | <b>Original Contingency (Budget)</b> | <b>Previous Period</b> | <b>Current Period</b> | <b>To-Date</b>  | <b>Remaining Contingency (Forecast)</b> |
| Unallocated Contingency         | 248,592                              | (5,620)                | 0                     | (5,620)         | 242,972                                 |
| Allocated Contingency           | 71,963                               | (44,766)               | (128)                 | (44,895)        | 27,069                                  |
| <b>Total Contingency</b>        | <b>320,555</b>                       | <b>(50,386)</b>        | <b>(128)</b>          | <b>(50,515)</b> | <b>270,040</b>                          |



## **DISADVANTAGED BUSINESS ENTERPRISE (DBE)**

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

#### **Contract C1045 Westside Purple Line Extension, Section 1 Design-Build**

*(Reporting Data as of September 2016)*

- DBE Goal – Design 20%
- Current DBE Commitment \$12,923,604.88 (20.25%)
- Current DBE Participation \$9,010,750.25 (16.10%)
- Fourteen (14) Design DBE subcontractors have been identified for Design
  
- DBE Goal – Construction 17%
- Current DBE Commitment \$258,940,454.57(17%)
- Current DBE Participation \$18,995,727.13 (5.32%)
- Sixty (60) Construction DBE subcontractors have been identified to-date

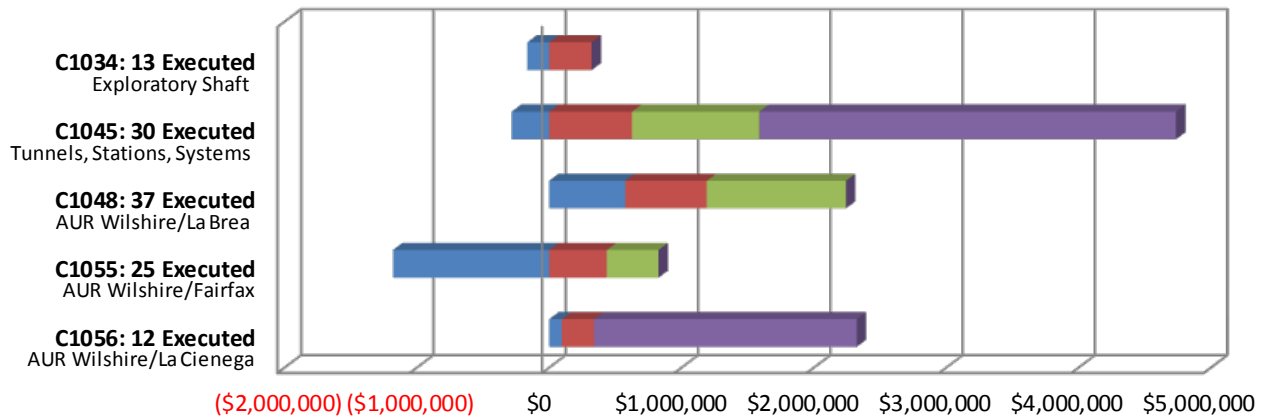
## **PROJECT LABOR AGREEMENTS (PLA) STATUS**

#### **Contract C1045 Westside Purple Line Extension, Section 1 Design-Build**

*(Reporting Data as of October 2016)*

- Targeted Worker Goal 40.00%
- Targeted Worker Current Participation 68.59%
  
- Apprentice Worker Goal 20.00%
- Apprentice Worker Current Participation 16.17%
  
- Disadvantaged Worker Goal 10.00%
- Disadvantaged Worker Current Participation 9.54%

**SUMMARY OF CONTRACT MODIFICATIONS**



|                              | <b>C1034</b><br>13 Executed | <b>C1045</b><br>30 Executed | <b>C1048</b><br>37 Executed | <b>C1055</b><br>25 Executed | <b>C1056</b><br>12 Executed | <b>Total</b>         |
|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------|
| ■ Under \$100K               | (164,288)                   | (281,256)                   | 574,448                     | (1,179,119)                 | 95,719                      | <b>(954,496)</b>     |
| ■ \$100K to \$250K           | 321,000                     | 626,791                     | 616,809                     | 436,190                     | 245,024                     | <b>2,245,814</b>     |
| ■ \$250K to \$1M             | -                           | 960,911                     | 1,050,980                   | 390,709                     | -                           | <b>2,402,600</b>     |
| ■ Over \$1M                  | -                           | 3,150,000                   | -                           | -                           | 1,983,179                   | <b>5,133,179</b>     |
| <b>Total Contract MODs</b>   | <b>156,712</b>              | <b>4,456,446</b>            | <b>2,242,237</b>            | <b>(352,220)</b>            | <b>2,323,922</b>            | <b>8,827,097</b>     |
| <b>Contract Award Amount</b> | <b>6,487,020</b>            | <b>1,636,418,585</b>        | <b>6,181,000</b>            | <b>14,430,000</b>           | <b>20,250,000</b>           | <b>1,683,766,605</b> |
| <b>% of Contract MODs</b>    | <b>2.4%</b>                 | <b>0.3%</b>                 | <b>36.3%</b>                | <b>-2.4%</b>                | <b>11.5%</b>                | <b>0.5%</b>          |

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

Thirteen Contract MODs with a total value of \$0.2 million have been executed since the award of Contract C1034 – Exploratory Shaft Construction by Innovative Construction Solutions (ICS). The contract has been completed and is closed out.

Thirty Contract MODs with a total value of \$4.5 million have been executed since the award of Contract C1045 – Tunnels, Stations, Trackwork, Systems and Systems Integration Testing by Skanska - Traylor - Shea, a Joint Venture.

Thirty-seven Contract MODs with a total value of \$2.2 million have been executed since the award of Contract C1048 – Advanced Utility Relocations at Wilshire/La Brea by Metro Builders & Engineering Group, LTD. The contract has been completed and is closed out.

Twenty-five Contract MODs with a total value of <\$0.4> million have been executed since the award of Contract C1055 – Advanced Utility Relocations at Wilshire/Fairfax by W. A. Rasic Construction Company, Inc. The contract has been completed and is closed out.

Twelve Contract MODs with a total value of \$2.3 million have been executed since the award of Contract C1056 – Advanced Utility Relocations at Wilshire/La Cienega by Steve Bubalo Construction Co.

