

# Crenshaw/LAX Transit Project



Metro<sup>®</sup>

# **CRENSHAW/LAX TRANSIT PROJECT**

## **QUARTERLY PROJECT STATUS REPORT**

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

**MARCH 2018**

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## **PROJECT OVERVIEW**

### **Contract Closeout**

**Contract C0990** - The advanced utility relocations contract with Metro Builders and Engineers Group, LTD was substantially completed on August 21, 2014. The Metro Board authorized a final settlement in March 2016 on all remaining issues. A final payment was issued to the contractor in April 2016. The contract is closed out.

**Contract C0992** – The concrete ties contract with Rocla Concrete Tie Inc., was substantially completed on August 15, 2014. The contractor was paid in full and the contract is closed out.

**Contract C0992A** – The running rail and bumping posts contract with LB Foster Rail Technology Corp was substantially completed on May 8, 2015. The contractor was paid in full and the contract is closed out.

**Design- Build Contract C0988 (Alignment)** – The design-builder, Walsh-Shea Corridor Constructors (WSCC) continues engineering in support of construction.

Construction efforts by the design-builder continued along all areas of the alignment. Underground work continues at the north end of the project. The contractor has substantially completed the twin tunnels. The three underground stations remain at various levels of completion with work continuing on wall, roof, and entrance concrete placements.

Three of the four at-grade stations structure concrete placements are substantially completed with canopy, entrance, and finish work underway. The aerial station structure concrete placement is substantially complete with canopy installed and entrance and finish work underway.

The underground shallow tunnel structure in front of the south runways of LAX along Aviation Boulevard is substantially completed. The shallow tunnel box structure south of Leimert Park Station and the shallow tunnel box structure south of Park Mesa Heights are both in various stages of construction.

All six bridge superstructures are substantially complete with the exception of the finishes and systems installations. Work has been completed on the mechanically stabilized earth (MSE) walls and continues for right-of-way at-grade work. Various construction efforts continue on the roadway section within the Park Mesa Heights area.

Trackwork installation is continuing in areas available along the southern area of alignment. The contractor has completed construction of six of 17 at-grade crossings.

**Design- Build Contract C0991 Southwestern Yard (Division 16)** – The design-builder, Hensel Phelps / Herzog JV (HPH) substantially completed final design and submission of submittals required for construction on October 26, 2016. Design for the future expansion of the main shop was issued as a preliminary engineering package for Metro's use in the future. Design and engineering is continuing in support of construction.

## **PROJECT OVERVIEW (Continued)**

*The contractor has completed the main shop slab on grade, metal decking installation, and CMU walls, and is continuing with closing the exterior of the building and roof construction. Installation of exterior/interior framing, sheeting, drywall, wall finishes, electrical, mechanical, plumbing, sewer connection, fire line and roof drain line activities continues in the main shop. Continued installation of roof equipment, car hoists, and 15 and 10-ton cranes in the main shop. The slab on grade was placed, structural steel erected, roofing and CMU wall constructed within the material storage building ready for exterior skin installation. Construction completed on the car wash and car cleaning footings, grade beams, underground conduits and piping, pit construction and installation of the carwash prefabricated structure and cleaning platform canopy. Construction of the paint and body shop continued with ductbank, conduits, underground piping, and footings.*

*In the yard area, construction continued with train control, communication, TPSS ductbank, underground gas, sewer connection, and water line, foundations for overhead catenary system, light foundation installations and started the SWY precast parameter wall foundations. Continued trackwork activities including under drain, sub-ballast, bottom ballast, storage track and turnouts including the double X-over installation.*

### **Right-of-Way**

Metro added in January 2016, two full takes and five part-takes/TCE's required for the construction of the Project. There are now a total of 79 parcels (eight have been decertified). There are 37 full takes, 27 partial takes and 15 temporary construction easements (TCE's). *There have been 76 parcels acquired through March 2018.* Thirty-six full takes, 26 part-takes and 14 TCE's have been provided to the design-builder WSCC.

### **Systems**

Metro staff initiated a study to explore possible alternative layouts to accommodate the central control functions associated with new project needs, such as Crenshaw/LAX project, within the existing ROC facility as an interim measure. Metro has determined that the best course of action is to expand the existing functional operations at the ROC to support the new five new rail lines and extensions including Foothill Ext., Expo II, Crenshaw/LAX, Regional Connector and Purple Extension Projects. The existing ROC service control and closed circuit television monitoring areas are being expanded and reconfigured for each new rail line extension. The supporting facilities and electrical\communication systems are also expanded and upgraded accordingly to suit the needs of the growing Metro operations. The ROC Reconfiguration Plan will be updated to suit the central control needs of each upcoming new rail line extension. Metro will prepare a design update for the Crenshaw/LAX Project. All work for the ROC is planned to be completed concurrently with the C0988 design-builder scope work to ensure continuity of the systems effort.

### **Program Management**

In May 2013, the Board approved a Motion that amended the fiscal year 2014 Proposed Metro Budget to include funding for an underground station at Leimert Park Village and an at-grade

## **PROJECT OVERVIEW (Continued)**

station at Hindry as part of the baseline project. This Motion added \$135 million to the LOP budget which included \$80 million in uncommitted fiscal year 2014 funding and \$55 million from the City of Los Angeles. Metro reached agreement with the City of Los Angeles to cover the incremental cost of the stations above the \$80 million identified in fiscal year 2014 funding which the Metro Board approved in May 2013.

With board approval on June 27, 2013, the additional \$135 million is included in the sources of funds chart as well as the additional \$160.1 million for the increased cost of the base work. All recommendations were approved by the Board on June 27, 2013 except that change order authority was maintained at \$500,000. This board action amended the life of project budget to \$2,058 million.

The Board approved on May 28, 2015 an increase in the amount of funding that the Crenshaw/LAX Project is contributing toward the total cost of the Southwestern Yard Project. An additional \$10.8 million is required to be funded by drawdown from the Unallocated Contingency Current Budget SCC 90 and added to the Southwestern Yard Current Budget SCC 30. The current budget includes the 49% cost allocation share that the project is responsible for paying which includes funding of the design and construction for the Southwestern Yard. This amount is revised to \$150.2 million out of a new total of \$307.2 million adopted by the Board.

The amount of funding available for the Crenshaw/LAX Transit Corridor Project, excluding the Southwestern Yard \$150.2 million allocation and Environmental/Planning budget of \$26.0 million is \$1,881.8 million.

Although there is no change to the Total LOP Current Budget there was a reallocation for changes to the SCC elements within the Current Budget in April 2017. The reallocation was required due to the draw down to date of the SCC 90 Allocated Contingency for changes issued to the design-build contractor, additional relocations of utilities by third parties, additional legal services and special services as well as an increase in professional services for construction and project management oversight.

The LOP budget is funded by various sources of funds which include local, state and federal funding. The TIFIA Loan is categorized under local funds as the loan is secured by a pledge of Measure R local sales tax funds. The funding percentages are as follows: local and state funding 91.3%, (includes Measure R TIFIA Loan), and federal funding is 8.7%.

*The project commitments thru March 2018 are \$1,999.5 million or 97.1% of the Current Budget. The project expenditures thru March 2018 are \$1,560.2 million or 75.8% of the Current Budget. The project expenditures are less than anticipated for the month as the design-builder was late in submitting their pay application and therefore the costs are not included.*

## **PROJECT OVERVIEW (Continued)**

The current period expenditures are for Contract C0988 design-builders monthly construction costs and professional services costs such as construction management and administrative staffing. The expenditures to date also include the Southwestern Yard expenditures that are part of the 49% cost allocation share that the Project is responsible for paying for. The 51% cost allocation is reported within another Metro internal project number. The total costs for the Southwestern Yard project is included in the Appendix.

In December 2016, the C0988 design-builder submitted a "Completion Schedule" which was subsequently reviewed and approved by Metro on December 16, 2016. This schedule represents a re-baseline of WSCC's Contract Schedule which reflects their means and methods for completing construction and testing during the remaining years with a commitment to complete on time to support Metro's planned revenue operations in the fall of 2019. The approved Completion Schedule resets WSCC's Contract Milestone #1 Substantial Completion to May 1, 2019.

*WSCC has not submitted a schedule update for the last two months. Metro continues to reflect in this report a 56-calendar day delay to WSCC's Contract Milestone #1 Substantial Completion date of May 1, 2019. Metro has requested WSCC to provide a Schedule Mitigation Plan to mitigate the 56 days of delay.*

## **MANAGEMENT ISSUES**

**Concern No. 1:** Timely future reviews of WSCC final design submittals by City of Los Angeles.

**Status/Action** There are a few remaining final design submittals that are required to be submitted by the Contractor for City of Los Angeles review. Metro meets with the Contractor several times a week on design submittal status and works with the Contractor and City to resolve outstanding issues. Metro will continue to take action and strictly monitor the review comments from the agencies and work with the contractor to ensure submittals are coordinated, quality checked and submitted within necessary timeline for reviews.

**Concern No. 2:** Design-builders construction schedule

**Status/Action** WSCC submitted a "Completion Schedule" which was subsequently reviewed and approved by Metro on December 16, 2016. This schedule represents a re-baselining of WSCC's Contract schedule which reflects their means and methods for completing construction and testing during the next three years with a commitment to complete on time to support Metro's planned revenue operations in the fall of 2019. The approved Completion Schedule resets WSCC's Contract Milestone #1 Substantial Completion to May 1, 2019.

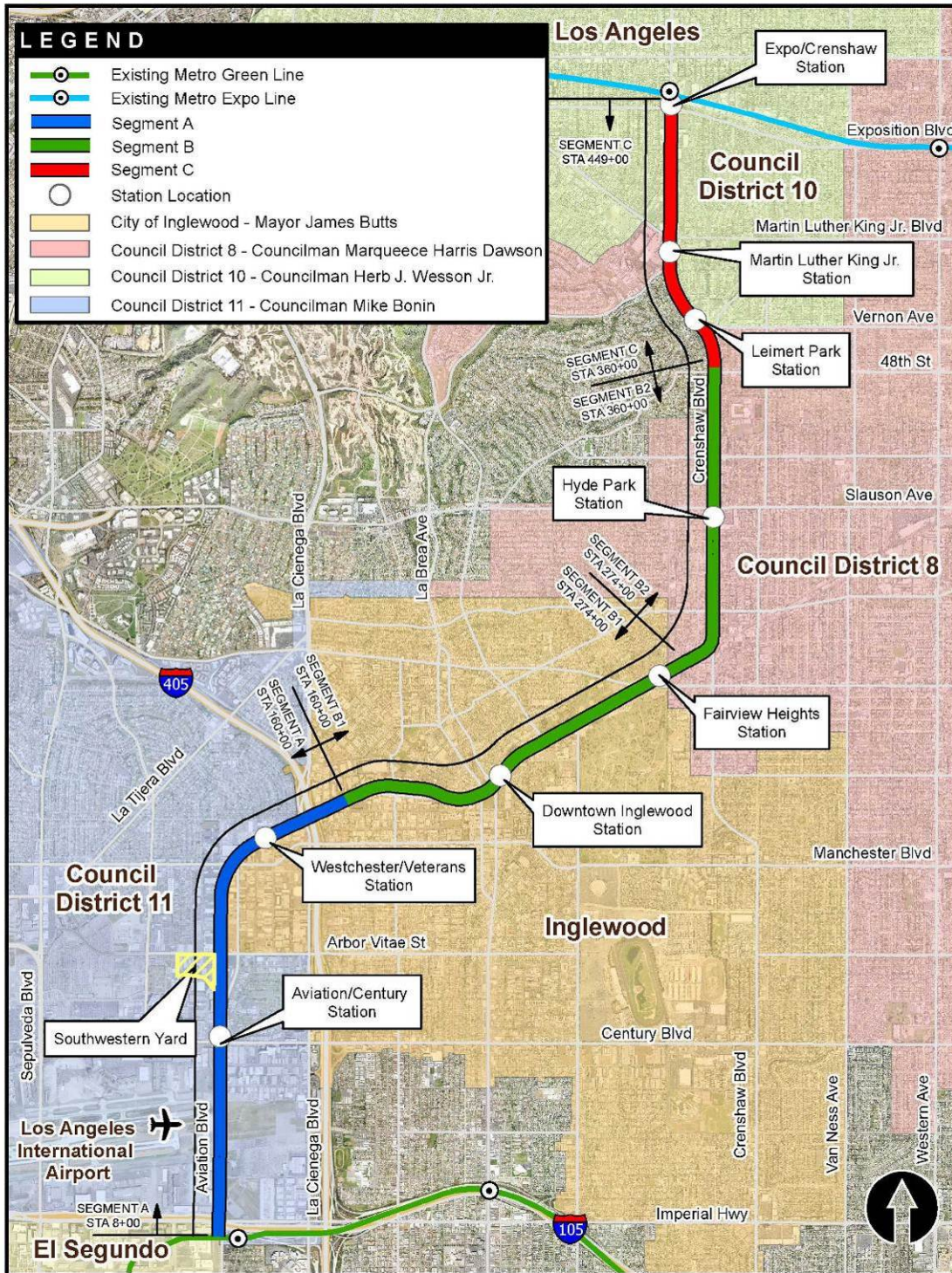
Metro received the January schedule update from WSCC after the close of the reporting period deadline in February 2018. The update forecast a 56-calendar day delay to WSCC's Contract Milestone #1 Substantial Completion date of May 1, 2019. This was an additional 16-calendar days of delay from the December 2017 forecast.

