Westside Purple Line Extension Section 2 Project



WESTSIDE PURPLE LINE EXTENSION SECTION 2 PROJECT

MONTHLY PROJECT STATUS REPORT

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

JULY 2017

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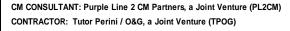
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PROJECT SUMMARY

LOCATION: Los Angeles / Beverly Hills DESIGN CONSULTANT: WSP USA Inc.

Century City Constellation LADWP Power Trenching



Century City Constellation

WORK COMPLETED PAST MONTH

- AT&T worksite traffic control plan submitted to LADOT for approval

- AT&T peak hour exemption application submitted to LADOT
- Conducted pre-construction meeting for SCG work through launch box

Wilshire/Rodeo

- Draft SCE work plan submitted to City of Beverly Hills (COBH)
- Obtained SCE construction permit from Beverly Hills City Council

| EXPENDITURE STATUS (\$ In Millions) | | | | SCHEDULE ASSESSMEN | п | | |
|--|-----------------|----------------|-----------|-------------------------------|----------------|------------------|---|
| | CURRENT | EXPENDED | PERCENT | MAJOR SCHEDULE | PRIOR | CURRENT | |
| ACTIVITIES | BUDGET | AMOUNT | EXPENDED | ACTIVITIES | PLAN | PLAN | VARIANCE WEEKS |
| | | | | Environmental | | | |
| DESIGN | \$153.5 | \$55.9 | 36.4% | FEIS / FEIR | N/A | 05/31/12 | Complete |
| | | | | SEIS | 09/06/17 | 10/09/17 | -5 |
| RIGHT-OF-WAY | \$426.4 | \$128.4 | 30.1% | | | | |
| | | | | Design | | | |
| CONSTRUCTION | \$1,416.2 | \$95.4 | 6.7% | Approval to Enter into PE | N/A | 01/24/13 | Complete |
| | | | | Final Design Complete | N/A | 10/25/19 | |
| OTHER | \$533.6 | \$16.9 | 3.2% | | | | |
| | | | | Right-of-Way | | | |
| TOTAL | \$2,529.7 | \$296.6 | 11.7% | All parcels available | N/A | 11/19/19 | |
| Current Budget includes Enviro | nmental/Plannir | ng and Finance | Costs. | | | | |
| | | | | | | | |
| | | | | Construction - Main Desi | gn / Build C | ontract | |
| AREAS OF CONCERN | | | | Notice to Proceed | 04/28/17 | 04/26/17 | Complete |
| -None at this time. | | | | Demobilization | 10/25/25 | 10/25/25 | |
| | | | | | | | |
| ROW ACQUISITION | PLAN | AVAILABLE | REMAINING | CRITICAL ACTIVITIES / 3 | MONTH LO | OK AHEAD | |
| | | | | - Continue negotiations wit | h City of Bev | erly Hills for M | emorandum of Agreement (MOA) governing utility work |
| PERMANENT PARCELS | 30 | 0 | 30 | - Start AT&T utility relocati | on at Century | / City | |
| | | | | - Resume DWP Power "Da | ay" work at C | entury City | |
| TEMPORARY PARCELS | 3 | 0 | 3 | - Start SCG work at Centu | ry City throug | h Launch Box | |
| | | | | - Begin/finish cable pulling | and splicing | for Telecom at | Century City |
| | | | | - Design Package 1 - Utilit | y/Civil Desigr | at Launch Bo | x in Century City 60% submittal |
| TOTAL PARCELS | 33 | 0 | 33 | - Design Package 2 - Rem | aining Utility | Conflicts (Outs | side of Launch Box) 60% submittal |
| | | | | - Start SCE utility work at | Wilshire/Rod | eo | |

PROJECT OVERVIEW & STATUS

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

Section 2 will extend the future Wilshire/La Cienega Station that is part of the Westside Purple Line Extension Section 1 Project currently under construction to the Century City area. The Project is located entirely underground, primarily following Wilshire Boulevard, and includes the design and construction of approximately 2.59 miles of double-track heavy rail and two new stations as well as the purchase of 20 heavy rail vehicles. The Project also includes train controls, signals, traffic controls, communications, traction power supply and distribution, fare collection systems and equipment, acquisition of right-of-way, and utility relocations.

<u>Design</u>

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

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

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

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

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

TPOG submitted for review the Tunnel Boring Machines (TBMs) preconstruction initial design demonstrating that the TBMs meet the Project's specifications. Design progress meetings are occurring weekly related to the design unit packages. Contractor is continuing with the required contractual submittals. *Other design related submittals that the Contractor has submitted this period are: Design Management Qualifications; Design Interface Management; Design Quality Manual; and BIM Implementation Plan.*

The 120 Day Project Schedule has been submitted and approved and will be used as the basis for progress evaluation until such time as the Baseline Schedule is approved. Weekly working sessions are being conducted with the Contractor on the draft Contract Baseline CPM Schedule. *Baseline schedule is forecasted to be submitted for review next period.*

Major Contract Procurement

All construction contracts for the Project have been awarded.

Construction

Advanced Utility Relocations

Century City Constellation: Telecom joint trench civil work completed in June 2017. Cable pulling and splicing work is anticipated to complete in September 2017. LADWP Water inside TBM launch box construction was completed in June 2017. LADWP Power construction began in May 2017. SCG and AT&T utility relocations are underway.

Wilshire/Rodeo: SCE will begin relocation of power lines in September 2017, followed by SCG and AT&T.