**FINANCIAL/GRANT STATUS**

| SOURCE                                       | (A)                | (B)                           | (C)                         | (D)                | (D/B)        | (E)              | (E/B)        | (F)              | (F/B)        |
|--|--------------------|-------------------------------|-----------------------------|--------------------|--------------|------------------|--------------|------------------|--------------|
|  | ORIGINAL<br>BUDGET | TOTAL<br>FUNDS<br>ANTICIPATED | TOTAL<br>FUNDS<br>AVAILABLE | \$                 | %            | \$               | %            | \$               | %            |
| FEDERAL - SECTION 5309 NEW STARTS            | \$1,250.000        | \$1,250.000                   | \$265.000                   | \$1,250.000        | 100%         | \$265.000        | 21%          | \$265.000        | 21%          |
| FEDERAL CMAQ                                 | \$12.171           | \$12.171                      | \$12.171                    | \$12.171           | 100%         | \$12.171         | 100%         | \$12.171         | 100%         |
| FEDERAL SECTION 5339 - ALTERNATIVES ANALYSIS | \$0.512            | \$0.512                       | \$0.512                     | \$0.512            | 100%         | \$0.512          | 100%         | \$0.512          | 100%         |
| MEASURE R - TIFIA LOAN                       | \$856.000          | \$856.000                     | \$0.000                     | \$0.000            | 0%           | \$0.000          | 0%           | \$0.000          | 0%           |
| MEASURE R 35%                                | \$869.178          | \$874.178                     | \$481.414                   | \$852.213          | 97%          | \$510.019        | 58%          | \$489.017        | 56%          |
| STATE STIP RIP                               | \$2.568            | \$2.568                       | \$2.568                     | \$2.568            | 100%         | \$2.568          | 100%         | \$2.568          | 100%         |
| STATE CAPITAL PROJECT LOANS - OTHERS *       | \$83.648           | \$83.648                      | \$83.648                    | \$83.648           | 100%         | \$83.648         | 100%         | \$54.500         | 65%          |
| CITY OF LOS ANGELES                          | \$75.273           | \$75.273                      | \$0.000                     | \$0.000            | 0%           | \$0.000          | 0%           | \$0.000          | 0%           |
| <b>TOTAL</b>                                 | <b>\$3,149.350</b> | <b>\$3,154.350</b>            | <b>\$845.313</b>            | <b>\$2,201.112</b> | <b>69.8%</b> | <b>\$873.918</b> | <b>27.7%</b> | <b>\$823.768</b> | <b>26.1%</b> |

EXPENDITURES ARE CUMULATIVE THROUGH SEPTEMBER 2016  
ORIGINAL BUDGET BASED ON JULY 2014 BOARD APPROVED LOP BUDGET

\* OTHERS INCLUDE TDA ADMINISTRATION (\$4.1M), LTF GENERAL REVENUES (\$1.8M), AND LEASE REVENUES (\$37.8M)

**STATUS OF FUNDS ANTICIPATED**

**FEDERAL SECTION 5309 NEW STARTS:** FTA Grant CA-03-0824 for \$65.0 million was awarded on June 2, 2014. FTA Grant CA-03-0824-01 for \$100.0 million was awarded on August 10, 2015. *FTA Grant CA-2016-017 for \$100.0 million was awarded on September 8, 2016.* Funds are available for drawdown.

**FEDERAL SECTION 5309 ALTERNATIVE ANALYSIS:** FTA Grant CA-39-0006 of \$0.5 million was awarded on July 25, 2014. Funds are available for drawdown.

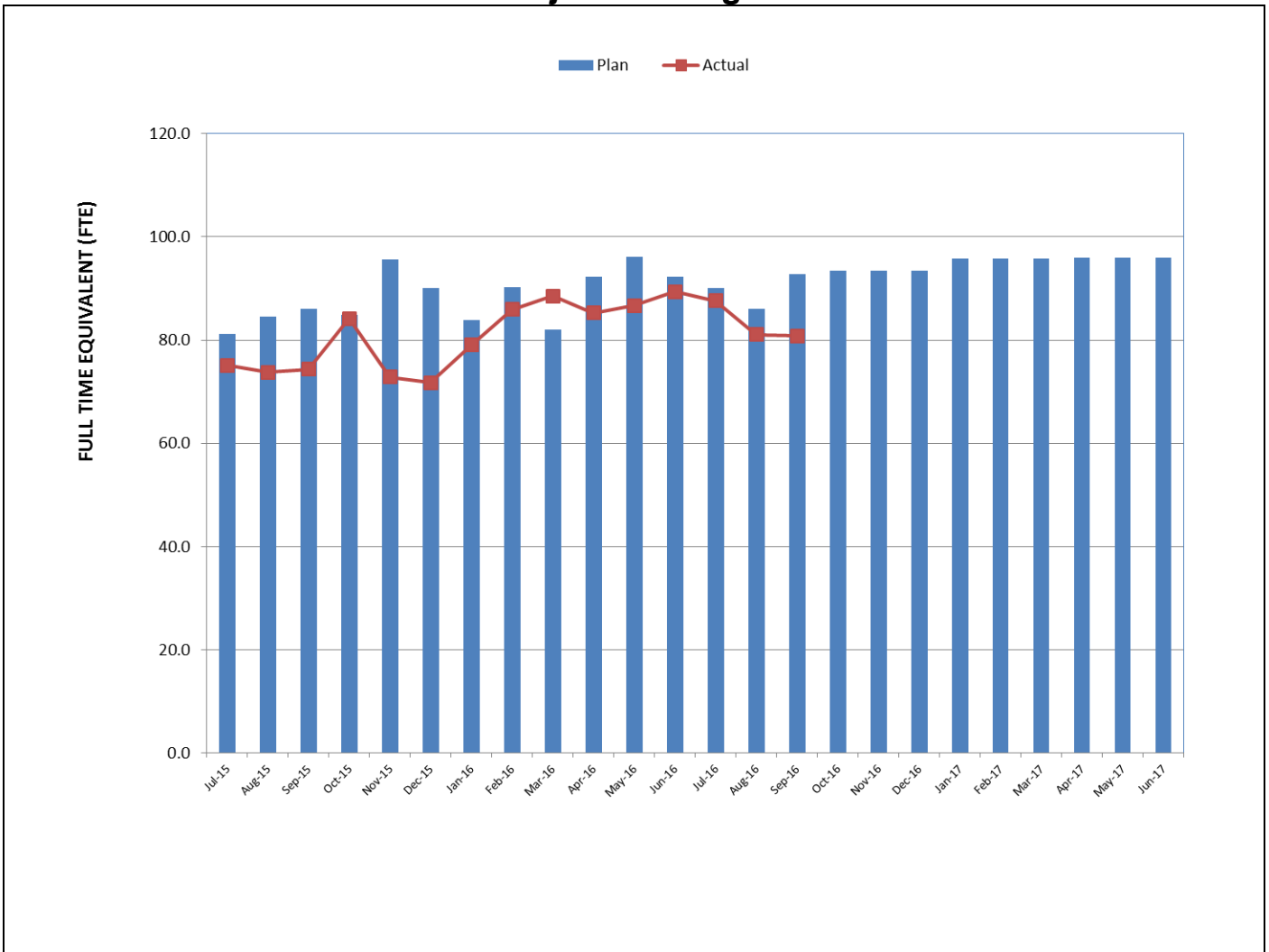
**MEASURE R – TIFIA LOAN (Transportation Infrastructure Finance & Innovation Act):** TIFIA Loan was executed on May 21, 2014 for \$856.0 million. First disbursement is planned for FY 2017.