*WSCC has not yet submitted a schedule update for the period ending March 30, 2018. Therefore, Metro is continuing to show the 56-calendar day delay to WSCC's Contract Milestone #1 Substantial Completion date of May 1, 2019. Metro has requested WSCC to provide a Schedule Mitigation Plan to mitigate the 56 days of delay.*

**Concern No. 3:** Remaining Unallocated Contingency is less than 2% of Total Project Budget.

**Status/Action** *Metro monitors and reports on the drawdown of unallocated contingency on a monthly basis. A new internal Metro project number, "Crenshaw Non-Project Activities" for tracking these costs will be active commencing in July 2018. Staff continues to evaluate the potential uses of the remaining unallocated contingency.*

**PROJECT ALIGNMENT**



## **PROJECT SCOPE**

The Crenshaw/LAX Transit Corridor is a north/south corridor that serves the cities of Los Angeles, Inglewood, Hawthorne and El Segundo as well as portions of unincorporated Los Angeles County. The alignment extends 8.5 miles, from the intersection of Crenshaw and Exposition Boulevards to a connection with the Metro Green Line at the Aviation/LAX Station. The project provides major connections with the Los Angeles International Airport (LAX) as well as links to the Metro Green Line, the Exposition Line and countywide bus network. The Board adopted a light rail system as the Locally Preferred Alternative (LPA) in December 2009.

The alignment is comprised of a double-tracked right-of-way consisting of sections of at-grade in-street, at-grade within railroad right-of-way, aerial, and below-grade guideway sections, eight stations, park and ride facilities at three locations, utilities, landscaping, roadway improvements required by the project and a maintenance & storage facility (Southwestern Yard).

The scope of work for the three construction contracts and two owner-supplied equipment contracts is shown below.

### **Contract C0990 Crenshaw/LAX Advanced Utility Relocations**

The design of several early utility relocations was advanced sufficiently into final design to allow for bidding of critical early utility relocations. This contract includes relocating three (3) existing duct banks that feed various NAVAIDS on the south airfield complex. New ductbank infrastructure will be built by Metro with the fiber replacement work and cut-over by FAA/LAWA. These ductbanks contain fiber lines and power lines which belong to both LAWA and FAA. Since the track alignment is below grade at these crossings, the ductbanks have to be relocated in advance to allow for the construction of the track alignment. In addition, other wet utilities along the Harbor Branch and Crenshaw Boulevard segments of the corridor that can be relocated in advance are included as part of this contract.

The project delivery method for this contract was bid-build Invitation for Bid (IFB).

### **Design-Build Contract C0988 Crenshaw/LAX Transit Corridor**

This is the largest project contract which will complete final design and construction of the infrastructure required along the corridor alignment. The structures required to be constructed are eight stations, grade separations including flyover structures, cut and cover trenching, tunneling and three park-n-ride facilities. The scope of work will include all the necessary systems work including train control, traction power supply substations and distribution, overhead catenary, communications, and systems tie-in to the existing Metro Green Line. The project delivery method for this contract was design-build utilizing a two-step best value procurement approach with submittal of qualification statements through a RFQ process, pre-qualification of qualified proposers followed by release of a RFP soliciting technical and price proposals with an option at Metro's discretion for best and final offers (BAFO).

## **PROJECT SCOPE (Continued)**

### **Design-Build Contract C0991 Southwestern Yard**

The Board-adopted 2009 Long Range Transportation Plan (LRTP) for Los Angeles County envisioned one new central Light Rail Transit (LRT) Maintenance facility to be used by all projects. Since the LRTP adoption, substantial progress on light rail system planning and development, including more accurate vehicle assignments, cost estimates, and functional requirements, has led Metro to conclude that two new LRT yards, an Eastern Yard and a Southwestern Yard, are necessary. This contract will construct the Southwestern Yard which will consolidate maintenance facility requirements for this project as well as the operating Metro Green Line, proposed South Bay Metro Green Line Extension and proposed Metro Green Line to LAX. The cost of constructing the Southwestern Yard will be proportionately split among the four projects.

The project delivery method for this contract was a two-step design-build IFB approach.

### **Owner-Supplied Equipment - Contract C0992 Crenshaw/LAX Concrete Ties and Assembly Items**

Metro added a contract for procuring owner-supplied equipment for the Design-Build Contract C0988 Crenshaw/LAX Transit Corridor Contractor. The equipment within the contract scope of work includes concrete ties and assembly items.

The project delivery method for this contract was bid-build IFB approach.

### **Owner-Supplied Equipment - Contract C0992A Crenshaw/LAX Rail and Bumping Posts Procurement**

Metro added a contract for rebidding the procurement of running rail and bumping posts for the Design-Build Contract C0988 Crenshaw/LAX Transit Corridor Contractor.

The project delivery method for this contract was bid-build IFB approach.

### **Start Up**

The commencement of pre-revenue operations will be determined by Metro Operations. The design-builder will have completed Phase I systems integration testing (SIT) and Metro will have subsequently completed and passed Phase II SIT. Metro may conduct some Phase II SIT efforts concurrently with the start of pre-revenue operations at the discretion of Metro Operations. All testing will be required to include and pass a "stress test" of maximum operational service levels to be acceptable. Pre-revenue operations includes: 1) train runs, especially those involving multiple trains, on the integrated and fully operational extension; 2) rehearsal of expected revenue operations scenarios; 3) as well as abnormal and emergency scenarios in which random combinations of system interactions are tested; 4) equipment "burned-in"; and 5) 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**

Activity ID	Activity Name	Milestone Date	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
988-CT-33000	Turnover to Track (sta. 9+00 to 16+64) - Aerial Structure #1	27-Dec-17 A						
988-CT-23700	Turnover to Track - 111th St Bridge	10-Jan-18 A						
988-CT-84975	Bridge Emergency Walkway - Aviation / Century Bridge	25-Jan-18 A						
988-IFC-TCC02	I-Face: TC&C Room Ready for systems @ A02 Aviation/Century TC&C #3	05-Feb-18						
988-TW-1400	Destress DF Track - STA 27+15 to 28+20 - 111th St. Bridge - Seg. A	07-Feb-18						
988-IFC-ATC01	I-Face: Track Complete @ A01 (6+00 to 43+50)	08-Feb-18						
988-CT-5659	Ductbank - Manhole / Vault / Pad / Pull Box - TPSS-07/ Aux. Power (Future)	13-Feb-18						
988-CT-69535	F/R/P Columns Sequence 3 - MLK	15-Feb-18						
988-SCE-T1050	TPSS-01 Permanent Power Drop - SCE - Procurement of Cable and Equipmen	22-Feb-18						
988-TW-2100	Construct Ballasted Track - Arbor Rail Pile STA 103+50 to 118+58 Manchester - Seg. A	01-Mar-18						
988-MOD-2780	TPSS No.2 Upgrade from 1.5 MW to 2.0 MW	02-Mar-18						
991-APM1120	Metro LAWA Final Acceptance	09-Mar-18			△			
988-SCE-T1170	TPSS-03 Permanent Power Drop - SCE - Utility Install Infrastructure and conduit	15-Mar-18						
991-TW-30160	Construct Turnouts TO-43	21-Mar-18			△			
988-ATC-03300	Rough-In for Wayside Equipment @ A03 (85+90 to 130+00)	28-Mar-18						
988-ATC-01400	Install ATC Local Cable @ TC&C #1	03-Apr-18						
988-TW-9683	Construct Ballasted Track - STA 256+09 to 274+25 (High to Brynhurst)	16-Apr-18						
988-ATC-02750	Ground Bonds & Signals @ A02 (43+50 to 85+90)	18-Apr-18						
988-ATC-TIA5-3000	96th Street - Additional ATC Local Cable at TC&C #3	26-Apr-18						
988-CT-89148	Escalator Finishes - Aviation / Century	30-Apr-18						
988-MOD-3180	Deluge System at Expo Crossover	03-May-18						
988-ATC-03400	Install ATC Local Cable @ TC #4	08-May-18						
988-CT-50980	Turnover to Track - U-Trench #3	14-May-18						
988-CT-91808	Erect Elevator 1 & 2 Framing - Plaza - Expo	21-May-18						
988-FAT-01A50	ATC: Field Acceptance Testing @ Aviation TC&C #1 Continental (6+00 to 43+50)	15-Jun-18						
988-CT-9189	Backup Power (TPSS) - TPSS-04	25-Jun-18						
988-TW-4023	Destress DF Track - STA 274+25 to 316+66 (Underground #3) - Seg. B2	26-Mar-18						
991-CON-25575	Architect and Engineer Punchlist - Control Tower - Main Shop	27-Jun-18						△