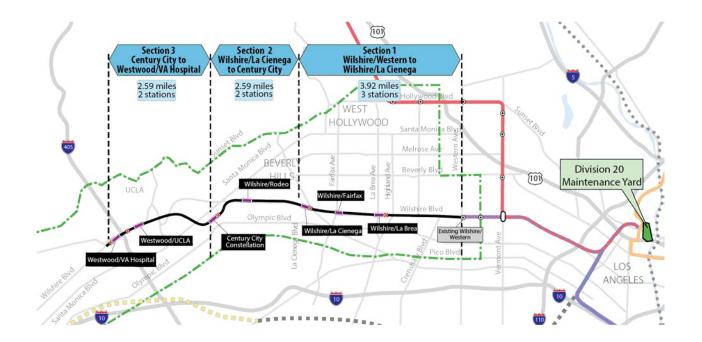
Contract C1120 – Tunnels, Stations, Trackwork and Systems (Design/Build)

Contract award was issued on January 31, 2017 and Notice to Proceed on April 26, 2017. *TBMs purchase order has been executed.*

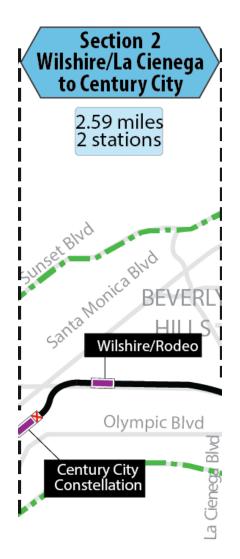
MANAGEMENT ISSUES

No management issues this period.

PROJECT ALIGNMENT by SECTIONS



PROJECT ALIGNMENT SECTION 2



BASE PROJECT SCOPE

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

Section 2 will extend the future Wilshire/La Cienega Station that is part of the Westside Purple Line Extension Section 1 Project currently under construction to the Century City area. The Project is located entirely underground, primarily following Wilshire Boulevard, and includes the design and construction of approximately 2.59 miles of double-track heavy rail and two new stations as well as the purchase of 20 heavy rail vehicles. The Project also includes train controls, signals, traffic controls, communications, traction power supply and distribution, fare collection systems and equipment, acquisition of right-of-way, and utility relocations.

The Wilshire/Rodeo Station box will be under the center of Wilshire Boulevard, beginning just east of South Canon Drive, and extending to El Camino Drive. The entrance will be on the southwest corner of Wilshire Boulevard and Reeves Drive.

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

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

The procurement of this contract utilized a two-step approach with the submittal of qualification statements through a Request for Qualification (RFQ) process, prequalification of qualified proposers followed by the release of a Request for Proposals (RFP) soliciting technical and price proposals with an option at Metro's discretion for Best and Final Offers (BAFO).

The Design/Build contract provides for final design and construction of the infrastructure along the 2.59 mile alignment. Contract scope includes demolition and removal of structures and clearing sites to facilitate construction operations. The structures to be constructed include twin bored tunnels, complete with cross-passages and walkways, including all mechanical, electrical and finished work. A tunnel boring launch (TBM) shaft will be constructed at the Century City Constellation Station. Two underground stations are to be constructed, one double crossover location, which is located east of the Century City Constellation Station which is the terminus station. Each station has a single entrance plaza with stairs, escalators and elevators which meet ADA requirements. The scope of work also includes all architectural finishes, mechanical and electrical systems and equipment including train control, traction power, communications, trackwork, system tie-in to the Wilshire/La Cienega Station (currently under construction), testing and commissioning.

BASE PROJECT SCOPE (Continued)

Metro Furnished Equipment

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

Start Up

The commencement of pre-revenue operations will be determined by Metro. Generally, all systems integration testing will have been completed and passed. All testing will be required to include and pass a "stress test" of maximum operational service levels to be acceptable. Pre-Revenue Operations include train runs, especially those involving multiple trains, on the integrated and fully operational extension; rehearsal of expected revenue operations scenarios; 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 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 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Jan-18 |
|--|-------------------|--------|--------|-----------|--------|--------|-------------|
| Third party utility construction begins at Century City Constellation - SCG (inside Launch Box) | 08/14/17 | Δ | | | | | |
| Submit 60% Design Package 2 - Remaining Utility Conflicts (Outside of Launch Box) | 08/15/17 | | | | | | |
| Submit 60% Design Package 1 - Utility/Civil Designt at Launch Box in Century City | 08/18/17 | | | | | | |
| Third party utility construction begins at Century City Constellation - AT&T | 09/05/17 | | Δ | | | | |
| Third party utility construction begins at Wilshire/Rodeo - SCE | 09/05/17 | | Δ | | | | |
| Third party utility construction complete at Century City Constellation - SCG (inside Launch Box) | 09/25/17 | | Δ | | | | |
| Third party utility construction begins at Century City Constellation - SCG (outside Launch Box) | 09/26/17 | | Δ | | | | |
| Third party utility cable pulling & splicing completes at Century City Constellation -Telecom | 09/29/17 | | Δ | | | | |
| Complete SEIS | 10/09/17 | | | ٠ | | | |
| Submit 85% Design Package 1 - Utility/Civil Designt at Launch Box in Century City | 10/16/17 | | | | | | |
| Submit 85% Design Package 2 - Remaining Utility Conflicts (Outside of Launch Box) | 11/01/17 | | | | | | |
| Submit 100% Design Package 1 - Utility/Civil Designt at Launch Box in Century City | 12/06/17 | | | | | | |
| Third party utility construction complete at Century City Constellation - AT&T | 12/21/17 | | | | | Δ | |
| Third party utility cable pulling & splicing begins at Wilshire/Rodeo - SCE | 01/17/18 | | | | | | \triangle |
| MTA Staff MTA Board Action FTA (Federal Transit Administration) | Δ | Other | | Contracto | | | |