**MEASURE R 35%:** \$481.4 million have been allocated to the Project through FY16. Funds are available for drawdown.

**STATE STIP RIP:** State grant application of \$8.4 million, of which \$2.6 million has been allocated to this project, was awarded on July 26, 2007. Funds are available for drawdown.

**CMAQ (Congestion Mitigation & Air Quality):** FTA Grant CA-95-X264 for \$12.2 million was awarded on July 27, 2015. Funds are available for drawdown.

**STAFFING STATUS  
Total Project Staffing – FTES**

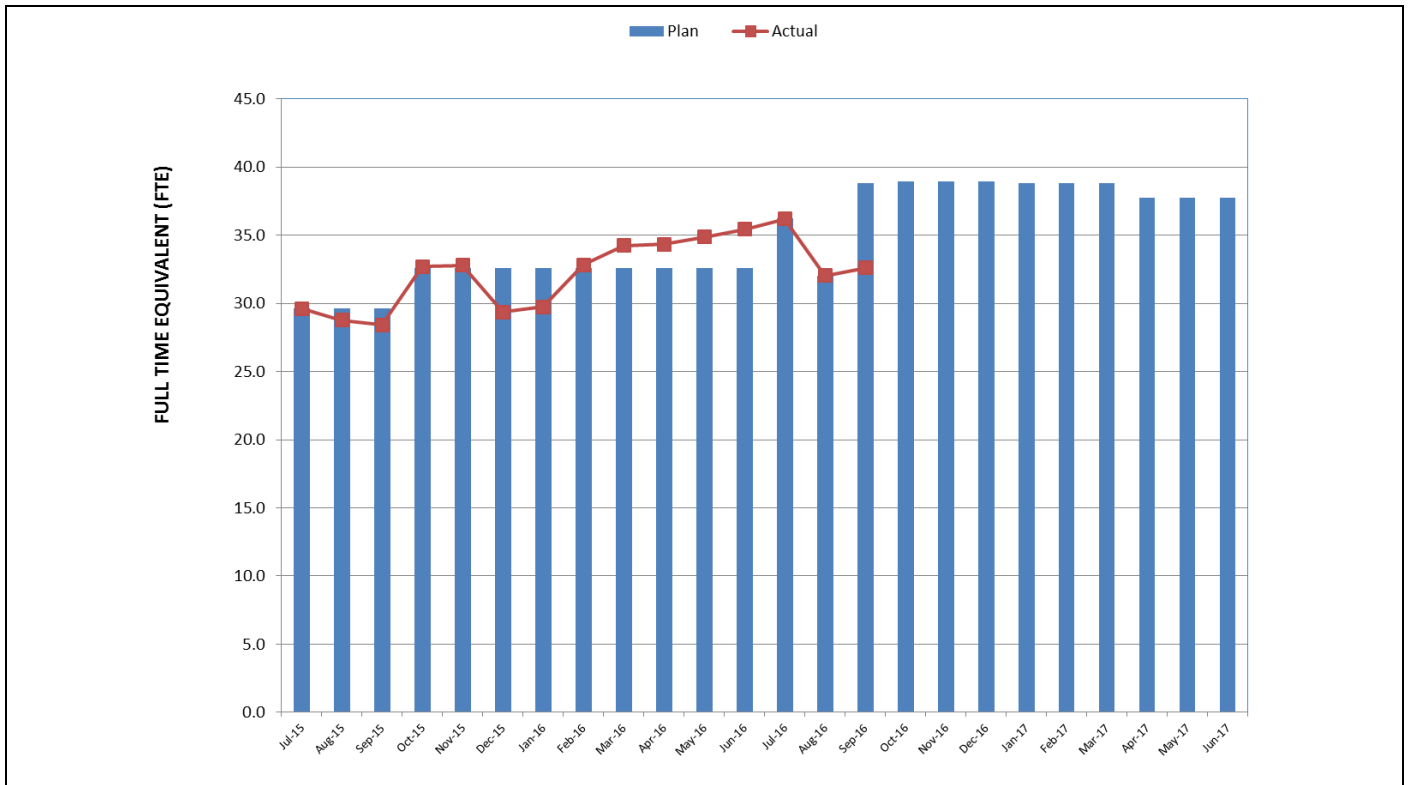


**TOTAL PROJECT STAFFING**

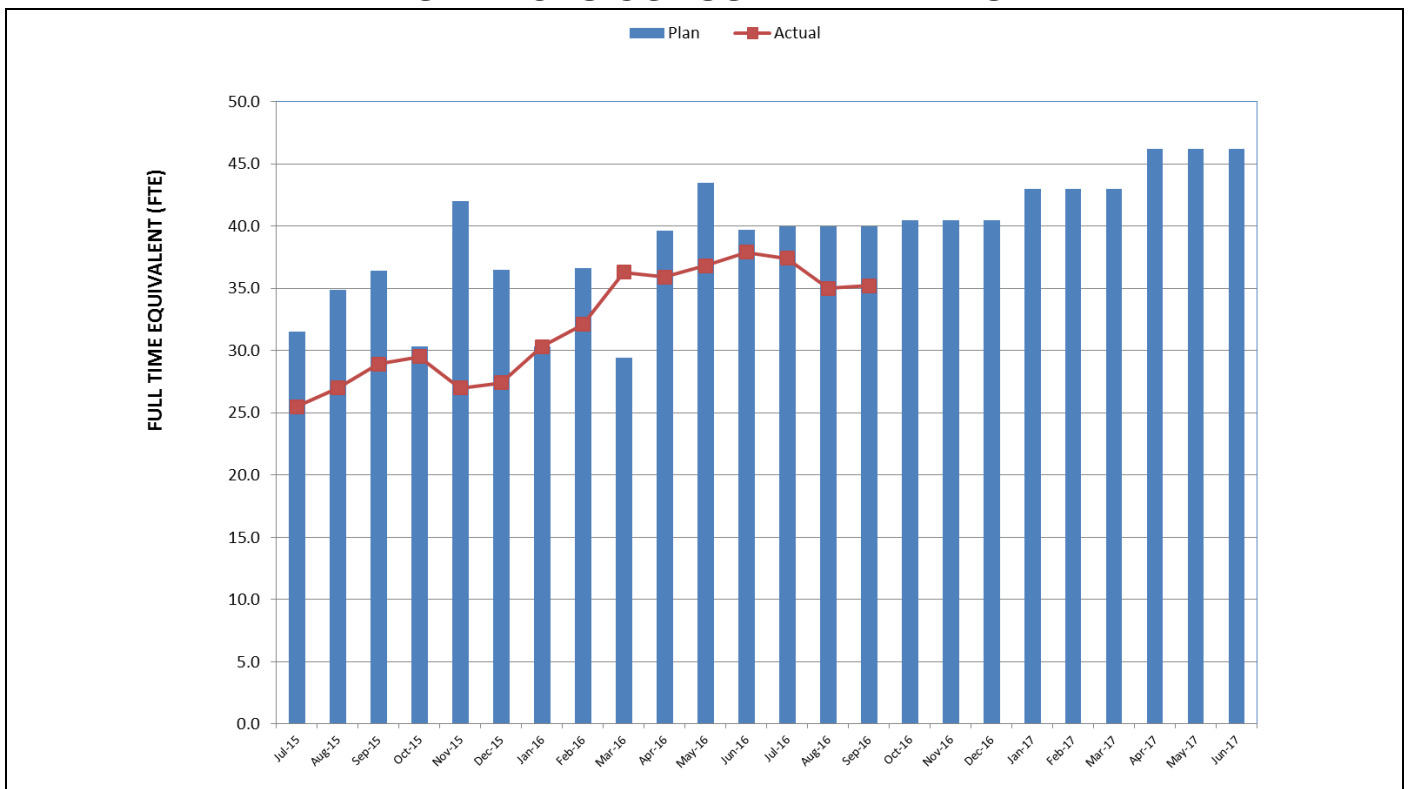
*The overall FY17 Total Project Staffing Plan averages 93.7 FTEs per month.*