MTA Board Action



MTA Staff



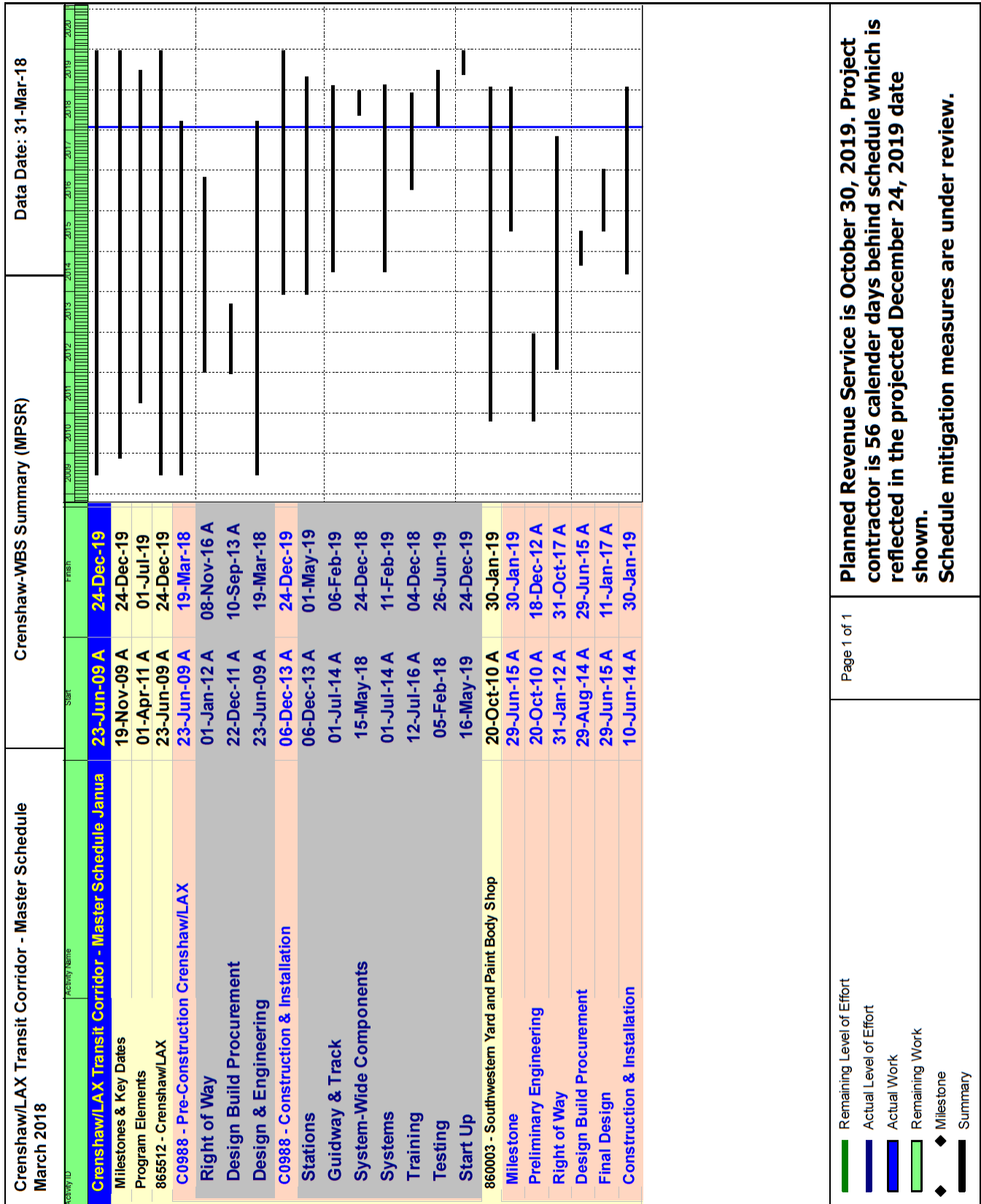
Walsh Shea Corridor Constructors



Hensel Phelps / Herzog

\*A\* following date is actual and completed

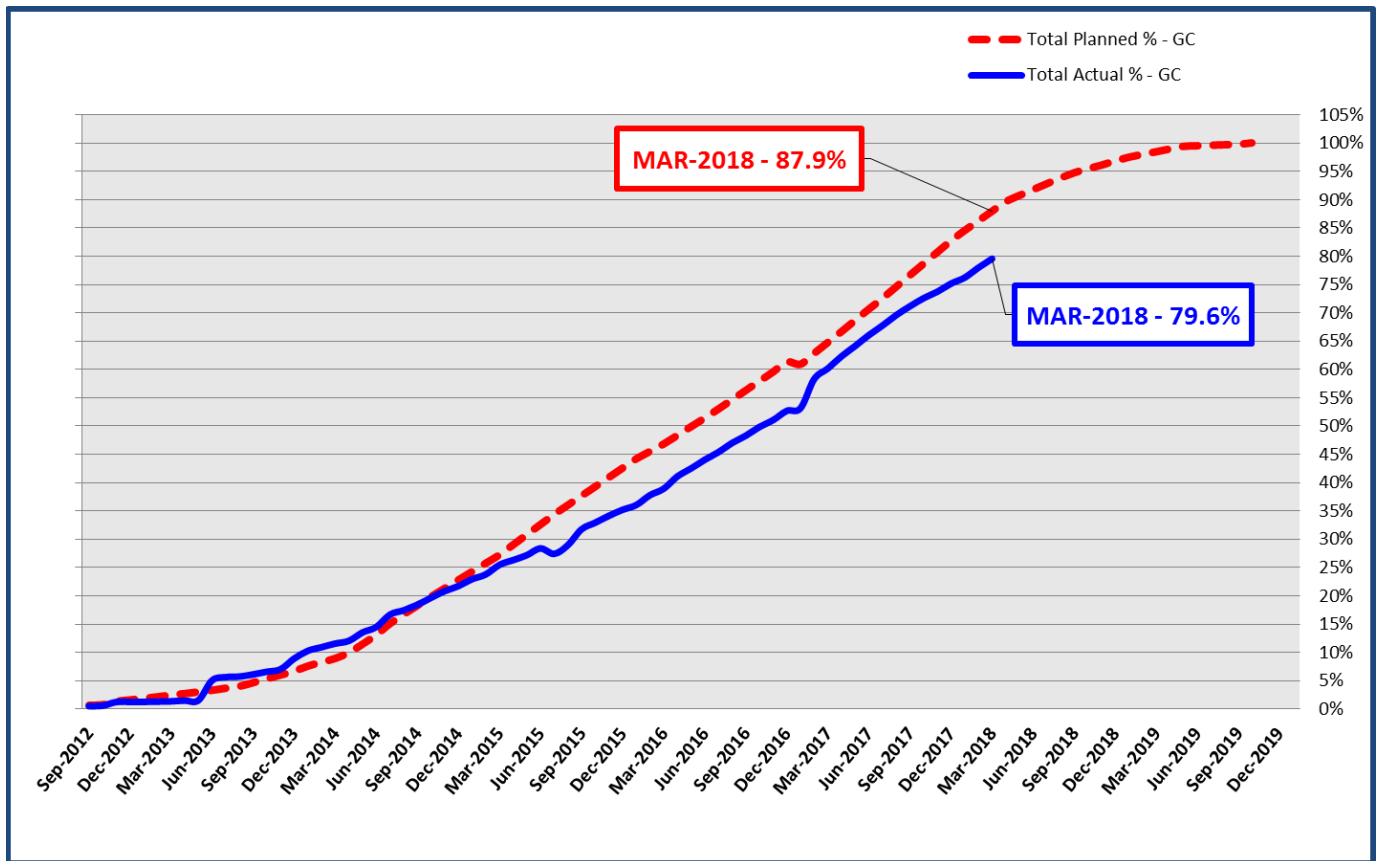
## PROJECT SUMMARY SCHEDULE



**SCHEDULE MEASUREMENTS**

	Status	Change from Last Period	Comment
Current Revenue Service:	10/30/2019	0	
Forecast Revenue Service:	12/24/2019	15	Behind Schedule
TIFIA Revenue Service:	10/30/2019	0	
<b>Final Design Progress:</b>			
Contract C0988	99.0%	0.0%	Behind Schedule
Contract C0990	100%	None	Design Completed
Contract C0991	91.5%	0.7%	On Schedule
Contract C0992	100%	None	Design Completed
Contract C0992A	100%	None	Design Completed
<b>Construction Contracts Progress:</b>			
Contract C0988	73.0%	1.4%	Behind Schedule
Contract C0990	100%	None	Substantially Completed
Contract C0991	60.1%	4.7%	One week behind Schedule
Contract C0992	100%	None	Substantially Completed
Contract C0992A	100%	None	Substantially Completed

## OVERALL CONSTRUCTION PROGRESS CURVE STATUS



The actual overall construction progress is 79.6% versus a planned progress of 87.9% through March 2018. The progress curves represent a composite percentage for the physical progress of work performed to complete the project's construction contracts, including, but not limited to the alignment design-build (C0988), advance utility relocation (C0990), Southwestern Yard design-build (C0991), and two equipment procurement contracts-concrete ties (C0992) and running rail (C0992A).

The physical progress percentage excludes non-construction items such as construction mobilization costs and all general requirement costs not tied specifically to a construction work effort.

The progress curve includes forecast for the alignment design-builder and includes the Southwestern Yard design-builder progress effort.

## **MAJOR EQUIPMENT DELIVERY STATUS**

### **Light Rail Vehicles**

The Board approved exercising Option 1 of Contract P3010 with KinkiSharyo International (KI) to provide light rail vehicles (LRV) for the Crenshaw/LAX project. The total number of vehicles in the option is 28 which include 20 LRVs for the Crenshaw/LAX project and two additional cars for spares.

The first Option 1 P3010 car was delivered in May 2017. The final P3010 car (22nd car) was delivered in September 2017, completing the Option delivery for the Crenshaw Project. All twenty-two Crenshaw cars are currently in revenue service on the Green and Blue Lines. KinkiSharyo/ASTS still needs to work on the Cutover (revenue service) software development to include Crenshaw's final alignment, track profiles, and berthing locations. Once completed, a series of software validation tests will need to be performed prior to implementation on the P3010s.

### **Universal Fare System Equipment**

A notice-to-proceed was issued on January 30, 2018 to the existing Metro Universal Fare System (UFS) contractor, Cubic Transportation Systems, Inc., to procure UFS equipment for the Crenshaw/LAX Project eight stations. The contractor will commence manufacturing of the equipment and will prepare for the installation of the fare equipment upon station availability. A manufacturing and installation schedule has been submitted by the UFS contractor in February 2018. The design-builder contractor (WSCC) has a Contract Milestone No. 2 "Complete UFS Station Areas" which is planned to be complete by November 1, 2018. The UFS contractor's installation schedule will be coordinated with the availability of each of the stations access areas.

**DESIGN-BUILDER'S (C0988) LONG LEAD ITEM LIST**

Area	Activity ID	Activity Name	Start	Need Date
Overhead Catenary (OCS)	988-PRC-00060	OCS: Purchase/Deliver Hardware & Insulators	04-Jan-17 A	13-Feb-18
Procurement	988-PR-11725360	Procurement/ Materials - Glass Canopy - Hyde Park Station	26-Feb-18	5-Jul-18
Procurement	988-PR-11725357	Procurement/ Materials - Glass Canopy - Fairview Heights Station	26-Feb-18	12-Jun-18
Procurement	988-PR-11725355	Procurement/ Materials - Entrance Canopy - Downtown Inglewood Station	18-Dec-17 A	19-Mar-18
Procurement	988-PR-11725354	Procurement/ Materials - Glass Canopy - Downtown Inglewood Station	18-Dec-17 A	19-Mar-18
Procurement	988-PR-11725351	Procurement/ Materials - Glass Canopy - NB Platform - Westchester/Veterans Station	26-Feb-18	4-May-18
Procurement	988-PR-0011725337	Procurement/ Materials - Tempered Glass Canopy - Aviation / Century	6-Feb-18	11-Apr-18
Procurement	988-PR-11724229	Structural Steel for Elevators #3 & #4 - Material/Fabrication (Store Off Site) - Expo Station	02-Jan-18 A	30-Mar-18
Procurement	988-PR-11724209	Structural Steel for Elevators #1 & #2 below concourse roof - Material/Fabrication (Store Off Site) - Expo Station	02-Jan-18 A	30-Mar-18
Procurement	988-PR-11724199	Structural Steel for Elevators #1 & #2 above ground - Material/Fabrication (Store Off Site) - Expo Station	02-Jan-18 A	30-Mar-18
Procurement	988-PR-914209	Structural Steel for Elevators #3 & #4 - Material/Fabrication (Store Off Site) - MLK Station	5-Feb-18	11-Jun-18
Procurement	988-PR-11724189	Structural Steel for Elevators #1 & #2 below concourse roof - Material/Fabrication (Store Off Site) - MLK Station	5-Feb-18	2-Jul-18
Procurement	988-PR-222179	Structural Steel for Elevators #3 & #4 - Material/Fabrication (Store Off Site) - Leimert Park Station	5-Feb-18	18-Jun-18
Procurement	988-PR-11724149	Structural Steel for Elevators #1 & #2 below concourse roof - Material/Fabrication (Store Off Site) - Leimert Park Stati	5-Feb-18	10-Jul-18
Procurement	988-PR-0324179	Structural Steel for Elevators #1 & #2 above ground - Material/Fabrication (Store Off Site) - Leimert Park Station	5-Feb-18	10-Jul-18
Procurement - Communication System	988-PRC-C0010	Procure/Deliver CTS Wire & Cable	21-Jun-17 A	24-Apr-18
Procurement - Communication System	988-PRC-C0011	Procure/Deliver Telephone Wire & Cable	21-Jun-17 A	9-May-18

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Procurement - Communication System	988-PRC-C0012	Procure/Deliver PA/VMS Wire & Cable	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0013	Procure/Deliver CCTV Wire & Cable	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0014	Procure/Deliver Radio Wire & Cable	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0016	Procure/Deliver TVM Wire & Cable	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0030	Procure Equip. & Components for EMP	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0055	Procure Equip. & Components for Radio	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0060	Procure Equip. & Components for SCADA	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0065	Procure Equip. & Components for Seismic Detection	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0070	Procure Equip. & Components for Telephone	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0075	Procure Equip. & Components for Portal Surveillance	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0008	Procure/Deliver Fire Alarm Wire & Cable	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C0009	Procure/Deliver IDS Wire & Cable	21-Jun-17 A	9-May-18
Procurement - Communication System	988-PRC-C1400	COM: Procure Equip. Complete		9-May-18
Procurement - Signal System	988-PRC-A7110	ATC: Factory Acceptance Test @ MLK TC&C #11 (364+40 to 419+70)	23-Nov-17 A	20-Jul-18
Site/Civil	988-PR-6965	Fab/Procure & Deliver Electrical Manholes, Vaults, Pads - Tunnel	01-Feb-17 A	21-Jun-18
Site/Civil	988-PR-6430	Fab/Procure & Deliver Air Handling Units (HVAC)	12-Mar-18	10-Jul-18
Stations	988-PR-11725369	Fabricate Fencing	26-Feb-18	17-Apr-18
Stations	988-PR-30631	Fabricate & Deliver Metal Railings - Westchester/ Veterans Station	3-Feb-18	29-Jul-18
Stations	988-PR-30601	Fabricate & Deliver Metal Railings - Hyde Park Station	12-Feb-18	12-Jun-18
Stations	988-PR-6360	Fab/Procure & Deliver Laminated Tempered Canopy Glass & Steel	02-Jan-18 A	19-Mar-18
Stations	988-PR-4700	Fabricate & Deliver Elevators	04-Apr-16 A	1-Apr-18