٠ • • MASTER SCHEDULE Data Date: 29-Jul-17 1 of 1 ٠ Westside Purple Line Extension Section 2 Project Los Angeles County Metropolitan Transportation Authority Management Schedule - MPSR 09-Aug-12 A 24-Jan-13 A 07-Aug-26 07-Oct-25* 26-Apr-17 A 26-Apr-12 A 31-Dec-14 A 15-Dec-16 A 28-Sep-18 26-Jan-17 A 26-Apr-17 A 31-Dec-26* 09-Oct-17 13-Apr-16 A 25-Oct-19 28-Sep-18 24-Aug-18 21-Nov-23 29-Dec-23 31-Jul-25 10-Jan-24 20-Dec-16 A 23-May-25* 15-Aug-25 25-Feb-25 23-May-25 28-Aug-25 31-Dec-26 09-Oct-17 25-Oct-19 15-Aug-25 03-Apr-20 31-Jan-24 31-Jul-25 28-Aug-25 07-Aug-26 6-Apr-17 A 28-May-15 A 28-May-15 A 06-Sep-16 A 31-Jul-17 05-Jan-15 A 02-Mar-15 A 03-Aug-15 A 31-Dec-14 A 20-May-15 A 12 4 05-Jan-15 A 02-Mar-15 A 19-Jun-25 81-Dec-14 A 01-Jul-15 A 06-Sep-16 A 29-Aug-25* 02-Mar-15 A 05-Jan-15 A 02-Mar-15 A 03-Jan-22 27-Apr-17 A 25-Apr-19 01-Feb-24 22-Mar-24 01-Jul-21 19-Jun-25 14-Jul-25 14-Jul-25 start DR-Ani 1210 264 1072 647 2565 2565 497 2234 1630 897 1694 1464 **658** 658 902 902 600 500 332 345 270 583 494 481 270 000000000 0 7 7 0 Contract C1120 Milestone # 1 - Substantial Completion (NTP+2,950 CD Project Close Out C1120 Milestone # 4 - Complete Demobilization (NTP+3,100 CD) FTA Issue Full Funding Grant Agreement (FFGA) Metro Board Adopt Project & Authorize Life of Project Budget FTA Approval to Enter Into Preliminary Engineering FTA Approval to Enter into New Starts Engineering Phase WPLE Section 2 - Wilshire La Grenega to Century City Constellation - Current Schedule Forecast Revenue Service Date - RSD Issue NTP to Major D/B Contractor MTA Board Approve Final EIS/EIR city FFGA Revenue Service Date iga to Century FTA Record of Decision Advanced Preliminary Engineering (APE) PROJECT PLANNING & DEVELOPMENT Re-Start Section 2 Summary Heavy Rail Vehicles Contract HR4000 Universal Fare Collection Equipment OWNER FURNISHED EQUIPMENT Wilshire/La Cier Environmental Document Update SCADA Software and Equipment Site Work & Temporary Facilities **WILESTONES & KEY DATES RE Acquisitions - Critical** FTA Process & Approvals **RE Relocations - Critical** Remaining Work Critical Remaining Work **Contract Procurement** RIGHT-OF-WAY (R/W) Pre-revenue Service Guideway & Track WS2-WS-PC-1000 WS2-WS-PC-1005 Final Design (FD) Project Close-Out CONSTRUCTION Actual Work
Remaining Wol ENGINEERING WS2-MS1020 WS2-MS1070 WS2-MS1110 WS2-MS1120 WS2-MS1000 WS2-MS1005 WS2-MS1010 WS2-MS1030 WS2-MS1040 WS2-MS1050 WS2-MS1060 ♦ Milestone Stations Systems Utilities Testing Start Up Miscellar VPLE

PROJECT SUMMARY SCHEDULE

July 2017

SCHEDULE MEASUREMENTS

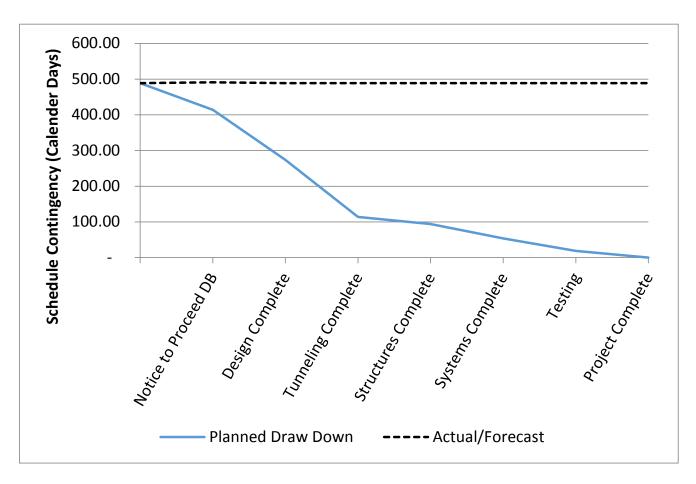
OVERALL CONSTRUCTION PROGRESS CURVE

MAJOR EQUIPMENT DELIVERY

DESIGN BUILDER'S (C1120) LONG LEAD ITEM LIST

CRITICAL PATH NARRATIVE

The Critical Path begins with the procurement process for the C1120 Design/Build (D/B) contract, mobilization of the design team for the contractor, and the start of final design for station boxes and tunnels. The Design/Build contractor begins installation of soldier piles, first on the north side of the Century City Constellation Station box, and then on the south side. Temporary Street decking is then installed, the station structural box is excavated, and invert concrete is placed. Concurrently with this is the procurement and assembly of the tunnel boring machines (TBM). The path continues with tunneling and then street decking, station box excavation and concrete invert at the Wilshire/Rodeo Station. The path then follows into 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 an August 29, 2025 Forecast Revenue Service Date (RSD).