*For September 2016, there were a total of 32.6 FTEs for MTA's Project Administration Staff and 48.2 FTEs for Consulting Staff. The total project staffing for September 2016 was 80.8 FTEs.*

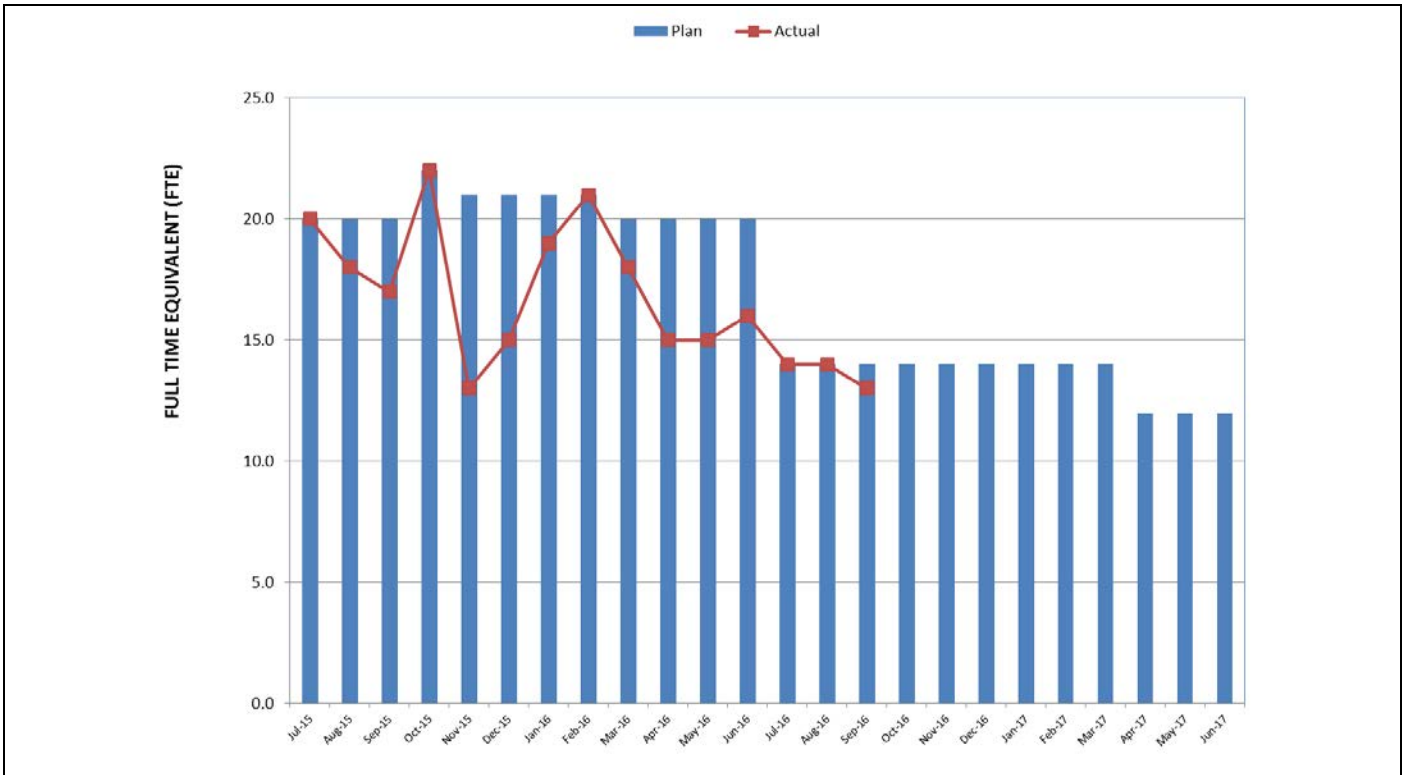
**STAFFING STATUS (Continued)  
METRO STAFFING – FTES**



**CONSTRUCTION MANAGEMENT SUPPORT  
SERVICES CONSULTANT – FTES**



**STAFFING STATUS (Continued)**  
**ENGINEERING MANAGEMENT SERVICES CONSULTANT – FTES**



**REAL ESTATE STATUS**

| <b>Purple Line Extension Section 1 - Real Estate Status Summary</b> |                   |           |                      |             |                                      |             |            |                   |
|---|-------------------|-----------|----------------------|-------------|--------------------------------------|-------------|------------|-------------------|
| Description   | Number of Parcels | Certified | Appraisals Completed | Offers Made | Agreements/<br>Settlements<br>Signed | Relocations |            | Parcels Available |
|   |                   |           |                      |             |                                      | Required    | Completed  |                   |
| Full Takes  | 9                 | 9         | 9                    | 9           | 9                                    | 109         | 109        | 9                 |
| Part Takes  | 6                 | 6         | 6                    | 5           | 1                                    | 0           | 0          | 5                 |
| TCE   | 4                 | 4         | 4                    | 4           | 1                                    | 0           | 0          | 4                 |
| <b>Total Parcels</b>  | <b>19</b>         | <b>19</b> | <b>19</b>            | <b>18</b>   | <b>11</b>                            | <b>109</b>  | <b>109</b> | <b>18</b>         |

The total count of the 19 parcels include the two Division 20 parcels required for constructing the MOW/NRV Building 61S.