**Crenshaw/LAX Transit Project  
Quarterly Project Status Report**

**March 2018**

Stations	988-PR-30471	Fabricate 100% of Artwork Panels - Westchester/Veterans Station (Porcelain Enamel Steel)	20-Feb-18	9-Jul-18
Stations	988-PR-7425	Fabricate Station Artwork Panels - Crenshaw/Expo Station (Porcelain Enamel Steel)	20-Feb-18	11-Jun-18
Stations	988-PR-30521	Fabricate & Deliver Structural Steel Canopy for Westchester/Veterans Station	26-Jan-17 A	28-Feb-18
Traction Power	988-PR-6955	Fabricate & Deliver Low Voltage Cable - Cut & Fill	03-Apr-17 A	11-Jan-18
Traction Power	988-PR-6925	Fabricate & Deliver Panelboards - TPSS	16-Feb-17 A	23-Mar-18
Traction Power	988-PR-6775	Fabricate & Deliver MCC - Expo	06-Feb-17 A	31-Jul-18
Traction Power	988-PR-6765	Fabricate & Deliver Low Voltage Cable (Project Wide)	01-Aug-17 A	5-Feb-18
Traction Power	988-PR-6745	Fabricate & Deliver Low Voltage Cable - MLK	5-Feb-18	10-May-18
Traction Power	988-PR-6725	Fabricate & Deliver Dry Type Transformers - MLK	04-Feb-17 A	20-Jun-18
Traction Power	988-PR-6605	Fabricate & Deliver Cable Tray in Stations	21-Mar-17 A	10-May-18
Traction Power	988-PR-6495	Fabricate & Deliver Panelboards - Underground Stations	16-Feb-17 A	25-Apr-18
Traction Power	988-PR-6475	Fabricate & Deliver Pad Mount Transformer - TPSS	02-Oct-17 A	12-Jun-18
Traction Power	988-PR-6535	Fabricate & Deliver Station UPS	5-Feb-18	15-Jun-18
Traction Power	988-PR-6555	Fabricate & Deliver Medium Voltage Cable	03-Apr-17 A	11-Jan-18
Traction Power	988-PR-6545	Fabricate & Deliver TPSS Generator	07-Aug-17 A	7-Mar-18
Traction Power	988-PR-6525	Fabricate & Deliver Loose Starters - Stations	28-Feb-18	26-Apr-18
Traction Power	988-PR-6505	Fabricate & Deliver Dry Type Transformers - TPSS	16-Feb-17 A	5-Mar-18
Traction Power	988-PR-6485	Fabricate & Deliver MCC - TPSS	16-Feb-17 A	7-Mar-18
Traction Power	988-PRC-T0110	Factory Acceptance Testing - TPSS-01	31-Jan-18 A	11-Jun-18
Traction Power	988-PRC-T0120	Prepare & Ship TPSS-01	15-Feb-18	25-Jun-18
Traction Power	988-PRC-T0200	Mfgr/Assemble/Wire Substation - TPSS-02	10-Jul-17 A	22-Feb-18
Traction Power	988-PRC-T0210	Factory Acceptance Testing - TPSS-02	26-Feb-18	14-May-18
Traction Power	988-PRC-T0220	Prepare & Ship TPSS-02	12-Mar-18	29-May-18
Traction Power	988-PRC-T0300	Mfgr/Assemble/Wire Substation - TPSS-03	04-Sep-17 A	1-Feb-18

**Crenshaw/LAX Transit Project  
Quarterly Project Status Report****March 2018**

Traction Power	988-PRC-T0310	Factory Acceptance Testing - TPSS-03	5-Feb-18	22-Jun-18
Traction Power	988-PRC-T0320	Prepare & Ship TPSS-03	19-Feb-18	9-Jul-18
Traction Power	988-PRC-T0800	Mfgr/Assemble/Wire Substation - TPSS-08	02-Oct-17 A	9-Apr-18
Traction Power	988-PRC-T0810	Factory Acceptance Testing - TPSS-08	11-Apr-18	23-Apr-18
Traction Power	988-PRC-T0820	Prepare & Ship TPSS-08	25-Apr-18	7-May-18

## **CRITICAL PATH NARRATIVE**

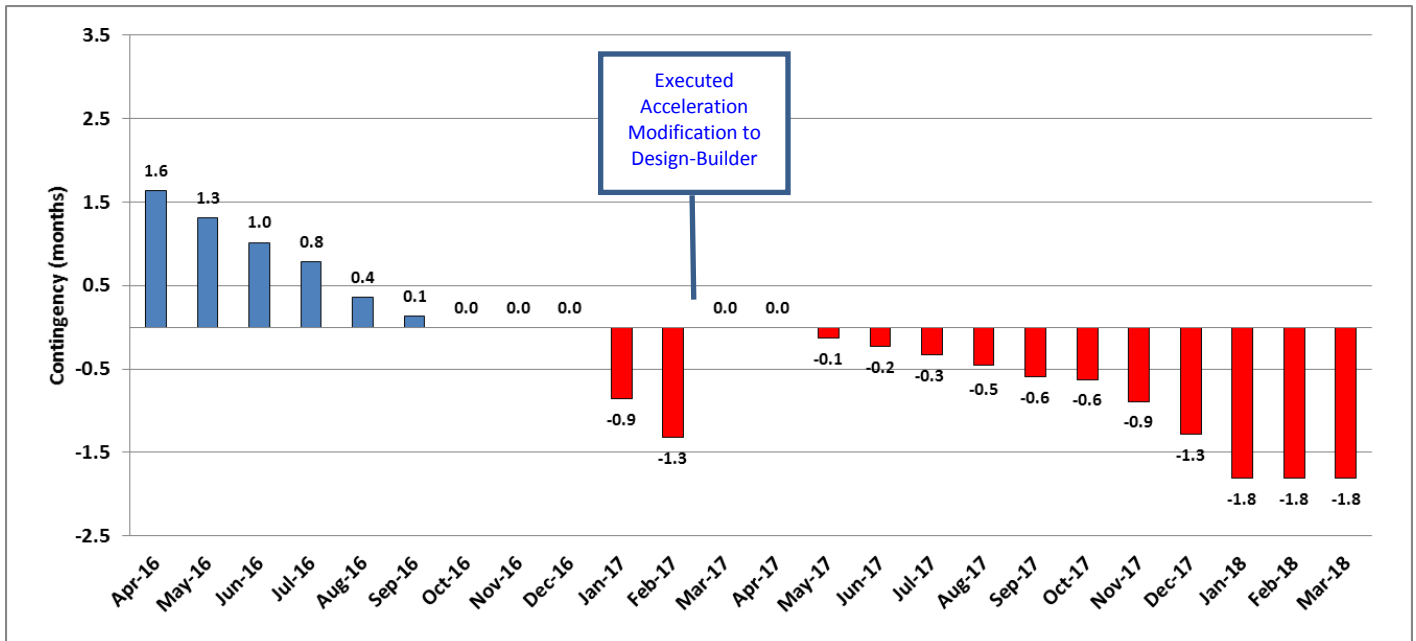
### **Critical Path:**

With the addition of construction activities for the accommodations to support a future LRT station at 96th Street in the approved Completion Schedule the project's critical path changed in December 2016. The critical path for the project as shown in the design-builder's Completion Schedule has shifted from the tunnel boring machine mining operations and tunnel concreting activities to the accommodations construction activities to support a future LRT station at 96th Street.

Metro has not received a March 2018 schedule update from WSCC. Therefore, Metro continues to show a 56 calendar day delay to WSCC's Contract Milestone #1 Substantial Completion date of May 1, 2019. The critical path continues with the track construction at Segment "A" (Green Line to Arbor Vitae), followed by ballasted track construction from Arbor Vitae to Oak Street, La Brea to Brynhurst, and Brynhurst to 48<sup>th</sup> Street. Track and OCS installation in the bored tunnel follows thereafter.

The current critical path then continues with WSCC systems integration testing, phase 1 and Metro's systems integration testing, phases 2, and Metro's pre-revenue operations. The critical path completes with the commencement of revenue operations.

**PROJECT SCHEDULE CONTINGENCY DRAWDOWN**



**PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS**

The project schedule contingency drawdown is based on the revenue service date of December 8, 2019.

Metro received and approved a revised baseline schedule (Completion Schedule) from the C0988 design-builder in December 2016. With the extension of time for the design-builders Substantial Completion Milestone to May 1, 2019 and a Metro/design-builder commitment to achieving an October 30, 2019 revenue operations date, no planned schedule contingency exists in the revised baseline schedule.

Metro received the January schedule update from WSCC after the close of the reporting period deadline in February 2018. The update forecast a 56-calendar day delay to WSCC’s Contract Milestone #1 Substantial Completion date of May 1, 2019. This was an additional 16-calendar days of delay from the December 2017 forecast.

WSCC has not yet submitted a schedule update for the period ending March 31, 2018. Therefore, Metro is showing the 56-calendar day delay to WSCC’s Contract Milestone #1 Substantial Completion date of May 1, 2019. Metro has requested WSCC to provide a Schedule Mitigation Plan to mitigate the 56 days of delay.

**PROJECT COST STATUS**

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	GUIDEWAYS	471,335,000	-	450,354,375	-	450,882,396	-	397,094,355	-	450,885,416	531,042
20	STATIONS	153,906,000	-	315,050,000	1,178,496	316,840,737	-	188,650,089	1,178,495	316,840,737	1,790,737
30	SUPPORT FACILITIES SOUTHWEST YARD	66,673,000	-	71,164,000	-	71,053,330	1,959,534	46,640,830	-	71,164,000	-
40	SITWORK/SPECIAL CONDITIONS	235,576,000	-	395,798,361	7,941,775	407,471,186	91,367	329,882,854	8,038,162	415,145,000	19,346,638
50	SYSTEMS	125,132,000	-	169,436,000	41,477	160,782,768	-	66,138,227	41,477	170,549,284	1,113,284
<b>CONSTRUCTION SUBTOTAL (10-50)</b>		<b>1,052,622,000</b>	<b>-</b>	<b>1,401,802,736</b>	<b>9,161,747</b>	<b>1,407,030,417</b>	<b>2,050,901</b>	<b>1,028,406,355</b>	<b>9,258,133</b>	<b>1,424,584,438</b>	<b>22,781,702</b>
60	RIGHT-OF-WAY	132,294,000	-	127,490,000	-	124,739,698	(22,700)	124,558,461	-	124,739,810	(2,750,190)
70	LRT VEHICLES	87,780,000	-	83,571,544	-	82,050,901	-	70,247,539	-	83,571,544	-
80	PROFESSIONAL SERVICES	273,147,000	-	368,734,466	(395,323)	360,169,842	3,500,453	311,487,732	691,972	375,810,042	7,075,576
<b>SUBTOTAL (10-80)</b>		<b>1,545,843,000</b>	<b>-</b>	<b>1,981,598,746</b>	<b>8,766,424</b>	<b>1,973,990,859</b>	<b>5,528,654</b>	<b>1,534,700,086</b>	<b>9,950,106</b>	<b>2,008,705,833</b>	<b>27,107,087</b>
90	UNALLOCATED CONTINGENCY	177,157,000	-	50,401,254	-	-	-	-	(9,950,106)	23,294,167	(27,107,087)
<b>TOTAL PROJECT 865512 (10-100)</b>		<b>1,723,000,000</b>	<b>-</b>	<b>2,032,000,000</b>	<b>8,766,424</b>	<b>1,973,990,859</b>	<b>5,528,654</b>	<b>1,534,700,086</b>	<b>-</b>	<b>2,032,000,000</b>	<b>-</b>
ENVIRONMENTAL/PLANNING - 405512		5,526,150	-	5,526,150	-	5,526,150	-	5,526,150	-	5,526,150	-
ENVIRONMENTAL/PLANNING - 465512		20,473,850	-	20,473,850	-	20,022,881	-	20,022,881	-	20,473,850	-
<b>TOTAL PROJECTS 405512 &amp; 465512 (ENV/ PLAN'G)</b>		<b>26,000,000</b>	<b>-</b>	<b>26,000,000</b>	<b>-</b>	<b>25,549,031</b>	<b>-</b>	<b>25,549,031</b>	<b>-</b>	<b>26,000,000</b>	<b>-</b>
<b>TOTAL PROJECTS 405512, 465512 &amp; 865512</b>		<b>1,749,000,000</b>	<b>-</b>	<b>2,058,000,000</b>	<b>8,766,424</b>	<b>1,999,539,890</b>	<b>5,528,654</b>	<b>1,560,249,117</b>	<b>-</b>	<b>2,058,000,000</b>	<b>-</b>

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH MARCH 30, 2018

**PROJECT COST ANALYSIS**

The project numbers 405512, 465512, 865512, and 860003 are internal to Metro and are used to differentiate between environmental/planning and construction components of the project.