PROJECT COST STATUS

| SCC CODE | DESCRIPTION | original Budget | CURRENT BUDGET | | COMMITMENTS | | EXPENDITURES | | CURRENT FORECAST | | FORECAST/ BUDGET |
|-------------|--|--------------------|----------------|-----------|-------------|-----------|--------------|---------|------------------|-----------|---------------------|
| CODL | | DODGET | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | PERIOD | TO DATE | VARIANCE |
| 10 | GUIDEWAY & TRACK ELEMENTS | 346,440 | - | 346,440 | - | 329,943 | - | 5,175 | - | 346,440 | - |
| 20 | STATIONS, STOPS, TERMINALS, INTERMODAL | 434,990 | - | 434,990 | - | 410,368 | - | 41 | - | 434,990 | - |
| 30 | SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS | - | - | - | - | - | - | - | - | - | - |
| 40 | SITEWORK & SPECIAL CONDITIONS | 553,282 | - | 553,282 | 51 | 520,677 | 322 | 90,169 | - | 553,282 | - |
| 50 | SYSTEMS | 81,457 | - | 81,457 | - | 68,537 | - | - | - | 81,457 | - |
| | CONSTRUCTION SUBTOTAL (10-50) | | - | 1,416,169 | 51 | 1,329,525 | 322 | 95,386 | - | 1,416,169 | - |
| 60 | ROW, LAND, EXISTING IMPROVEMENTS | | - | 426,396 | - | 166,839 | 3,388 | 128,357 | - | 426,396 | - |
| 70 | VEHICLES | 42,000 | - | 42,000 | - | - | - | - | - | 42,000 | - |
| 80 | PROFESSIONAL SERVICES | 374,878 | - | 374,878 | - | 167,592 | 465 | 70,853 | - | 374,878 | - |
| | SUBTOTAL (10-80) | 2,259,444 | - | 2,259,444 | 51 | 1,663,956 | 4,174 | 294,596 | - | 2,259,444 | - |
| 90 | UNALLOCATED CONTINGENCY | 177,176 | - | 177,176 | - | - | - | - | - | 177,176 | - |
| 100 | FINANCE CHARGES | 88,695 | - | 88,695 | - | - | - | - | - | 88,695 | - |
| DTAL PR | OJECT 865522 (FFGA & NON-FFGA CONCURRENT ACTIVITIES) | 2,525,314 | - | 2,525,314 | 51 | 1,663,956 | 4,174 | 294,596 | - | 2,525,314 | - |
| | ENVIRONMENTAL/PLANNING - 465518 & 465522 | | - | 4,349 | - | 2,203 | 48 | 2,008 | - | 4,349 | - |
| | TOTAL PROJECT 465518 & 465522 (ENV / PLAN'G) | 4,349 | - | 4,349 | - | 2,203 | 48 | 2,008 | - | 4,349 | - |
| | TOTAL PROJECTS 465518, 465522 & 865522 | 2.529.664 | - | 2,529,664 | 51 | 1,666,159 | 4,223 | 296,604 | - | 2,529,664 | _ |

PROJECT COST ANALYSIS

Original Budget, Current Budget and Forecast

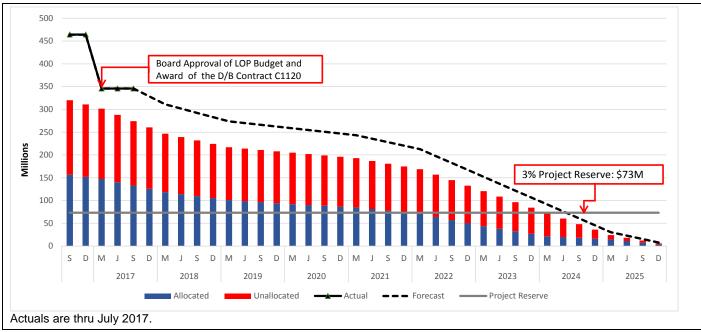
The Original Budget, Current Budget and Forecast of \$2.5 billion reflect the Life of Project (LOP) budget approved by the Board on January 26, 2017, plus Finance Charges of \$88.7 million.

Commitments

The Commitments increased this period by \$0.05 million due to executed work orders for private utility companies. The \$1.7 billion in Commitments to date represents 65.9% of the Current Budget.

Expenditures

The Expenditures increased this period by \$4.2 million this period primarily for costs associated with Private Utilities, Real Estate Acquisitions, and Metro Project Administration. The \$296.6 million in Expenditures to date represents 11.7% of the Current Budget.



PROJECT COST CONTINGENCY DRAWDOWN

PROJECT COST CONTINGENCY DRAWDOWN ANALYSIS

The Current Budget of \$2.5 billion includes finance charges totaling \$88.7 million. It also includes a project cost contingency of \$345.7 million or 13.7% of the total project, which is based upon the Life of Project (LOP) Budget approved by the Board in January 2017. An allocated contingency amount of \$168.5 million is included in the total cost contingency. The allocated contingency is an amount to cover anticipated but unknown contract modifications issued by Metro where applicable to specific contracts within each Standard Cost Category (SCC).

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

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

The project contingency remained unchanged this period.

| PROJECT COST CONTINGENCY DOLLARS IN THOUSANDS | | | | | | | | | |
|--|-------------------------------------|--------------------|-------------------|---------|--|--|--|--|--|
| | Original Contingency (Budget) | Previous Period | Current Period | To-Date | Remaining Contingency (Forecast) | | | | |
| Unallocated Contingency | 177,176 | 0 | 0 | 0 | 177,176 | | | | |
| Allocated Contingency | 168,534 | 0 | 0 | 0 | 168,534 | | | | |
| Total Contingency | 345,710 | 0 | 0 | 0 | 345,710 | | | | |

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

None to report at this time.

PROJECT LABOR AGREEMENTS (PLA) STATUS

The Contractor has committed to comply with PLA/CCP requirements for the Project. Project Staff will monitor and report the contractor's progress toward meeting the goals of the PLA/CCP once construction begins.

SUMMARY OF CONTRACT MODIFICATIONS

No Contract MODs have been executed since the award of Contract C1120–Tunnels, Stations, Trackwork, and Systems to Tutor Perini/O&G, a Joint Venture.

FINANCIAL/GRANT STATUS

| | (4) | (IN MILLIONS O | , | | (D(D) | (E) | (E/D) | (E) | (E(D) |
|-----------------------------------|---------------------------|-----------------------|-----------------------|---------------|----------------|-------------|--------------------|---------------------------|-------|
| SOURCE | (A) ORIGINAL BUDGET | (B) TOTAL FUNDS | (C) TOTAL FUNDS | (D) COMMIT | (D/B) MENTS | (E) EXPI | (E/B) ENDITURES | (F) BILLED TO SOURC | |
| | | ANTICIPATED | AVAILABLE | \$ | % | \$ | % | \$ | % |
| FEDERAL - SECTION 5309 NEW STARTS | \$1,187.000 | \$1,187.000 | \$100.000 | \$1,044.007 | 88% | \$91.965 | 8% | \$88.428 | 7% |
| FEDERAL CMAQ | \$169.000 | \$169.000 | \$43.000 | \$43.000 | 25% | \$22.703 | 13% | \$22.703 | 13% |
| MEASURE R - TIFIA LOAN | \$307.000 | \$307.000 | \$146.000 | \$307.000 | 100% | \$0.000 | 0% | \$0.000 | 0% |
| MEASURE R 35% | \$811.902 | \$811.902 | \$145.783 | \$217.390 | 27% | \$127.174 | 16% | \$56.265 | 7% |
| STATE CAPITAL PROJECT LOANS | \$54.762 | \$54.762 | \$54.762 | \$54.762 | 100% | \$54.762 | 100% | \$54.762 | 100% |
| TOTAL | \$2,529.664 | \$2,529.664 | \$489.545 | \$1,666.159 | 65.9% | \$296.604 | 11 7% | \$222.158 | 8.8% |