Metro has possession of 18 parcels by either acquisition, possession and use agreements or stipulations. The C1045 contractor has possession of all properties needed to construction the Project. *The purchase agreement for the remaining parcel (Chalmers) at Division 20 was approved by the Metro Board in June 20126. A right-of-entry agreement is being executed between Chalmers and Metro in order to proceed with construction work in advance of closing escrow.*

## **QUALITY ASSURANCE STATUS**

### **C1045 – Tunnels, Stations, Trackwork, Systems and Systems Integration Testing**

- Attended weekly Project staff meetings and progress meetings with the Contractor Skanska/Traylor/Shea (STS).
- Ongoing discussions and coordination with the Engineering Management Services Consultant (EMSC) and Construction Management Support Services Consultant (CMSSC) support staff for quality oversight.
- Reviewed daily inspection reports from the Contractor/Field Technician and CMSSC oversight inspection personnel. Inspections show that the work is predominately compliant.
- Reviewed and provided comments on quality related submittals construction work plan, project specifications, product data and quality manuals.
- Continue to track structural support members which require modification through open items list and RFI process (*Wilshire/Fairfax Support of Excavation*).
- *Metro QAC conducted a surveillance of the Contractors implementation of their quality procedures at the Wilshire/ Fairfax Support of Excavation.*
- *Metro QAC conducted a surveillance of the in progress activities at the Wilshire/LA Brea Support of Excavation.*

### **C1056 – Advanced Utility Relocations – Wilshire/La Cienega**

- *Contractor submitted Certification of Compliance for materials testing.*

### **C1078 – Division 20 MOW and NRV Building 61S**

- Attended weekly Project Staff Meetings and Progress Meetings with the Contractor.
- Reviewed and provided comments on quality related submittals.
- *Building pad excavation is 95% complete. Backfill and testing are 75% complete with no outstanding quality control issues.*



## **ENVIRONMENTAL STATUS**

- Limited noise and vibration monitoring performed by DB Contractors. *DB contractor generally performing weekly noise and vibration monitoring at periods of greatest noise and vibration generating activities. Contractor addressing noise and vibration exceedances as identified. Corrective actions include placement of additional noise blankets as well as relocation and/or phasing of concurrent activities.*
- Reviewed C1045 Contractor submittals and tracked monitoring and reporting obligations in accordance with contract Specifications and EIR requirements.
- Conducted weekly Environmental Compliance Progress Meetings and monthly Environmental Mitigation (MMRP) update meeting with C1045 Contractor.
- Participated in various Construction Work Plan Workshops and Readiness Review Meetings prior to start of new construction activities.
- Conducted field environmental monitoring and spot inspections for construction noise, stormwater BMPs, dust and cultural resources for C1045, and Third Party AUR work activities.
- Evaluated Contractor's proposed hauling/trucking plans.
- Worked on foundation excavation scope and shoring plans for Building 61S (C1078).
- Assessed Contractor's SUSMP/LID and Drainage Reports.
- Coordinated supplemental noise level analysis for decking and jet grouting activities.
- Coordinated fulltime monitoring requirements with Paleontologist.
- Ongoing coordination of appropriate sediment, erosion and track out BMP measures.
- Performed Green Construction Policy spot check inspection.
- Continued work on LOC61S (Division 20) Groundwater Plume Cleanup on north side.
- *Participated in C1045 Contract Coordination Meetings and evaluated progress and schedules for upcoming construction activities.*

## **CONSTRUCTION RELATIONS STATUS**

- *Produced and distributed 20 construction work notices for advance utility relocations and construction activities.*
- *Made Project Presentations at the following: Saban Theater Vibration testing review meeting, Academy Motion Pictures and Studios, Decron Property on Wilshire, Miracle Mile Chamber Event Farmers Market, Mid City West Community Council, the Grove and Farmers Market Meeting, LAPD Wilshire Division Open House, Ratcovich Property Management Meeting, Park La Brea Management Meeting, Greater Wilshire Neighborhood Council, John Burroughs Middle School Transportation Meeting, Book My Lot Food Truck Fairfax, Wilshire Center Medical Center, Petersen Museum, SAG/Aftra Meeting, Miracle Mile Chamber event and Public Pedestrian Improvement Association..*
- *Pre-Construction issues: traffic issue during jet grouting work at Wilshire/Arden, Wilshire/Crenshaw Yard maintenance issue, noise issue during deck opening at Wilshire/La Brea, noise and back up alarms issue during Wilshire/Fairfax piling, and noise and vibration issue during building demolition at Wilshire/La Cienega.*
- *Visited and updated businesses and residences at future station locations to discuss utility relocations, business profiles and Eat, Shop, Play Wilshire promotional campaign for businesses.*
- *Attended the following meetings: Construction Management, Advanced Utility Relocations, Construction Relations, Environmental Mitigations, STS Third Party Workshop, Beverly Hills MOA and AUR, Marketing, Social Media, Eat, Shop, Play, Bus Relocations and Stops and DOT/Elected Officials.*
- *Updated website, Facebook, Twitter as needed.*
- *Continued with the “Eat, Shop, Play Spotlight” campaign to advertise and promote businesses along Wilshire Boulevard. Two businesses are being highlighted per month.*

## **CREATIVE SERVICES STATUS**

- *Continued to refine project artwork opportunities and locations.*
- *Responded to RFIs and submittals.*
- *Participated in Design Build Workshops and document reviews.*
- *Participated in elected officials briefing and community construction update meetings.*
- *Initiated artist contract for Division 20 Building 61S.*
- *Hosted community outreach event at Craft and Folk Art Museum.*

## **SAFETY & SECURITY STATUS**

- *There were no recordable worker injuries during October, 2016.*
- Metro continues to work with the D/B contractor to insure adequate Construction Safety Staffing in compliance with the Contract.
- *AUR Construction activities (day and night) are now complete in the field. Design Builder's construction activities (also day and night) and the C1078 Maintenance of Way Building site continue to be monitored to document contractor compliance with contract specifications.*
- Safety staff attended weekly Progress Meetings, readiness reviews, and other project meetings to evaluate Contractors Safety Program compliance with contract requirements.
- *Metro Construction Safety hosted Monthly All Hands Safety Meeting for all Westside-Purple Line Extension Contractors (including environmental contractors) on October 25 2016.*
- Construction Safety staff continue to work with Program Management and Construction Relations staff to monitor issues related to public concerns regarding noise, traffic and transient encampment hazards as well as public interactions with the construction crews.
- The statistics below continue to be estimates due to the under-report of hours discussed last month. *Metro staff is working with the contractor to return to actual reported numbers.*
- *September 2016 Contractor Work Hours (Design & Construction): 47,825*
- *Contractor - Project to Date Work Hours (Design & Construction)(through 9/30/2016): 921,346*
- *Total Project to Date Work Hours (Contractor & the IPO Staff) (through 9/30/2016): 1,235,797*
- Project to Date Recordable Injury Rate: 0.5 (Three Recordable Injuries)(each rate is per 200,000 work hours)(National Rate: 3.0)
- Project to Date Total Time Away Injury Rate: 0.3 (Two Time Away From Work Injuries)(National Rate: 1.7)
- *Project to Date Total Days Away Rate: 35.1 (217 Days Away From Work) (No National Rate Published)*
- National Rates for Heavy and Civil Construction (NAICS Code 237) are for Calendar Year 2014, published by USBLS in December 2015.