**Original Budget:**

The Board in October 2011 established the Life-of-Project (LOP) budget of \$1,749 million for the Crenshaw/LAX Transit Project.

**Current Budget:**

There have been two increases in the LOP to date:

- The Board in December 2012 approved an increase of \$13.9 million for a new LOP total of \$1,762.9 million. The Unallocated Contingency Standard Cost Category (SCC) 90 budget line item was increased by the \$13.9 million for a new total of \$191.1 million.
- The Board in June 2013 approved an increase of \$295.1 million for a new LOP total of \$2,058.0 million. The total increase was based on two actions:
  - Increase LOP base project scope in the amount of \$160.1 million, and
  - Increase LOP to include the options for Crenshaw/Vernon Station (Leimert Park Village) and Florence/Hindry Station in the amount of \$135.0 million.

The Board in May 2015 approved an increase in the amount of funding that the Crenshaw/LAX project is contributing toward the total cost of the Southwestern Yard Project. An additional \$10.8 million was drawdown from the Unallocated Contingency Current Budget SCC 90 and added to the Southwestern Yard Current Budget SCC 30. The current budget includes the 49% cost allocation share that the project is responsible for paying which includes funding of the design and construction for the Southwestern Yard. This amount was revised to \$150.2 million.

## **PROJECT COST ANALYSIS (Continued)**

The \$150.2 million is spread among the SCC 30, 40, 60, 80 and 90 in the Cost Report by Element table above.

A project cost status chart depicting the adopted budget for Southwestern Yard Project is included this month in the appendix section of this report.

The Current Budget allocation for the Crenshaw/LAX Transit Project, excluding the Southwestern Yard Project \$150.2 million 49% allocation and the Environmental/Planning Current Budget of \$26.0 million is \$1,881.8 million.

Although there is no change to the Total LOP Current Budget there was a reallocation for changes to the SCC elements within the Current Budget in April 2017. The reallocation was required due to the draw down to date of the SCC 90 Allocated Contingency for changes issued to the design-build contractor, additional relocations of utilities by third parties, additional legal services and special services as well as an increase in professional services for construction and project management oversight.

### **Current Forecast:**

The total project current forecast is \$2,058 million. However, there was a reallocation of forecast within the SCC-40 (Sitework and Special Conditions), SCC-50 (Systems), SCC-60 (Right-of-Way), SCC-80 (Professional Services) and SCC-90 (Unallocated Contingency).

### **Commitments:**

The commitments are cumulative through March 30, 2018. The total commitments increased by \$8.7 million this period primarily due to the following:

- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$1.2 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-40 (Sitework and Special Conditions) has increased by \$7.9 million for executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-80 (Professional Services) has a net decreased of \$0.4 million due to de-commitment of Purchase Order funds for prior fiscal year Work Order Authorizations with Los Angeles City Departments. The total commitment of \$360.2 million includes \$23.3 million for the Southwestern Yard 49% allocation.

The \$1,999.5 million in commitments to date represents 97.1% of the current budget.

**PROJECT COST ANALYSIS (Continued)**

**Expenditures:**

The expenditures are cumulative through March 30, 2018. The total expenditures increased by \$5.5 million this period and do not include the \$19.8 million design-build March invoice due to late submittal by contractor. The increase is primarily due to the following:

- SCC-30 (Southwestern Yard) has increased by \$1.9 million for costs associated with the design-build Contract C0991 Division 16: Southwestern Yard (Design/Build).
- SCC-40 (Sitework and Special Conditions) has increased by \$0.1 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor, third party utility relocation scope of work with Los Angeles Department of Water and Power and Metro Art Program.
- SCC-80 (Professional Services) has increased by \$3.5 million for costs associated with the Contract C0991 Division 16: Southwestern Yard (Design/Build), Metro project administration, IPMO field office lease and utilities, construction management support contract MC069 with STANTEC CONSULTING INC, third party scope of work with Los Angeles City Departments, project management support contract AE35279 with KKCS/TRIUNITY, signage and graphics, labor compliance monitoring and environmental consultant services. The total expenditure of \$311.5 million includes \$18.7 million for the Southwestern Yard 49% allocation.

The \$1,560.2 million in expenditures to date represents 75.8% of the current budget.

**Crenshaw/LAX Transit Locally Funded Activities**

The costs shown in the table below are part of Crenshaw/LAX Transit Project locally funded activities' costs, which are being reported below the line and will be re-allocated to a new FY19 "Crenshaw/LAX Locally Funded Activities" project. The project will be active commencing July 2018.

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
60	RIGHT-OF-WAY	-	-	-	-	3,867,395	-	3,867,395	-	3,867,395	(3,867,395)
70	VEHICLES / BUSES *1	-	-	-	-	10,699,000	-	10,699,000	-	10,699,000	(10,699,000)
80	PROFESSIONAL SERVICES	-	-	-	-	4,419,494	64,064	1,613,018	-	4,846,214	(4,846,214)
	<b>SUBTOTAL (10-80)</b>	-	-	-	-	<b>18,985,889</b>	<b>64,064</b>	<b>16,179,413</b>	-	<b>19,412,609</b>	<b>(19,412,609)</b>
	<b>TOTAL</b>	-	-	-	-	<b>18,985,889</b>	<b>64,064</b>	<b>16,179,413</b>	-	<b>19,412,609</b>	<b>(19,412,609)</b>

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH MARCH 30, 2018

Note \*1: The \$10.7 million under SCC 70 LRT Vehicles is for State Board of Equalization (SBOE) to tax LRT vehicle deliveries since August 2016. Metro is appealing the decision by the SBOE but is paying the tax so as not to incur any late fees.

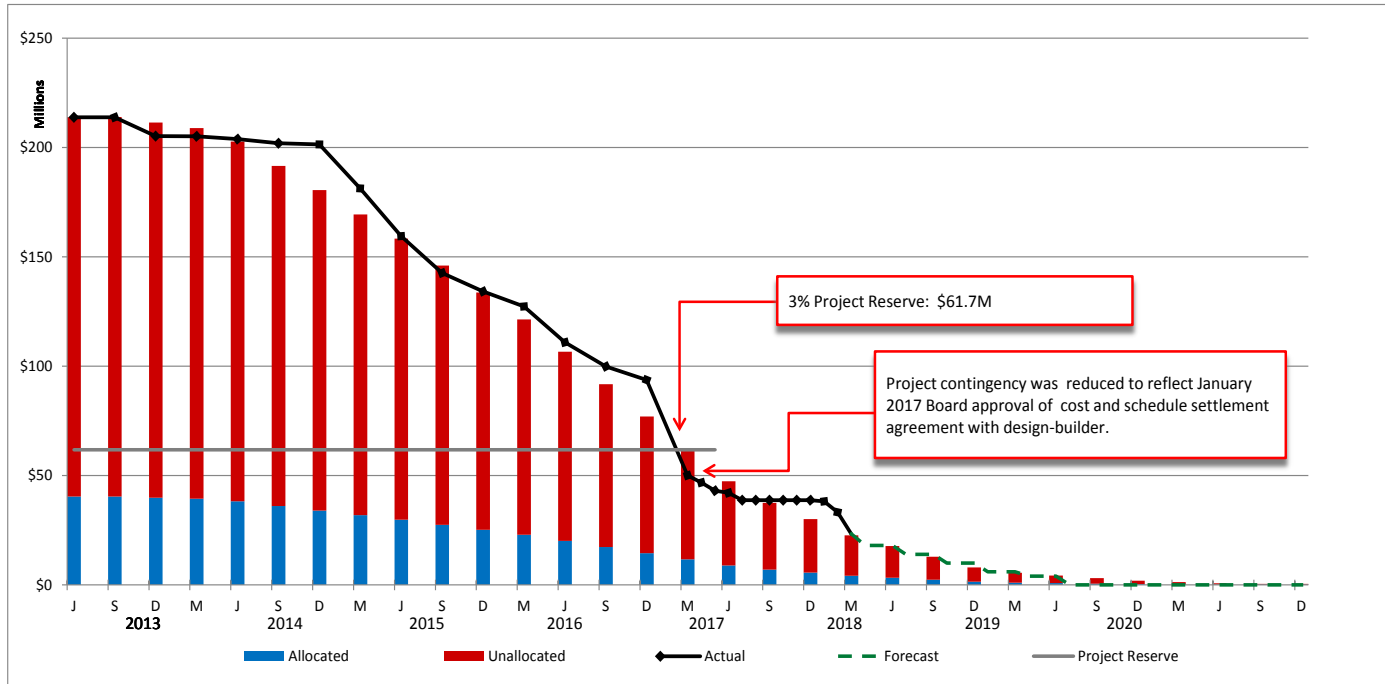
**PROJECT COST ANALYSIS (Continued)**

**Non-Crenshaw/LAX Transit Project Funded Scope of Work**

The costs shown in the table below are not part of Crenshaw/LAX Transit Project costs but are funded by other Metro projects using the services of the alignment design-builder (Contract C0988)

C0988 NON-CRENSHAW/LAX TRANSIT PROJECT FUNDED SCOPE OF WORK									
DESCRIPTION	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
405556 SYSTEMWIDE TRANSIT PLANNING	-	175,495	-	320,035	-	230,035	-	175,495	-
210090/93 FARE GATE PROJECT	-	2,566,226	-	2,566,226	-	252,726	-	2,566,226	-
210152 CRENSHAW/LAX BUS TRANSFER FACILITY	-	2,200,000	-	2,200,000	-	403,334	-	2,200,000	-
460303 AIRPORT METRO CONNECTOR	-	37,914,465	-	35,794,171	383,071	35,316,555	-	37,914,465	-
500013 C/LAX LAWA SCOPE OF WORK	-	1,575,362	-	914,613	-	741,407	-	1,575,362	-
TOTAL	-	44,431,548	-	41,795,045	383,071	36,944,058	-	44,431,548	-

**PROJECT COST CONTINGENCY DRAWDOWN**



Through 30-Mar-2018

**PROJECT COST CONTINGENCY DRAWDOWN ANALYSIS**

The project current budget of \$2,058,000,000 includes an “unallocated contingency” amount of \$173,500,000 which is included as a separate Standard Cost Category (SCC) element. Also included within the current budget is an “allocated contingency” of \$40,366,792 which is allocated, where applicable, to specific contracts within each SCC element. The allocated contingency is not broken out separately in the current budget, as this amount covers anticipated but unknown contract modifications issued by Metro. The total project cost contingency is \$213,866,792 or 10.4%.

Included in the project contingency drawdown is a 3% project reserve line. The Board is to be notified when it becomes necessary to drawdown contingency below the project reserve line to cover project costs. This notification request was adopted by the Metro Board of Directors in September 2012.

In February 2017, the project contingency drawdown curve went below the 3% project reserve level and the Board was notified.

The project contingency drawdown curve is based on an October 2019 revenue service date. In February 2017, the forecast drawdown curve was revised.

**PROJECT CONTINGENCY DRAWDOWN ANALYSIS (Continued)**

There has been a cumulative drawdown of \$190,572,625 or 89.1% for both allocated and unallocated contingency through March 2018.

- The unallocated contingency decreased by \$9,950,106 for executed modifications for design-build contract C0988 Crenshaw/LAX Transit Corridor and executed modification with KLEINFELDER, INC. contract PS3274 CWO04 for Environmental Support Services.
- There is no allocated contingency remaining as of February 2017 month-end reporting.