STATUS OF FUNDS ANTICIPATED

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

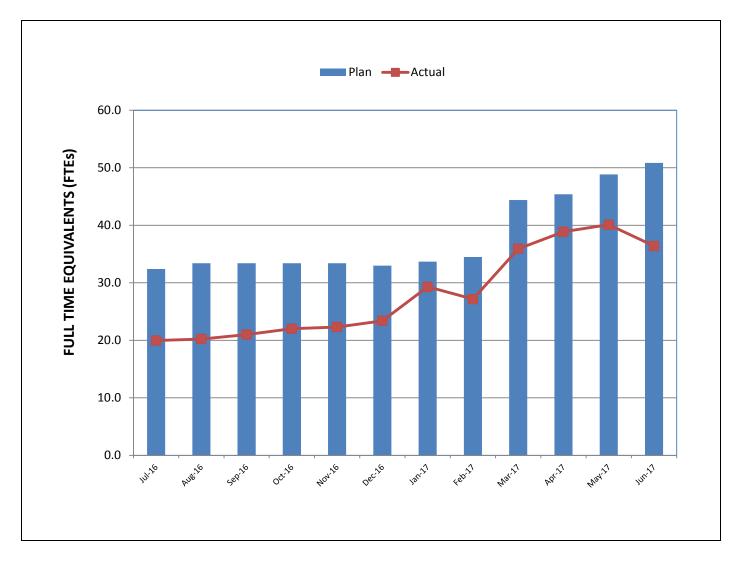
CMAQ (Congestion Mitigation & Air Quality): FTA grant CA-2016-2045 for \$43.0 million was awarded by the FTA on December 15, 2016. Funds are available for drawdown.

MEASURE R – TIFIA LOAN (Transportation Infrastructure Finance & Innovation Act): TIFIA Loan was executed on December 20, 2016 for \$307.0 million. \$146 million funds are available for drawdown. First disbursement is planned for November 2017.

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

STAFFING STATUS

Total Project Staffing – FTEs



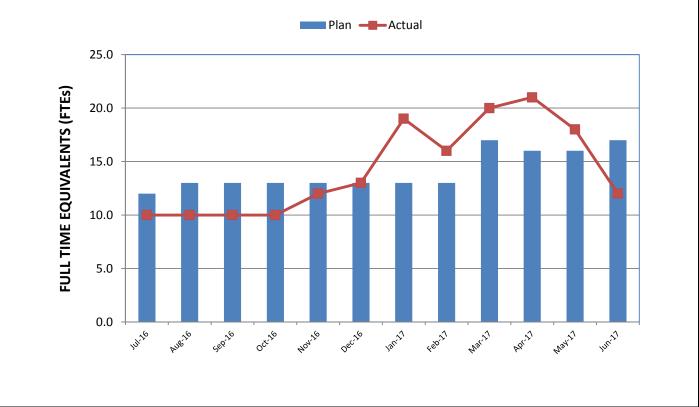
TOTAL PROJECT STAFFING

The overall FY17 Total Project Staffing Plan averages 38.1 FTEs per month.

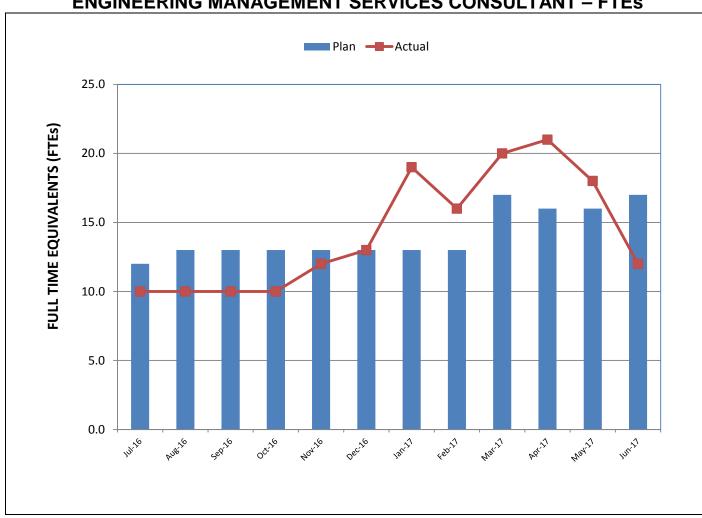
For June 2017, there were a total of 15.8 FTEs for MTA's Project Administration Staff and 20.6 FTEs for Consulting Staff. The total project staffing for July 2017 was 36.4 FTEs.

METRO STAFFING – FTEs Plan 25.0 FULL TIME EQUIVALENTS (FTEs) 20.0 15.0 10.0 5.0 0.0 Mar.17 Nov-16 Decilo API-1 000-10 Feb.11 Jun:11 101-26 AU8:16 Jan'11 Mayill Sepi16

> **CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTEs**



STAFFING STATUS (Continued)



STAFFING STATUS (Continued) ENGINEERING MANAGEMENT SERVICES CONSULTANT – FTES

REAL ESTATE STATUS

| | Real Estate Status Summary | | | | | | | | | | |
|---------------------|----------------------------|-----------|------------|--------|------------|---------------------------------------|----------|-----------|-----------|--|--|
| Decorintien | Number | Certified | Appraisals | Offers | Agreements | Condemnation | Reloc | Parcels | | | |
| Description | of Parcels | Certified | Completed | Made | Signed | Filed | Required | Completed | Available | | |
| | | | | | | · · · · · · · · · · · · · · · · · · · | | | | | |
| Full Takes | 3 | 3 | 3 | 3 | 1 | 2 | 21 | 11 | 1 | | |
| Part Takes | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | |
| TCE | 3 | 3 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | | |
| SSE | 23 | 1 | 1 | 1 | 0 | 1 | 3 | 0 | 0 | | |
| Permanent Easements | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Total Parcels | 33 | 8 | 6 | 6 | 1 | 4 | 25 | 11 | 1 | | |

QUALITY ASSURANCE STATUS

• None to report at this time.