**THIRD PARTY AGREEMENT STATUS**

| <b>Third Party</b>                        | <b>Type of Agreement</b>                  | <b>Forecast Execution Date</b> | <b>Required Need Date</b>    | <b>Status/ Comments</b>  |
|---|---|--------------------------------|------------------------------|--|
| City of Los Angeles (LA)                  | Master Cooperative Agreement              | N/A                            | N/A                          | Parties will work under 2003 MCA.  |
| City of Beverly Hills (BH)                | Memorandum of Agreement (La Cienega only) | 9/14 (AUR)<br><br>1/17 (D/B)   | 9/14 (AUR)<br><br>1/17 (D/B) | City of Beverly Hills approved the MOA for the C1056 Wilshire/La Cienega AUR contract on August 19, 2014. Metro continues to work with the City to establish an MOA for the C1045 Design/Build contract. Required Need Date reflects turnover date to C1045 contractor for all areas at Wilshire/La Cienega. |
| Los Angeles Department of Water and Power | <i>Master Cooperative Agreement</i>       | N/A                            | N/A                          | Metro and LADWP will continue to work under the terms of the previous MCA.   |
| Los Angeles County Public Works           | <i>Master Cooperative Agreement</i>       | 4/11                           | 3/12                         | Executed   |
| Caltrans                                  | <i>Master Cooperative Agreement</i>       | 8/11                           | 3/12                         | Executed   |
| Private Utilities                         | <i>Utility Cooperative Agreement</i>      | 9/14                           | N/A                          | Metro is working with affected third party utilities under existing agreements except for Qwest/Century Link and Level 3. Draft agreements for Qwest/Century Link and Level 3, and a new agreement for SCE are all under review. In absence of an agreement, work is being performed by work orders.         |

## **ADVANCED UTILITY RELOCATION STATUS**

- *The LADWP Power relocations at the Wilshire/Fairfax Station are on-going and are anticipated to complete in November 2016.*
- AT&T relocations at the Wilshire/La Cienega Station are anticipated to complete in December 2016.
- On August 5, 2016, the C1056 Contractor achieved substantial completion prior to the contractual substantial completion date of December 8, 2016. *Remaining punch list items are anticipated to complete in November 2016.*
- SCE crews began the cable pulling and splicing work at Wilshire/La Cienega Station on August 4, 2016 and are anticipating completing in November 2016.

## **PEAK HOUR AND NIGHTTIME CONSTRUCTION VARIANCES**

Metro is actively pursuing extended hour variances/exemptions to accommodate the Project needs. Metro staff is working with the City of Los Angeles Bureau of Engineering and the Los Angeles Police Commission to obtain Peak Hour Exemptions and Nighttime Construction Variances. Current efforts center around extending the existing nighttime noise variances to accommodate advanced utility relocations at the Wilshire/La Brea and Wilshire/Fairfax Station sites as well as obtaining new nighttime noise variances and peak hour exemptions to allow night work and weekend work to accommodate the Wilshire/La Brea, Wilshire/Fairfax and Wilshire/Western piling operations for the Design/Build contractor.

- The Peak Hour Exemption for Wilshire/La Brea decking installation was approved by the City of Los Angeles Board of Public Works on May 27, 2016 as part of the full street closure approval. The dates for the Peak Hour Exemption are from June 10, 2016 through November 18, 2016.
- The Peak Hour Exemption for Wilshire/Fairfax Station pile installation was approved on June 29, 2016. The dates for the Peak Hour Exemption are from July 5, 2016 through October 28, 2016. *Additional Peak Hour Exemptions have been submitted to LABOE to support the remaining pile operations and the decking/excavation activities.*
- The Nighttime Noise Variance for the Wilshire/La Brea Advanced Utility Relocation work has been extended to December 17, 2016 by the Los Angeles Police Commission. *A request for a six month extension has been submitted to the Los Angeles Police Commission.*
- The Nighttime Noise Variance for the Wilshire/Fairfax Advanced Utility Relocation work has been extended to January 17, 2017 by the Los Angeles Police Commission.
- The Nighttime Noise Variances for the five yard locations in the City of Los Angeles (North La Brea, South La Brea, Fairfax, Western and Crenshaw) have been extended to January 14, 2017 by the Los Angeles Police Commission.
- The Nighttime Noise Variance for the decking and excavation work at Wilshire/La Brea Station has been approved by the Los Angeles Police Commission. The time period is from June 10, 2016 to December 5, 2016.
- The Nighttime Noise Variance for the pile installations at Wilshire/Fairfax was approved by the Los Angeles Police Commission on May 24, 2016 and extends to November 24, 2016.

## **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 Preliminary Engineering  |
| May 2011       | Began Preliminary Engineering  |
| April 2012     | Board certification of Final EIS / EIR and adoption of project                             |
| July 2012      | Completion of Exploratory Shaft final design   |
| August 2012    | FTA Record of Decision   |
| September 2012 | Began Real Estate Acquisition  |
| November 2012  | Began Final Design - C1048 - Advanced Utility Relocations contract – Wilshire/La Brea      |
| November 2012  | Began Final Design - C1055 - Advanced Utility Relocations contract – Wilshire/Fairfax      |
| November 2012  | Issued RFQ for C1045 Design / Build contract   |
| December 2012  | Began Final Design - C1056 - Advanced Utility Relocations contract – Wilshire/La Cienega   |
| January 2013   | Began C1034 Exploratory Shaft construction   |
| February 2013  | Received RFQ responses for C1045 Design / Build contract                                   |
| June 2013      | Issued RFP for C1045 Tunnels, Stations, Trackwork, Systems and Systems Integration Testing |
| June 2013      | Beginning of C1055 AUR Wilshire/Fairfax Bid Period   |
| July 2013      | Submitted draft FFGA application   |

**CHRONOLOGY OF EVENTS (Continued)**

|                |   |
|----------------|---|
| July 2013      | Completed Final Design - C1048 - Advanced Utility Relocations contract – Wilshire/La Brea             |
| July 2013      | Submitted TIFIA loan application  |
| August 2013    | Began C1048 Advanced Utility Relocations contract – Wilshire/La Brea                                  |
| August 2013    | NTP for Construction Management Support Services Contract   |
| January 2014   | Submitted application to FTA requesting an FFGA   |
| January 2014   | Received RFP Proposals for Contract C1045   |
| February 2014  | Beginning of C1056 AUR Wilshire/La Cienega Bid Period   |
| May 2014       | FTA awarded FFGA  |
| May 2014       | Received TIFIA Loan   |
| June 2014      | Began C1055 Advanced Utility Relocations at Wilshire/Fairfax  |
| July 2014      | Metro Board approved staff recommendation to award Contract C1045 and approved Life-of-Project Budget |
| September 2014 | Issued Invitation to Bid for Contract C1078   |
| October 2014   | Issued C1056 Contract Award   |
| November 2014  | Issued C1045 Contract Award   |
| January 2015   | Issued C1045 Contract Notice to Proceed   |
| January 2015   | Issued C1056 Contract Notice to Proceed   |
| February 2015  | Received Contract C1078 Bids  |
| August 2015    | Issued C1078 Contract Award   |
| September 2015 | Issued C1078 Contract Notice to Proceed   |
| October 2015   | Contract C1055 achieved Substantial Completion  |
| June 2016      | Began deck beam and decking operations for Wilshire/La Brea Station                                   |
| August 2016    | Contract C1056 achieved Substantial Completion  |