<b>PROJECT COST CONTINGENCY (through 30-Mar-2018)</b>					
<b>UNITS IN DOLLARS</b>					
	Original Contingency (Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	173,500,000	(140,255,728)	(9,950,106)	(150,205,834)	23,294,166
Allocated Contingency	40,366,792	(40,366,792)	-	(40,366,792)	-
<b>Total Contingency</b>	<b>213,866,792</b>	<b>(180,622,520)</b>	<b>(9,950,106)</b>	<b>(190,572,625)</b>	<b>23,294,166</b>

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS**

**Contract C0988 Crenshaw/LAX Transit Corridor Design-Build**

(Reported Data as of February 2018)

- DBE Goal (Design)** – A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.00%**
- Current DBE Commitment** – Total DBE Committed Dollars divided by Total Contract Value for Design or Construction. **\$23,600,665 (20.00%)**
- Current DBE Participation** – Total amount paid to date to DBEs divided by the amount paid to date to Prime. **\$28,282,895 (25.59%)**

Twenty-Six (26) Design subcontractors have been identified to-date

- DBE Goal (Construction)** - A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.00%**
- DBE Commitment** - Contract commitment divided by current contract value for Construction. **\$251,067,446 (20.00%)**
- Current DBE Commitment** - Actual commitments as Construction work is awarded. **\$244,968,077 (19.51%)**
- Current DBE Participation** - Total amount paid to date to DBEs divided by the amount paid to date to Prime **\$226,556,140 (25.51%)**

246 Construction subcontractors have been identified to-date.

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

### **Contract C0988 Crenshaw/LAX Transit Corridor Design-Build**

(Reported Data as of February 2018)

• <b>Targeted Worker Goal</b> – Construction work to be performed by residents from Economically Disadvantaged Area of LA County	<b>40.00%</b>
<b>Targeted Worker Current Attainment</b>	<b>59.80%</b>
• <b>Apprentice Worker Goal</b> – Construction work to be performed by Apprentices	<b>20.00%</b>
<b>Apprentice Worker Current Attainment</b>	<b>22.86%</b>
• <b>Disadvantaged Worker Goal</b> – Construction work to be performed by Disadvantaged Workers whose primary place of residence is within LA County	<b>10.00%</b>
<b>Disadvantaged Worker Current Attainment</b>	<b>12.28%</b>

## DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

### Contract C0991 Division 16: Southwestern Yard Design-Build

(Reported Data as of February 2018)

- **DBE Goal (Design)** – A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **20.00%**
- **Current DBE Commitment** – Total DBE Committed Dollars divided by Total Contract Value for Design or Construction. **\$2,467,837 (20.93%)**
- **Current DBE Participation** – Total amount paid to date to DBEs divided by the amount paid to date to Prime. **\$2,059,613 (19.97%)**

Ten (10) Design subcontractors have been identified to-date

- **DBE Goal (Construction)** - A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area. **16.00%**
- DBE Commitment** - Contract commitment divided by current contract value for Construction. **\$25,930,837 (16.00%)**
- **Current DBE Commitment** - Actual commitments as Construction work is awarded **\$25,764,090 (15.90%)**
- Current DBE Participation** - Total amount paid to date to DBEs divided by the amount paid to date to **\$11,370,551 (13.67%)**

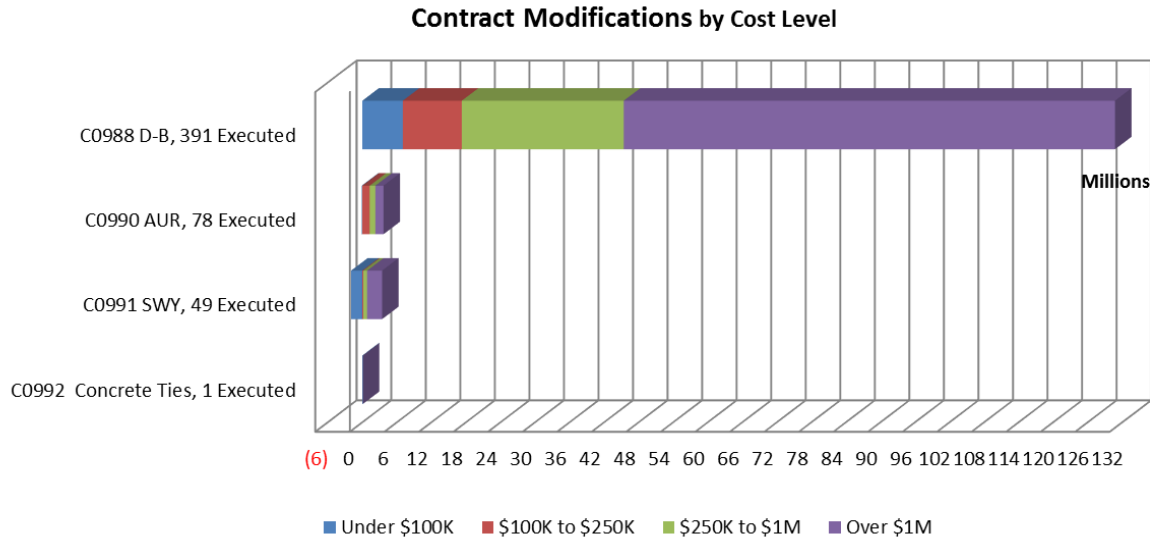
Forty-eight (48) Construction subcontractors have been identified to-date.

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

**Contract C0991 Division 16: Southwestern Yard Design-Build**  
(Reported Data as of February 2018)

• <b>Targeted Worker Goal</b> – Construction work to be performed by residents from Economically	<b>40.00%</b>
<b>Targeted Worker Current Attainment</b>	<b>51.69%</b>
• <b>Apprentice Worker Goal</b> – Construction work to be performed by Apprentices	<b>20.00%</b>
<b>Apprentice Worker Current Attainment</b>	<b>25.06%</b>
• <b>Disadvantaged Worker Goal</b> – Construction work to be performed by Disadvantaged Workers whose primary place of residence is within LA County	<b>10.00%</b>
<b>Disadvantaged Worker Current Attainment</b>	<b>9.18%</b>

**SUMMARY OF CONTRACT MODIFICATIONS**



	<b>C0988</b>	<b>C0990</b>	<b>C0991</b>	<b>C0992</b>
	<b>391 Executed</b>	<b>78 Executed</b>	<b>49 Executed</b>	<b>1 Executed</b>
<b>Under \$100K</b>	\$ 7,028,342	(\$ 70,251)	(\$ 1,930,880)	\$ 81,738
<b>\$100k to \$250K</b>	\$ 10,252,814	\$ 1,280,184	\$ 182,669	\$ 0
<b>\$250K to \$1M</b>	\$ 28,128,103	\$ 984,662	\$ 663,290	\$ 0
<b>Over \$1M</b>	\$ 85,345,950	\$ 1,417,202	\$ 2,590,000	\$ 0
<b>Total Contract MODs</b>	<b>\$ 130,755,209</b>	<b>\$ 3,611,797</b>	<b>\$ 1,505,079</b>	<b>\$ 81,738</b>
<b>% of Contract MODs</b>	<b>10.27%</b>	<b>46.14%</b>	<b>0.87%</b>	<b>3.78%</b>

Three hundred and ninety-one (391) changes with a total value of \$130.76 million have been executed since award of Contract C0988. There are an additional thirty-nine (39) changes with a total value of \$2.75 million pending the administrative approval process.

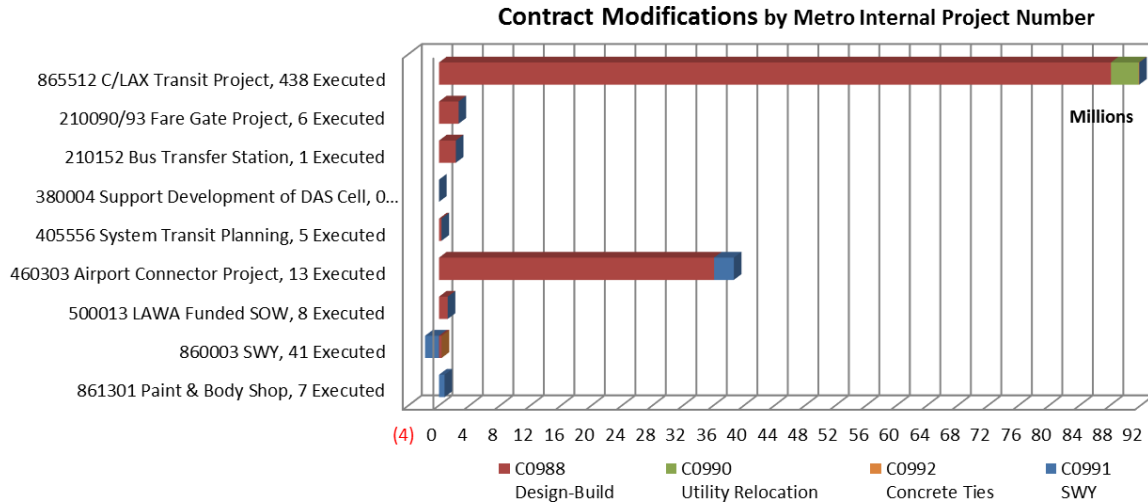
Seventy-eight (78) changes with a total value of \$3.61 million have been executed for completed Contract C0990.

Forty-nine (49) changes with a total value of \$1.51 million have been executed since award of Contract C0991. There are an additional two (2) changes with a total value of \$0.06 million credit pending the administrative approval process.

One (1) change with a value of \$81,738 was executed for completed Contract C0992.

Percent of Contract modifications equals the total Change modifications divided by the Contract Award amount

**SUMMARY OF CONTRACT MODIFICATIONS**



	865512	210090/93	210152	380004	405556	460303	500013	860003	861301
	Executed	Executed	Executed	Executed	Executed	Executed	Executed	Executed	Executed
<b>C0988 - QTY</b>	359	6	1	0	5	11	8	1	0
<b>C0988 - \$</b>	88,125,062	2,566,226	2,200,000	0	320,035	36,069,273	1,134,613	340,000	0
<b>C0990 - QTY</b>	78	0	0	0	0	0	0	0	0
<b>C0990 - \$</b>	3,611,797	0	0	0	0	0	0	0	0
<b>C0991 - QTY</b>	0	0	0	0	0	2	0	40	7
<b>C0991 - \$</b>	0	0	0	0	0	2,598,580	0	(1,818,637)	725,136
<b>C0992 - QTY</b>	1	0	0	0	0	0	0	0	0
<b>C0992 - \$</b>	81,738	0	0	0	0	0	0	0	0
<b>Total - QTY</b>	<b>438</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>13</b>	<b>8</b>	<b>41</b>	<b>7</b>
<b>Total - \$</b>	<b>91,818,597</b>	<b>2,566,226</b>	<b>2,200,000</b>	<b>0</b>	<b>320,035</b>	<b>38,667,853</b>	<b>1,134,613</b>	<b>(1,478,637)</b>	<b>725,136</b>

Four hundred and thirty-eight (438) changes with a total value of \$91.82 million have been executed for Project 865512 Crenshaw/LAX Transit Project. There are an additional thirty-three (33) changes with a total value of \$1.02 million pending the administrative approval process.

Six (6) changes with a value of \$2.57 million have been executed for Project 210090/93 Fare Gate Project.

One (1) change with a value of \$2.20 million has been executed for Project 210152 Bus Transfer Station Project.

Zero (0) change has been executed for project 380004 Support Development of DSA Cell. There is additional one (1) change with total value of \$0.03 million pending the administrative approval process.

Five (5) changes with a value of \$0.32 million have been executed for Project 405556 System Transit Planning.

Thirteen (13) changes with a value of \$38.67 million have been executed for Project 460303 Airport Metro Connector Project. There are an additional three (3) changes with a total value of \$0.002 million pending the administrative approval process

Eight (8) changes with a total value of \$1.13 million have been executed for Project 500013 Crenshaw/LAX LAWA Statement of Work.

Forty-one (41) changes with a credit value of \$1.48 million have been executed for Project 860003 Southwestern Yard project. There are additional three (3) changes with a total value of \$1.64 million pending the administrative approval process.

Seven (7) changes with a value of \$0.73 million have been executed for Project 861301 Southwestern Yard Paint and Body Shop.