ENVIRONMENTAL STATUS

- Performed daily noise monitoring activities at Century City Constellation Station for utility relocation work and submitted daily field reports.
- Participated in various project pre-construction and utility relocation meetings and reported on environmental compliance with local, state and federal regulations, specifications and EIR.
- Provided environmental awareness training to construction crew as required.
- Conducted field environmental monitoring and spot check inspections for stormwater and dust BMPs, cultural resources and Metro's Green Construction Policy.
- Participated in various C1120 contract coordination meetings and evaluated progress and schedules for environmental compliance and sustainability efforts.
- Completed 9th Quarter Mitigation Measures Status Report (MMSR) and submitted to FTA.
- Reviewed June 2017 Noise Monitoring Report.
- Submitted draft Noise Control and Monitoring Plan and Haul Route to City of Beverly Hills.
- Coordinated with City of Beverly Hills staff on the permit process for abatement of the former Ace Gallery building.
- Researched groundwater quality and quantity for future station dewatering activities.

CONSTRUCTION RELATIONS STATUS

- Attended the following meetings: Construction Management, Advanced Utility Relocations, Construction Relations, Environmental Mitigations, Third Party Workshop, Marketing, Social Media and Bus Relocations and Stops.
- Conducted online and door-to-door outreach for community meetings.
- Addressed traffic control complaints related to utility work on Constellation Boulevard.
- Updated Facebook/Twitter Website as needed.
- Produced and distributed two pre-construction work notices for advanced utility relocations.
- Made Project presentations at the following: Elected Officials Briefing, Spago and Citizen

Restaurant Meeting and Century City Business Improvement District Meeting.

• Conducted field outreach regarding Ace Gallery building abatement with businesses in the Wilshire/Rodeo area.

CREATIVE SERVICES STATUS

- Conducted community outreach and coordinated cultural partnerships.
- Attended site meeting and tour with Westfield Mall management.

SAFETY & SECURITY STATUS

- Third party advanced utility relocation work continues. *No injuries reported during July 2017.*
- Third party advance utility construction work is being monitored to document contractor compliance with regulations and good business practices.
- Attended LADWP Water and Power Field Tool-Box Safety Meetings and conducted site safety walks.
- Attended weekly Project Issues Standing Meetings.
- Conducted Safety Workshop and coordination meetings with TPOGJV safety staff and defined over-the- shoulder review schedules.
- Attended Telecom Joint Trench Weekly Construction Meetings.
- Attended LADWP Water/Power Relocation Weekly Construction Meeting.
- Continued coordination with the D/B's Contractor safety personnel to insure presubmittal compliance for adequate contractual construction safety staffing.
- Conducted project safety orientation for new Metro/Consultants and IPMO project staff.
- Will track injury and work hour statistics when the D/B's NTP date commences. Coordination with the D/B's Contractor Safety Manager is ongoing.
- Continued ongoing project safety and security administrative requirements.
- Conducted over-the-shoulder reviews on safety/security submittal drafts with TPOGJV safety staff.
- Conducted ROW and worksite safety walks.

THIRD PARTY AGREEMENT STATUS

| No. | Third Party | Type of Agreement | Forecast Execution Date | Required Need Date | Status/ Comments |
|-----|---|------------------------------------|-------------------------------|-----------------------|---|
| 1 | City of Los Angeles (LA) | Master Cooperative Agreement | N/A | N/A | Parties will work under 2003 MCA. |
| 2 | City of Beverly Hills (COBH) | Memorandum of Agreement | 03/17(A) | 03/17(A) | Reimbursement Agreement was executed in March 2017. |
| | | | 06/17(A) | 06/17(A) | Beverly Hills City Council approved the construction permit for SCE work in June 2017. Other utility relocation construction permits will be processed as needed. |
| | | | 03/18 | 04/18 | Metro continues to work with the City to establish an MOA for the C1120 Design/Build contract. Required Need Date reflects turnover date to C1120 contractor for station footprint availability. |
| 3 | Los Angeles Department of Water and Power (LADWP)- Water & Power | Master Cooperative Agreement | N/A | N/A | Metro and LADWP will continue to work under the terms of the previous Master Cooperative Agreement. |
| 4 | Los Angeles County Public Works Flood Control | Master Cooperative Agreement | N/A | N/A | Executed. |
| 5 | Private Utilities | Utility Cooperative Agreement | N/A | N/A | AT&T, Pac Bell, SBC, MCI, Verizon, Southern California Gas Company (SCGC), TCG Los Angeles – Metro is working under existing agreements. |
| | | | 11/17 | 11/17 | Level 3 – Metro and Level 3 have initiated a new agreement. Currently, awaiting comments from Level 3. Time Warner Pacific West LLC, D/B/A Time Warner Cable – County Counsel to respond to Time Warner's latest comments. SCE – Metro and SCE have initiated a new agreement. A draft is under review. Veolia – A draft agreement has been submitted to Veolia for review and comment. Sprint – A draft of the Agreement submitted has been submitted to Sprint, pending comments. |
| | | | 09/17 | 09/17 | Zayo, XO Communications, LLC – the agreements have been finalized and will be presented to the Board. |

ADVANCED UTILITY RELOCATION STATUS

Century City Constellation

- Telecom joint trench civil work in Century City was completed in June 2017. Telecom joint trench cable pulling and splicing work is anticipated completion by September 2017.
- The Los Angeles Department of Water and Power (LADWP) Water utility relocations inside the TBM launch box completed in June 2017.
- LADWP Power utility relocations are ongoing at the Century City Constellation Station.