**CONTRACT C1045 STATUS**

|  |  |   |                         |                |                  |          |              |
|--|--|---|-------------------------|----------------|------------------|----------|--------------|
| <b>Description: Westside Purple Line Extension Design-Build</b><br><b>Contractor: SKANSKA - TRAYLOR - SHEA</b>   |  | <b>Contract No. C1045</b><br><b>Status as of: November 1, 2016</b>  |                         |                |                  |          |              |
| <b>Progress / Work Completed:</b><br>- Wilshire/La Brea temporary decking installation<br>- Wilshire/La Cienega demolition<br>- DU #1 Wilshire/Western AFC submittal<br>- DU #6 Systems/Trackwork 100% design submittal<br><br><b>Areas of Concern:</b><br><p style="text-align: center;">None</p> |  | <b>Major Activities (In Progress):</b><br>- DU #2 Wilshire/La Brea – AFC submittal<br>- DU #3 Wilshire/Fairfax – AFC submittal<br>- DU #6 Systems – AFC submittal<br>- DU #4 Wilshire/La Cienega – 100% design submittal<br>- Wilshire/ La Brea excavation muck shafts<br>- Wilshire/La Brea under deck utility support<br>- Wilshire/ La Brea under deck excavation<br>- Wilshire/La Brea north side installation of dewatering system<br>- Wilshire Blvd. jet grouting cross passages<br>- Wilshire/La Cienega vibration monitoring equipment<br>- Wilshire/Fairfax north side pile installation<br>- Wilshire/La Cienega soundwall installation<br><br><b>Major Activities Next Period:</b><br>- Wilshire/Fairfax pile installation south side<br>- Wilshire/La Brea excavation continues<br>- Wilshire/La Brea dewatering<br>- Wilshire/Fairfax traffic control switch to south side<br>- DU #5 Tunnels AFC submittal |                         |                |                  |          |              |
| <b>Schedule Summary:</b><br><br>Date of Award: 11/04/14<br>Notice to Proceed: 01/12/15<br>Original Contract Duration: 3250 CD<br>Current Contract Duration: 3250 CD<br>Elapsed Time from NTP: 659 CD   |  |   | Original Contract Dates | Time Extension | Current Contract | Forecast | Variance CDs |
|  |  | Notice to Proceed (Estimated)   | 01/12/15                | 0              | 01/12/15         | 01/12/15 | 0            |
|  |  | Milestone 1: Substantial Completion   | 06/09/23                | 0              | 06/09/23         | 06/09/23 | 0            |
|  |  | Milestone 2: Stations available to UFS  | 10/07/22                | 0              | 10/07/22         | 10/07/22 | 0            |
|  |  | Milestone 3: Start of Integration Testing to ROC  | 01/10/23                | 0              | 01/10/23         | 01/10/23 | 0            |
|  |  | Milestone 4: Demobilization   | 12/06/23                | 0              | 12/06/23         | 12/06/23 | 0            |
|  |  | Milestone 5: Temporary Construction Easements   | 01/10/23                | 0              | 01/10/23         | 01/10/23 | 0            |
| <b>Physical Percent Complete:</b><br><br>Physical completion: 11.27%*<br><br>* Note: Physical completion assessment reflects work completed and work in progress.  |  | <b>Cost Summary: \$ In millions</b><br>1. Award Value: 1,636.4<br>2. Executed Modifications: 4.5<br>3. Approved Change Orders: 0.0<br>4. Current Contract Value (1+2+3): 1,640.9<br>5. Incurred Cost: 449.6   |                         |                |                  |          |              |

**CONTRACT C1056 STATUS**

|   |   |                         |                |                  |          |              |
|---|---|-------------------------|----------------|------------------|----------|--------------|
| <p><b>Description:</b> Wilshire/La Cienega AUR<br/><b>Contractor:</b> Steve Bubalo Construction Co.</p>   | <p><b>Contract No.</b> C1056<br/><b>Status as of:</b> November 1, 2016</p>  |                         |                |                  |          |              |
| <p><b>Progress / Work Completed:</b><br/>- Substantial Completion achieved on August 5, 2016</p> <p><b>Areas of Concern:</b><br/><b>None</b></p>  | <p><b>Major Activities (In Progress):</b><br/>- Final punch list items<br/>- Contract close out</p> <p><b>Major Activities Next Period:</b><br/>- Complete punch list items<br/>- Contract close out</p>  |                         |                |                  |          |              |
| <p><b>Schedule Summary:</b></p> <p>Date of Award: 10/13/14<br/>Notice to Proceed: 01/12/15<br/>Original Contract Duration: 696 CD<br/>Current Contract Duration: 696 CD<br/>Elapsed Time from NTP: 659 CD</p> |   | Original Contract Dates | Time Extension | Current Contract | Forecast | Variance CDs |
|   | Notice to Proceed (Estimated)   | 01/12/15                | 0              | 01/12/15         | 01/12/15 | 0            |
|   | Milestone 1:  | 07/13/16                | 0              | 07/13/16         | 04/28/16 | 76           |
|   | Milestone 2: Substantial Completion   | 12/08/16                | 0              | 12/08/16         | 08/05/16 | 125          |
| <p><b>Physical Percent Complete:</b></p> <p>Physical completion: 82.86%*</p> <p><i>* Note: Physical completion assessment reflects work completed and work in progress.</i></p>                               | <p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <p>1. Award Value: 20.3<br/>2. Executed Modifications: 2.3<br/>3. Approved Change Orders: 0.0<br/>4. Current Contract Value (1+2+3): 22.6<br/>5. Incurred Cost: 19.1</p> |                         |                |                  |          |              |