**FINANCIAL/GRANT STATUS**

\$ in millions

SOURCE	(A)	(B)	(C)	(D)	(D/B)	(E)	(E/B)	(F)	(F/B)
	ORIGINAL BUDGET	TOTAL FUNDS ANTICIPATED	TOTAL FUNDS AVAILABLE	COMMITMENTS \$	%	EXPENDITURES \$	%	BILLED to \$	FUNDING SOURCE %
FEDERAL - CMAQ	68.2	54.0	54.0	54.0	100%	54.0	100%	54.0	100%
FEDERAL - SECTION 5309 BUS CAPT	8.6	8.6	8.6	8.6	100%	8.6	100%	8.6	100%
FEDERAL - REGIONAL STP	20.0	105.9	105.9	105.9	100%	93.5	88%	93.5	88%
FEDERAL - ALTERNATIVE ANALYSIS	1.2	1.2	1.2	1.2	100%	1.2	100%	1.2	100%
FEDERAL - TIGER II	0.0	13.9	13.9	13.9	100%	13.9	100%	13.9	100%
STATE REGIONAL IMPROVEMENT PROG	36.5	36.6	9.1	36.6	100%	9.1	25%	9.1	25%
STATE PPM	0.178	0.178	0.178	0.178	100%	0.178	100%	0.178	100%
STATE PROP 1B PTMISEA	201.2	128.9	128.9	128.9	100%	128.9	100%	128.9	100%
STATE PROP 1 B LOCAL PARTNER PROG	0.0	49.5	49.5	49.5	100%	49.5	100%	49.5	100%
MEASURE R - TIFIA LOAN	545.9	545.9	545.9	545.9	100%	545.9	100%	545.9	100%
MEASURE R	661.1	529.3	529.3	529.3	100%	476.8	90%	471.9	89%
OTHER FUNDS*	52.4	160.5	87.0	102.5	62%	80.9	50%	80.9	50%
PROP C 25% HIGHWAY	148.9	373.1	373.1	373.1	95%	82.7	22%	82.7	22%
PROP C 40% DISCRETIONARY	0.0	0.0	0.0	0.0	0%	0.0	0%	0.0	0%
PROP A 35% RAIL CAPITAL	4.8	50.4	50.4	50.4	100%	15.0	30%	4.9	10%
<b>TOTAL</b>	<b>1,749.0</b>	<b>2,058.0</b>	<b>1,956.9</b>	<b>2,000.0</b>	<b>97.0%</b>	<b>1,560.2</b>	<b>76.0%</b>	<b>1,545.2</b>	<b>75.0%</b>

NOTE: Expenditures are cumulative through March 30, 2018

Original Budget based on Board approved October 2011 Funding/Expenditure Plan

Total Funds Anticipated based on August 2016 Funding Plan

\* Other funds include: Local Agency Funds (\$107.470), CNG Tax Credit (\$54.000) and 3rd Party Lease Contingency (\$26.000)

## **STATUS OF FUNDS ANTICIPATED**

**FEDERAL – CMAQ:** Metro submitted to FTA in October 2013 a draft grant application of \$30M for review. FTA has reviewed the application and allowed Metro to formally submit the grant application in July 2014. Grant was approved in December 2014. Funds are available for drawdown. Metro submitted to FTA in January 2015 a grant application of \$24M for approval. Grant was approved on September 23, 2015. Funds are available for drawdown. \$54M of CMAQ Funds for construction have been spent as of June 2016.

**FEDERAL – RSTP:** *\$28.2M of RSTP Funds for construction has been spent as of June 2016. \$77.2M of RSTP funds for light rail vehicles (LRV) is available for drawdown. See separate LRV Progress Report for more detail.*

**STATE PROP 1B – PTMISEA:** \$128.5M of original PTMISEA Funds and \$432.6K have been spent as of October 2017.

**STATE PROP 1B SLPP:** \$49.5M of PROP 1B SLPP Funds for construction have been spent as of June 2016.

**STATE PROP RIP:** \$6.88 of RIP Funds executed by Caltrans in January 2018 and is available for drawdown.

**MEASURE R – TIFIA LOAN (Transportation Infrastructure Finance & Innovation Act):** Application for a loan of \$545.9M was submitted to the US Department of Transportation (DOT) in November 2011. Loan agreement was executed on September 12, 2012. Funds have been spent fully drawn as of August 2016.

**MEASURE R:** \$529.3M of Measure R Funds have been committed for this project. Funds are budgeted annually based on cashflow needs.

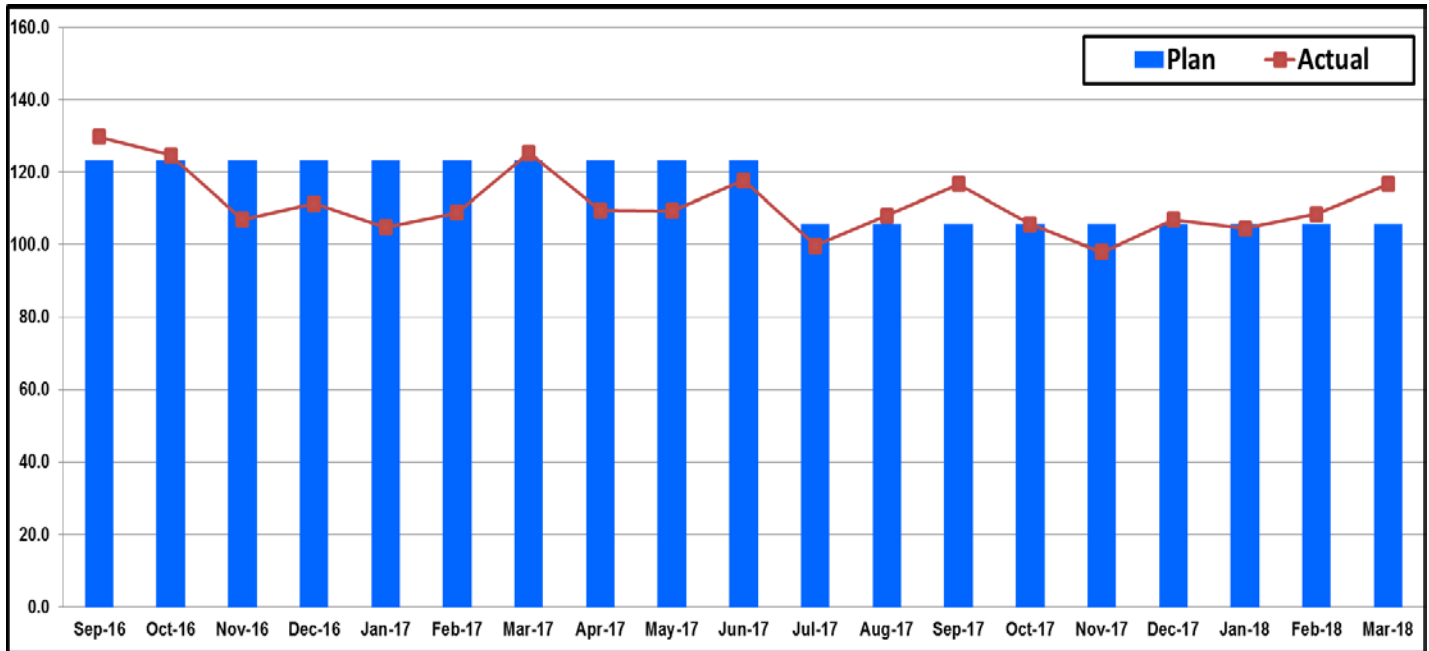
**OTHER FUNDS:** City of LA: Based on the funding agreement between Metro and the City of LA. \$28M is available for drawdown through FY2018. \$53M of General Funds have been committed for this Project. Funds are budgeted annually based on cashflow needs.

**PROP C 25% HIGHWAY:** \$378.1M of PROP C 25% Funds have been committed for this Project. Funds are budgeted annually based on cashflow needs.

**PROP A 35% RAIL CAPITAL:** \$50.4M of PROP A 35% Funds have been committed for this Project. Funds are budgeted annually based on cashflow needs.

## STAFFING STATUS

### Total Project Staffing – FTES



**Notes:**

1. FTE = Full Time Equivalent
2. Staffing levels include the Southwestern Yard Project.
3. Actual staffing levels are cumulative through March 2018.

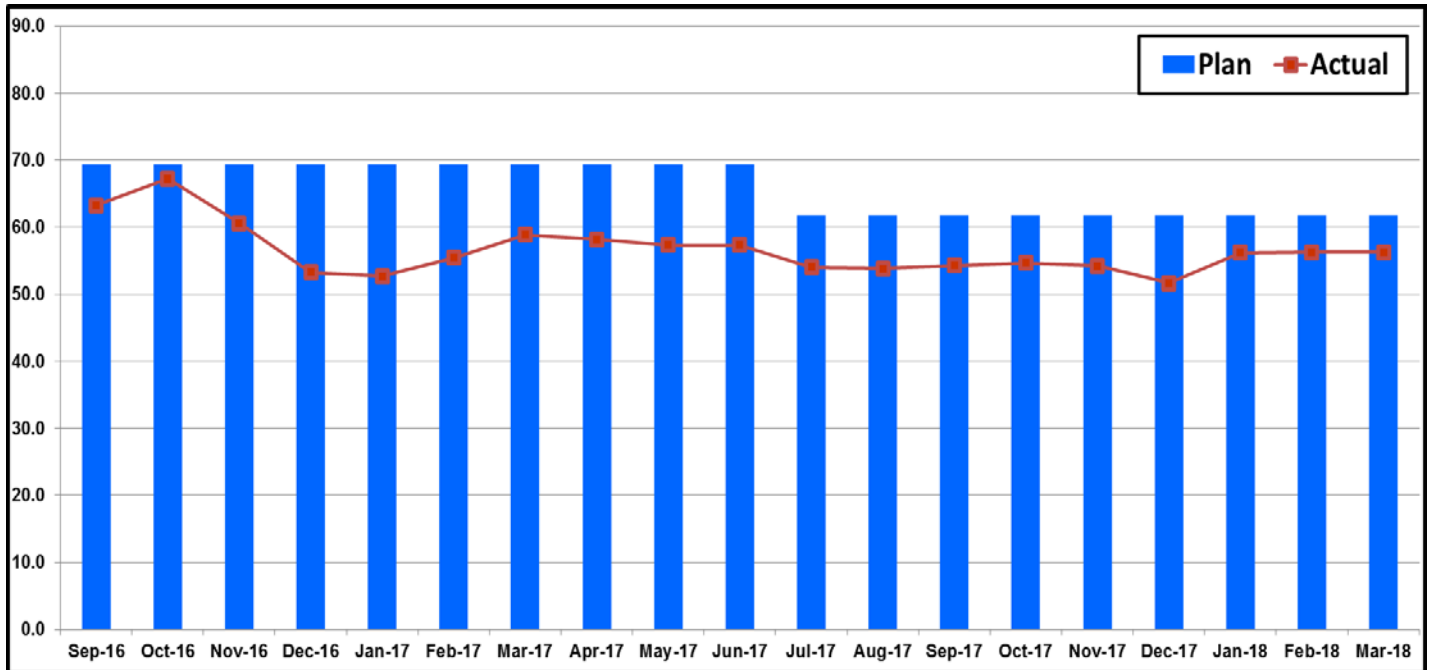
## TOTAL PROJECT STAFFING

The overall FY18 Total Project Staffing Plan averages 105.7 Full Time Equivalent (FTEs) per month consisting of 61.7 for Metro Agency staff, 37.0 for Construction Management Support Services Consultant and 7.0 for Design and Engineering Support Services Consulting staff.

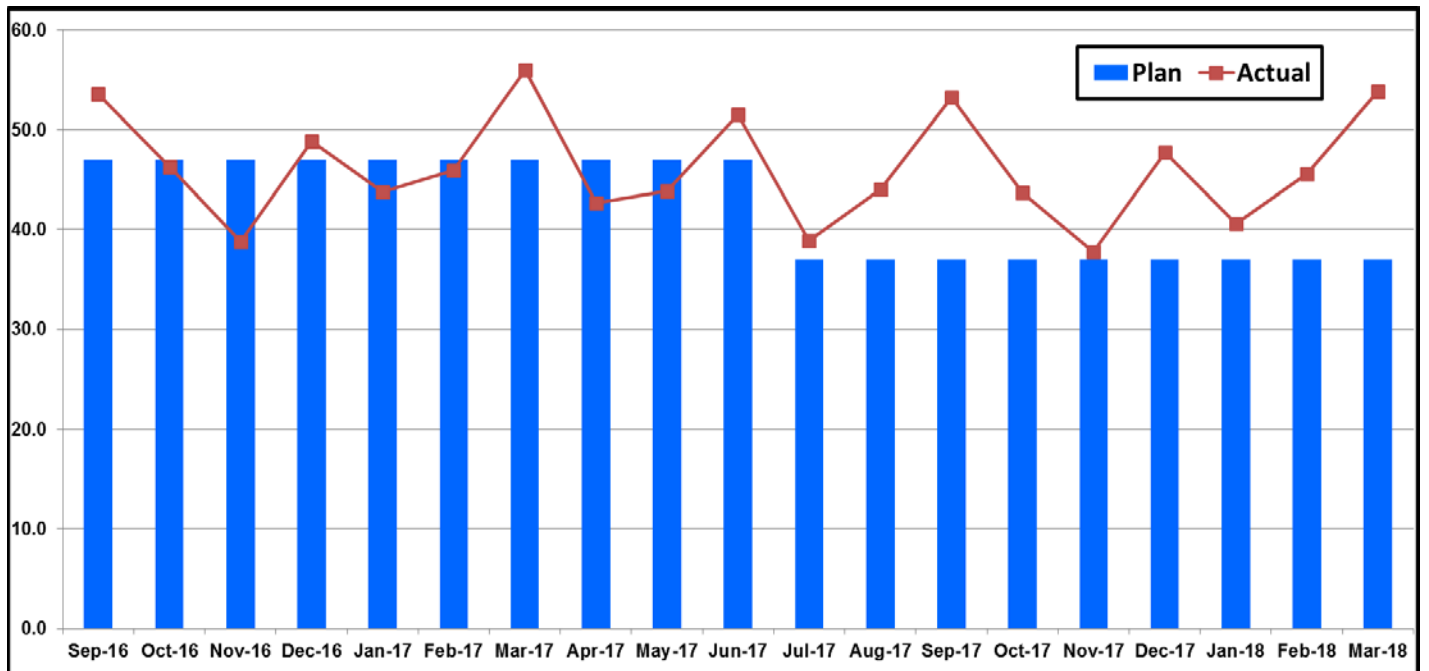
For March 2018, total project staffing were 116.7 FTEs for the month consisting of 56.3 FTEs for Metro’s project administration staff, 53.9 FTEs for Construction Management Support Services Consultant and 6.6 FTEs for Design and Engineering Support Services Consulting staff.