Wilshire/Rodeo

• Advanced third party utility relocations at the Wilshire/Rodeo Station will begin with the relocation of SCE facilities in September 2017. Obtained approval of SCE construction permit by the City of Beverly Hills in June 2017.

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 Beverly Hills, City of Los Angeles Bureau of Engineering and the Los Angeles Police Commission to obtain Peak Hour Exemptions and Nighttime Construction Variances.

- Peak Hour Exemption application is in progress for the TBM launch box excavation.
- A peak hour exemption for the LADWP Water relocation has been approved from May 15, 2017 to August 17, 2017. Construction work completed in June 2017.
- Peak Hour Exemption application for AT&T relocations on Constellation Boulevard is being processed.
- Nighttime noise variance for relocation of third party utilities on Constellation Boulevard is approved through October 2017. *Application for extension of noise* variance will be submitted at the end of August 2017 to LAPD.

CHRONOLOGY OF EVENTS

| August 2012 | FTA Record of Decision |
|----------------|--|
| January 2013 | FTA approval to enter to Preliminary Engineering |
| December 2014 | FTA approval to enter to New Starts Engineering Phase |
| March 2015 | Began Real Estate Acquisition |
| May 2015 | Began Advanced Preliminary Engineering |
| September 2015 | Issued RFQ for C1120 Design/Build contract |
| October 2015 | Received RFQ responses for C1120 Design/Build contract |
| May 2016 | Submitted draft FFGA application |
| May 2016 | Submitted TIFIA loan application |
| June 2016 | Submitted application to FTA requesting an FFGA |
| June 2016 | Received RFP Proposals for Contract C1120 |
| September 2016 | Began joint trench construction in Century City |
| December 2016 | FTA executed FFGA |
| December 2016 | Received TIFIA Loan |
| January 2017 | NTP for Construction Management Support Services Contract |
| January 2017 | Metro Board approved staff recommendation to award the Design/Build Contract C1120 to Tutor Perini/O&G, a Joint Venture (TPOG) and approved Life-of-Project Budget |
| January 2017 | Issued C1120 Contract Award TPOG |
| April 2017 | Issued C1120 Contract NTP to TPOG |
| May 2017 | Mobilized C1120 Contract Design and Construction Team |

| Description: Purple Line Extension Design-Bui Contractor: Tutor Perini/O&G a Joint Venture | Contract No. C1120 Status as of: July 28, 2017 | | | | | | | | |
|---|--|--------|--|--|--|--|--|--|--|
| Progress / Work Completed: | Major Activities (In Progress): | | | | | | | | |
| Quality design plan submitted for review and approval Draft geotechnical boring plan submitted for review BIM Implementation Plan submitted Safety plan submitted for review and approval Draft CDRL comments received Sustainability plan submitted for review and approval | Prepare 60% Design Package 1 - Utility/Civil Design at Launch Box Century City Prepare 60% Design Package 2 - Remaining Utility Conflicts (Outsic of the Launch Box) Prepare Quality Construction Plan | | | | | | | | |
| Areas of Concern: - None | Major Activities Next Period: Discuss draft demolition schedule with COBH for former ACE Gallen Targeting November for building demolition Baseline schedule submission Establish partnering goals, agendas, schedules, and next steps for first partnering session Public outreach meeting for geotechnical borings in COBH Continue final design development Link schedule activities to CDRL list | у. | | | | | | | |
| Schedule Summary: | Original Contract Dates Extension Contract Forecast Variand | ce CDs | | | | | | | |
| Date of Award:01/31/17Notice to Proceed:04/26/17 | Notice to Proceed (Estimated) 04/26/17 0 04/26/17 04/26/17 | 0 | | | | | | | |
| Original Contract Duration:3,100CDCurrent Contract Duration:3,100CD | MS 1 (NTP + 2950): Substantial Completion 05/24/25 0 05/24/25 05/24/25 0 | 0 | | | | | | | |
| Elapsed Time from NTP: 94 CD | MS 2 (NTP + 2600): Stations Available 06/08/24 0 06/08/24 06/08/24 06/08/24 | 0 | | | | | | | |
| | MS 3 (NTP + 2700): Ready for Systems 09/16/24 0 09/16/24 09/16/24 09/16/24 09/16/24 | 0 | | | | | | | |
| | MS 4 (NTP + 3100): Demobilization 10/21/25 0 10/21/25 0 | 0 | | | | | | | |
| Physical Percent Complete: | Cost Summary:\$ In millions1. Award Value:1,376.5 | | | | | | | | |
| Physical completion: 2.55% * Note: Physical completion assessment reflects | Executed Modifications: 0.0 Approved Change Orders: 0.0 Current Contract Value (1+2+3): 1,376.5 | | | | | | | | |
| work completed and work in progress. | 4. Current Contract Value (1+2+3). 1,370.3 5. Incurred Cost: 149.8 | | | | | | | | |