**CONTRACT C1078 STATUS**

| <p><b>Description: Building 61S (MOW/NRV)</b><br/><b>Contractor: Clark Construction</b></p>  | <p><b>Contract No. C1078</b><br/><b>Status as of: October 29, 2016</b></p>   |                |                  |          |              |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
|--|--|----------------|------------------|----------|--------------|--|-----------------|-------------------------|----------------------------|------------------|----------------------------|--------------|------------------------------------|----------|-------------------|--------|----------|---|-------------------------------------|----------|-----|------|----------|------|--|--|--|--|--|--|
| <p><b>Progress / Work Completed:</b></p> <ul style="list-style-type: none"> <li>- CO-00003.1/CN-00006: Revised Building Location Design 30% to IFC - CO executed and incorporated into project schedule. Contractor has invoiced against remaining CO-3.1 amounts</li> <li>- Contractor finalized and updated CDRL log: October 12, 2016</li> <li>- Contractor received direction to incorporate Arcadis's (Bid Dig) schedule. Impacts being analyzed</li> </ul> <p><b>Areas of Concern:</b><br/><b>None</b></p> | <p><b>Major Activities (In Progress):</b></p> <ul style="list-style-type: none"> <li>- Contractor continues design development</li> <li>- Processing CN-00002: Reduction of Parts Storage Expansion. Awaiting Contractor's supporting cost data for CSP</li> <li>- Processing CN-00004: Inspection Pit, CMU Wall and Security Gate Awaiting Contractor's supporting cost data for CSP</li> <li>- Processing CN-00007: 3 Additional VLMS (requested by Metro Operation) Metro currently reviewing</li> <li>- Processing CN-00008: Relocation of 8" Sanitary Sewer (deletion). CN issued Awaiting CSP</li> <li>- Processing CN-00009: 21-Inch Storm Drain Relocation. CN issued Awaiting CSP</li> <li>- Processing CN-00010: Construction Impacts of Relocating Building. CN issued. Awaiting CSP and ICE</li> </ul> <p><b>Major Activities Next Period:</b></p> <ul style="list-style-type: none"> <li>- Quantify impacts of Sanitary Sewer and Storm Drain relocations to Clark's subsequent mobilization to site</li> <li>- Identify construction impacts due to Phase II (Arcadis Scope of Work)</li> <li>- APDU #2 (Utility Relocation) and APDU #3 (Foundation) 100% design submittal</li> </ul> |                |                  |          |              |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| <p><b>Schedule Summary:</b></p> <p>Date of Award: 08/03/15<br/>         Notice to Proceed: 09/30/15<br/>         Original Contract Duration: 853 CD<br/>         Current Contract Duration: 1023 CD<br/>         Elapsed Time from NTP: 367 CD</p>   | <table border="1"> <thead> <tr> <th></th> <th>Original Contract Dates</th> <th>Time Extension</th> <th>Current Contract</th> <th>Forecast</th> <th>Variance CDs</th> </tr> </thead> <tbody> <tr> <td>Notice to Proceed (Estimated)</td> <td>09/30/15</td> <td>0</td> <td>0</td> <td>09/30/15</td> <td>0</td> </tr> <tr> <td>Milestone 1: Substantial Completion</td> <td>01/30/18</td> <td>170</td> <td>1023</td> <td>07/19/18</td> <td>-170</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>   |                |                  |          |              |  |                 | Original Contract Dates | Time Extension             | Current Contract | Forecast                   | Variance CDs | Notice to Proceed (Estimated)      | 09/30/15 | 0                 | 0      | 09/30/15 | 0 | Milestone 1: Substantial Completion | 01/30/18 | 170 | 1023 | 07/19/18 | -170 |  |  |  |  |  |  |
|  | Original Contract Dates  | Time Extension | Current Contract | Forecast | Variance CDs |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| Notice to Proceed (Estimated)  | 09/30/15   | 0              | 0                | 09/30/15 | 0            |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| Milestone 1: Substantial Completion  | 01/30/18   | 170            | 1023             | 07/19/18 | -170         |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
|  |  |                |                  |          |              |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| <p><b>Physical Percent Complete:</b></p> <p>Physical completion: 9.50%</p> <p><i>* Note: Physical completion assessment reflects work completed and work in progress.</i></p>  | <p><b>Cost Summary: \$ In millions</b></p> <table> <tr> <td>1. Award Value:</td> <td style="text-align: right;">\$ 52.8</td> </tr> <tr> <td>2. Executed Modifications:</td> <td style="text-align: right;">\$ -</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td style="text-align: right;">\$ 2.1</td> </tr> <tr> <td>4. Current Contract Value (1+2+3):</td> <td style="text-align: right;">\$ 54.9</td> </tr> <tr> <td>5. Incurred Cost:</td> <td style="text-align: right;">\$ 9.7</td> </tr> </table>  |                |                  |          |              |  | 1. Award Value: | \$ 52.8                 | 2. Executed Modifications: | \$ -             | 3. Approved Change Orders: | \$ 2.1       | 4. Current Contract Value (1+2+3): | \$ 54.9  | 5. Incurred Cost: | \$ 9.7 |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| 1. Award Value:  | \$ 52.8  |                |                  |          |              |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| 2. Executed Modifications:   | \$ -   |                |                  |          |              |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| 3. Approved Change Orders:   | \$ 2.1   |                |                  |          |              |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| 4. Current Contract Value (1+2+3):   | \$ 54.9  |                |                  |          |              |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |
| 5. Incurred Cost:  | \$ 9.7   |                |                  |          |              |  |                 |                         |                            |                  |                            |              |                                    |          |                   |        |          |   |                                     |          |     |      |          |      |  |  |  |  |  |  |

## CONSTRUCTION PHOTOGRAPHS



*Wilshire/La Brea South Muck Shaft Tieback Grouting*



*Wilshire/La Brea Station Excavation*

**APPENDIX  
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.  |

**APPENDIX  
LIST OF ACRONYMS**

|          |   |
|----------|---|
| 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                                       |
| CPM      | 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                                 |
| DB       | 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         |

**APPENDIX**

**LIST OF ACRONYMS (Continued)**

|        |  |
|--------|--|
| FTA    | Federal Transit Administration                           |
| FTE    | Full Time Equivalent                                     |
| GBR    | Geotechnical Baseline Report                             |
| GDSR   | Geotechnical Design Summary Report                       |
| HMM    | Hatch Mott MacDonald                                     |
| 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                           |
| LRV    | Light Rail Vehicle                                       |
| 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  |
| OCC    | Operations Control Center                                |
| OSHA   | Occupational Health and Safety Administration            |
| PA/VMS | Public Address/Visual Messaging Sign                     |
| PE     | Preliminary Engineering                                  |



**APPENDIX**

**LIST OF ACRONYMS (Continued)**

|        |   |
|--------|---|
| PEER   | Permit Engineering Evaluation Report                |
| PIP    | Project Implementation Plan                         |
| PLA    | Project Labor Agreement                             |
| 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                                |
| RLPE   | Red Light Photo Enforcement                         |
| 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                               |
| SBCC   | <i>Steve Bubalo Construction Co</i>                 |
| 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                          |
| SOE    | Support of Excavation                               |
| SOQ    | Statement of Qualification                          |
| SOV    | Schedule Of Value                                   |
| SOW    | Statement Of Work                                   |

**APPENDIX**

**LIST OF ACRONYMS (Continued)**

|       |  |
|-------|--|
| SP    | Special Provision  |
| SSMP  | Safety and Security Management Plan                      |
| STB   | Surface Transportation Board                             |
| STIP  | State Transportation Improvement Program                 |
| STP   | Surface Transportation Program                           |
| STV   | STV Group  |
| SWPPP | Storm Water Pollution Prevention Plan                    |
| TBD   | To Be Determined   |
| TBM   | 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   |
| 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                                      |