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CONSTRUCTION PHOTOGRAPHS



LAWDP Power relocation work in Century City

COST AND BUDGET TERMINOLOGY

Project Cost Descriptions

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

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

LIST OF ACRONYMS AND ABBREVIATIONS

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

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

| FTAFederal Transit AdministrationFTEFull Time EquivalentGBRGeotechnical Baseline ReportGDSRGeotechnical Design Summary ReportHRTHeavy Rail TransitHRVHeavy Rail VehicleIFBInvitation for BidIPMOIntegrated Project Management OfficeJVJoint-VentureLALos AngelesLABOELos Angeles Bureau of EngineeringLABOELos Angeles Bureau of Street LightingLACFCDLos Angeles Bureau of Street LightingLACFCDLos Angeles Department of Transportation AuthorityLADDWLos Angeles Department of Public WorksLADWPLos Angeles Department of Vater and PowerLAUSDLos Angeles International AirportLAXLos Angeles International AirportLAXLos Angeles International AirportLAYLos Angeles International AirportLAYLos Angeles International AirportLAXLos Angeles International AirportLAXLos Angeles Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMerorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNPESNational Pollution Discharge Elimination SystemNTENotice To ProceedOCCOperational Health and Safety AdministrationPAVMSPublic Address/Visual Messaging SignPEERPreliminary | | |
|---|--------|--|
| GBRGeotechnical Baseline ReportGDSRGeotechnical Design Summary ReportHRTHeavy Rail TransitHRVHeavy Rail VehicleIFBInvitation for BidIPMOIntegrated Project Management OfficeJVJoint-VentureLALos AngelesLABOELos Angeles Bureau of EngineeringLABOELos Angeles Bureau of Street LightingLACFCDLos Angeles Bureau of Street LightingLACFCDLos Angeles County Flood Control DistrictLACMTALos Angeles Department of Transportation AuthorityLADOTLos Angeles Department of Public WorksLADWPLos Angeles Department of Vublic WorksLADWPLos Angeles Unified School DistrictLAWALos Angeles International AirportLATPLimited Notice To ProceedLONPLefter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPESNational Pollution Discharge Elimination SystemMTENotice of DetroceedOCCOperations Control CenterOSHAOccupational Health and Safety Administration | FTA | Federal Transit Administration |
| GDSRGeotechnical Design Summary ReportHRTHeavy Rail TransitHRVHeavy Rail VehicleIFBInvitation for BidIPMOIntegrated Project Management OfficeJVJoint-VentureLALos AngelesLABOELos Angeles Bureau of EngineeringLABOSLos Angeles Bureau of Street LightingLAFCDLos Angeles County Flood Control DistrictLACFCDLos Angeles County Flood Control DistrictLACMTALos Angeles Department of Public WorksLADDTLos Angeles Department of Public WorksLADWLos Angeles Department of Vater and PowerLAUSDLos Angeles International AirportLAWALos Angeles International AirportLAWALos Angeles International AirportLAWALos Angeles International AirportLAWALos Angeles International AirportLATPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice To ProceedNDNNot ApplicableNEPANational Environmental Protection ActNODNotice To ProceedNPDESNational Environmental Protection ActNODNotice To | | • |
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| LABSLLos Angeles Bureau of Street LightingLACFCDLos Angeles County Flood Control DistrictLACMTALos Angeles County Metropolitan Transportation AuthorityLADOTLos Angeles Department of Transportation AuthorityLADVWLos Angeles Department of Public WorksLAUSDLos Angeles Department of Water and PowerLAUSDLos Angeles Unified School DistrictLAWALos Angeles International AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTFNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPAVMSPublic Address/Visual Messaging SignPEERPerminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LABOE | Los Angeles Bureau of Engineering |
| LACFCDLos Angeles County Flood Control DistrictLACMTALos Angeles County Metropolitan Transportation AuthorityLADOTLos Angeles Department of TransportationLADPWLos Angeles Department of Public WorksLADWPLos Angeles Department of Water and PowerLAUSDLos Angeles Unified School DistrictLAWALos Angeles International AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMothly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEERPermit EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LABOS | Los Angeles Bureau of Sanitation |
| LACMTALos Angeles County Metropolitan Transportation AuthorityLADOTLos Angeles Department of TransportationLADPWLos Angeles Department of Public WorksLADWPLos Angeles Department of Water and PowerLAUSDLos Angeles Unified School DistrictLAWALos Angeles World AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNTENotice To ProceedOCCOperational Health and Safety AdministrationPA/VMSPublic Address/visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LABSL | Los Angeles Bureau of Street Lighting |
| LADOTLos Angeles Department of TransportationLADPWLos Angeles Department of Public WorksLAUSDLos Angeles Department of Water and PowerLAUSDLos Angeles Unified School DistrictLAWALos Angeles World AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LACFCD | Los Angeles County Flood Control District |
| LADPWLos Angeles Department of Public WorksLADWPLos Angeles Department of Water and PowerLAUSDLos Angeles Unified School DistrictLAWALos Angeles Unified School DistrictLAWALos Angeles International AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPAVMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LACMTA | Los Angeles County Metropolitan Transportation Authority |
| LADWPLos Angeles Department of Water and PowerLAUSDLos Angeles Unified School DistrictLAWALos Angeles World AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LADOT | Los Angeles Department of Transportation |
| LAUSDLos Angeles Unified School DistrictLAWALos Angeles World AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Environmental Protection ActNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPAVMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LADPW | Los Angeles Department of Public Works |
| LAWALos Angeles World AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNTENot to ExceedNTFNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LADWP | Los Angeles Department of Water and Power |
| LAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LAUSD | Los Angeles Unified School District |
| LNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LAWA | Los Angeles World Airports |
| LONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LAX | Los Angeles International Airport |
| LOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LNTP | Limited Notice To Proceed |
| LPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LONP | Letter Of No Prejudice |
| LRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LOP | Life-of-Project |
| MCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LPA | Locally Preferred Alternative |
| MISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | LRTP | Long Range Transportation Plan |
| MMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | MCA | Master Cooperative Agreement |
| MOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERRPermit Engineering Evaluation ReportPIPProject Implementation Plan | MIS | Major Investment Study |
| MPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERRPermit Engineering Evaluation ReportPIPProject Implementation Plan | MMRP | Mitigation Monitoring and Reporting Plan |
| N/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan | MOU | Memorandum of Understanding |
| NEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan | MPSR | Monthly Project Status Report |
| NODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan | N/A | Not Applicable |
| NPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan | NEPA | National Environmental Protection Act |
| NTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan | NOD | Notice of Determination |
| NTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan | NPDES | National Pollution Discharge Elimination System |
| OCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | NTE | Not to Exceed |
| OSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan | NTP | Notice To Proceed |
| PA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | OCC | Operations Control Center |
| PEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan | OSHA | Occupational Health and Safety Administration |
| PEER Permit Engineering Evaluation Report PIP Project Implementation Plan | PA/VMS | Public Address/Visual Messaging Sign |
| PIP Project Implementation Plan | PE | Preliminary Engineering |
| PIP Project Implementation Plan | PEER | Permit Engineering Evaluation Report |
| | PIP | |
| | PLA | • • |

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

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

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

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