The next three charts show actual staffing versus planned staffing for the three major project participants.

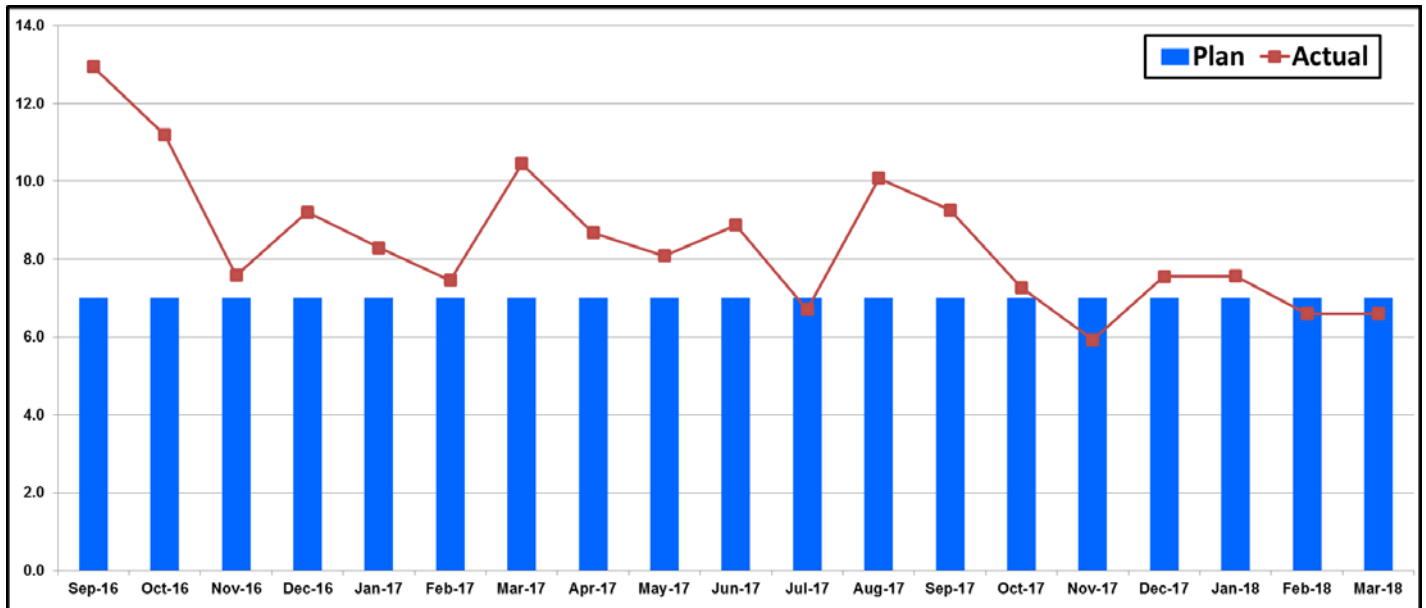
**STAFFING STATUS (Continued)**  
**METRO STAFFING – FTES**



**CONSTRUCTION MANAGEMENT  
 SUPPORT SERVICES CONSULTANT – FTES**



### STAFFING STATUS (Continued) ENGINEERING SERVICES CONSULTANT – FTES



**REAL ESTATE STATUS**

Contract No.	Number of Parcels	Certified	Decertified	Appraisals Complete	Offers Made	Agreements Signed	Condemnations Filed	Relocations Complete	Parcels Available to WSCC
<b>C0988 C/LAX Transit Corridor (D-B):</b>									
<i>Crenshaw Subdivision</i>									
Full Takes	12	12		12	12	7	5	12	12
Part Takes (PT or SE)	10	9	1	9	9	3	6		9
TCE	10	9	1	10	10	1	8		9
<b>Subtotal Parcels</b>	<b>32</b>	<b>30</b>	<b>2</b>	<b>31</b>	<b>31</b>	<b>11</b>	<b>19</b>	<b>12</b>	<b>30</b>
<i>Crenshaw Subdivision Additional Parcels:</i>									
Full Takes									
Part Takes	1	1		1	1	1	1		1
TCE									
<b>Subtotal Parcels:</b>	<b>1</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>		<b>1</b>
<b>Total Crenshaw Parcels</b>	<b>33</b>	<b>31</b>	<b>2</b>	<b>32</b>	<b>32</b>	<b>12</b>	<b>20</b>	<b>12</b>	<b>31</b>
<i>Harbor Subdivision</i>									
Full Takes	15	15		15	15	8	7	12	15
Part Takes (PT or SE)	18	16	2	18	17	8	10		16
TCE	3	2	1	2	2		2		2
<b>Subtotal Parcels</b>	<b>36</b>	<b>33</b>	<b>3</b>	<b>35</b>	<b>34</b>	<b>16</b>	<b>19</b>	<b>12</b>	<b>33</b>
<i>Harbor Subdivision Additional Parcels:</i>									
Full Takes	3	2	1	2	1			1	1
Part Takes	4	2	2	2	2	2			2
TCE	3	3		3	3	3			3
<b>Subtotal Parcels:</b>	<b>10</b>	<b>7</b>	<b>3</b>	<b>7</b>	<b>6</b>	<b>5</b>		<b>1</b>	<b>6</b>
<b>Total Harbor Subdivision Parcels</b>	<b>46</b>	<b>40</b>	<b>6</b>	<b>42</b>	<b>40</b>	<b>21</b>	<b>19</b>	<b>13</b>	<b>39</b>
<b>Total CR/HS Parcels:</b>	<b>79</b>	<b>71</b>	<b>8</b>	<b>74</b>	<b>72</b>	<b>33</b>	<b>39</b>	<b>25</b>	<b>70</b>
<i>Southwestern Yard</i>									
Full Takes	8	8		8	8	4	4	7	8
Part Takes									
TCE									
<b>Subtotal Parcels:</b>	<b>8</b>	<b>8</b>		<b>8</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>8</b>
<b>Total SW Parcels:</b>	<b>8</b>	<b>8</b>		<b>8</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>8</b>
<b>Total Project Parcels</b>	<b>87</b>	<b>79</b>	<b>8</b>	<b>82</b>	<b>80</b>	<b>37</b>	<b>43</b>	<b>32</b>	<b>78</b>

- All parcels necessary to construct the guideway have been turned over to the Contractor.
- *Work requiring the last remaining parcel does not fall under WSCC's scope of work and will be constructed under a separate contract. Relocations for this parcel should be complete by 12/31/18.*
- Efforts continue to closeout court cases on the various condemned properties.

## **QUALITY ASSURANCE STATUS**

### **C0988 Crenshaw/LAX Transit Corridor Design-Build Contract**

- Attended weekly Quality Staff Meetings with City of Los Angeles, Los Angeles Bureau of Contract Administration and WSCC Lead Quality personnel.
- *WSCC Quality issued two (2) Nonconformance Reports (NCR's) during this period.*
- *Metro Quality participated in Readiness Review Meetings for Omega Seal and Metals, Concrete Masonry Units, Radio Cable, OCR Anchors, Fiber Optic in Ductbank, 48<sup>th</sup> St. Crossing for Duct Bank Installation, VNSM Canopy Gutters, Schindler Escalator and Emergency Ventilation.*
- *Metro Independent Testing Lab (ITL) conducted stockpile soil sampling and laboratory of materials for use at UG-4 backfill operation.*

## **ENVIRONMENTAL STATUS**

### **C0988 Crenshaw/LAX Transit Corridor Design Build**

- Reviewed and commented on the following Contractor Submittals:
  - Weekly Noise and Vibration Monitoring Data for station and alignment construction
  - Weekly Storm Water Pollution Prevent Plan (SWPPP) inspection reports
  - Weekly Fugitive Dust Inspection Reports
  - Various Construction Work Plans and Submittals
  - Quarterly Noise Control Plans
  - Monthly Mitigation Monitoring Reports
- Conducted Contractor Cultural Awareness Training.
- Conducted site visits along the ROW for environmental compliance including soil stockpile areas, UG1, UG3, UG4, B1 and A guideways and laydown yards.
- *Conducted night time noise monitoring at UG3 operations on 2/22.*
- *Conducted night time noise monitoring at UG4 on multiple days in March 2018.*
- *Conducted night time noise monitoring at Vernon Station on multiple days in March 2018.*
- *Conducted night time noise monitoring at Hindry at grade crossing on 3/16 and 3/18.*
- *Conducted night time noise monitoring at MLK Station on multiple days in March 2018.*
- *Conducted night time noise monitoring at I-405 Bridge on 3/9.*
- *Conducted night time noise monitoring at Expo Station on multiple days in March 2018.*
- *Conducted night time noise monitoring at West Station on 3/9.*
- *Bi-weekly EMS and Environmental Team Meetings were held on 3/1 and 3/14.*

## **CONSTRUCTION RELATIONS STATUS**

- *Ongoing outreach to key stakeholders and community organizations concerning restoration work and closures in the northern portion of the alignment.*
- *Began preparations for a Restoration Community Meeting in May 2018.*
- *Continued production of a restoration fact sheet with detour information and a bus detour map for distribution to stakeholders in the impacted area.*
- *Metro Transit Safety continues to work with the community on the recurring issues of homeless encampments within the ROW.*
- *A Construction Update Community Meeting was held on March 22, 2018.*
- *Continued working with WSCC to minimize the impacts of lane and street closures in the area of Brynhurst Avenue for sewer construction.*
- *Working with WSCC to mitigate the impact and traffic backups on Florence Avenue.*

## **SYSTEMWIDE DESIGN AND ART PROGRAM STATUS**

- *Facilitated coordination between artists and fabrication firms.*
- *Provided design review comments for NDCs and shop drawings.*
- *Reviewed porcelain enamel steel artwork fabrication proofs.*
- *Conducted fabrication reviews at porcelain enamel steel fabrication shops.*
- *Organized an artist and docent led community tour of Metro Expo Line artworks in partnership with the Community Leadership Council.*

## **SAFETY & SECURITY STATUS**

- Participated in weekly progress meetings with Construction Management Team to discuss safety/security/quality related issues.
- Attended WSCC's and Metro Progress Meeting to discuss safety concerns and the six week look ahead work schedule.
- Attended the WSCC's weekly Safety Tool-Box Meetings.
- Monitored construction activities on a daily basis including weekend safety "spot-checks" to ensure compliance with contract specifications.
- *Monitored UG1, Green Line tie in, station boxes and tunnels including tunnel cross passages handrail installation.*
- *Conducted Monthly All Hands Safety and Security Meeting on February 28, 2018 to discuss Cal OSHA documentation, status of UG3, teamwork/partnering, ventilation of station boxes, invert, concourse, roof and surface areas.*
- *Conducted safety walk with WSCC Safety Manager on February 7, 2018 to monitor access and egress at UG4.*
- *Participated in 54<sup>th</sup> Street Duct Bank Restoration Work Readiness Review Meeting on February 27, 2018.*
- *Participated in Safety Readiness Review Meeting on February 13, 2018 to discuss UG3 Backfill Restoration, traffic plans, backfill methods and utility protection.*
- *Conducted workshop on February 13, 2018 to discuss self-rescuers, tag in and tag out and certified gas testers to perform air monitoring.*
- Contract C0990 Metro Builders Advanced Utility Relocation completed 360,287 work hours with four recordable incidents. This contract is closed out.
- *Contract C0991 Hensel Phelps Project-to-Date completed 297,011 work hours with 3 recordable injuries. Hensel Phelps and their subcontractors completed 31,102 (HPH is confirming hours) work hours and zero recordable injuries for the month of February 2018.*
- *Contract C0988 (WSCC) completed 140,900 work hours with two recordable injuries for the month of February 2018. Total Project to Date work hours are 5,228,991 with a total of seventy-seven recordable incidents. The Project Recordable Rate is 2.9. The Bureau of Labor Statistics average recordable rate per 200,000 work hours is 2.9.*

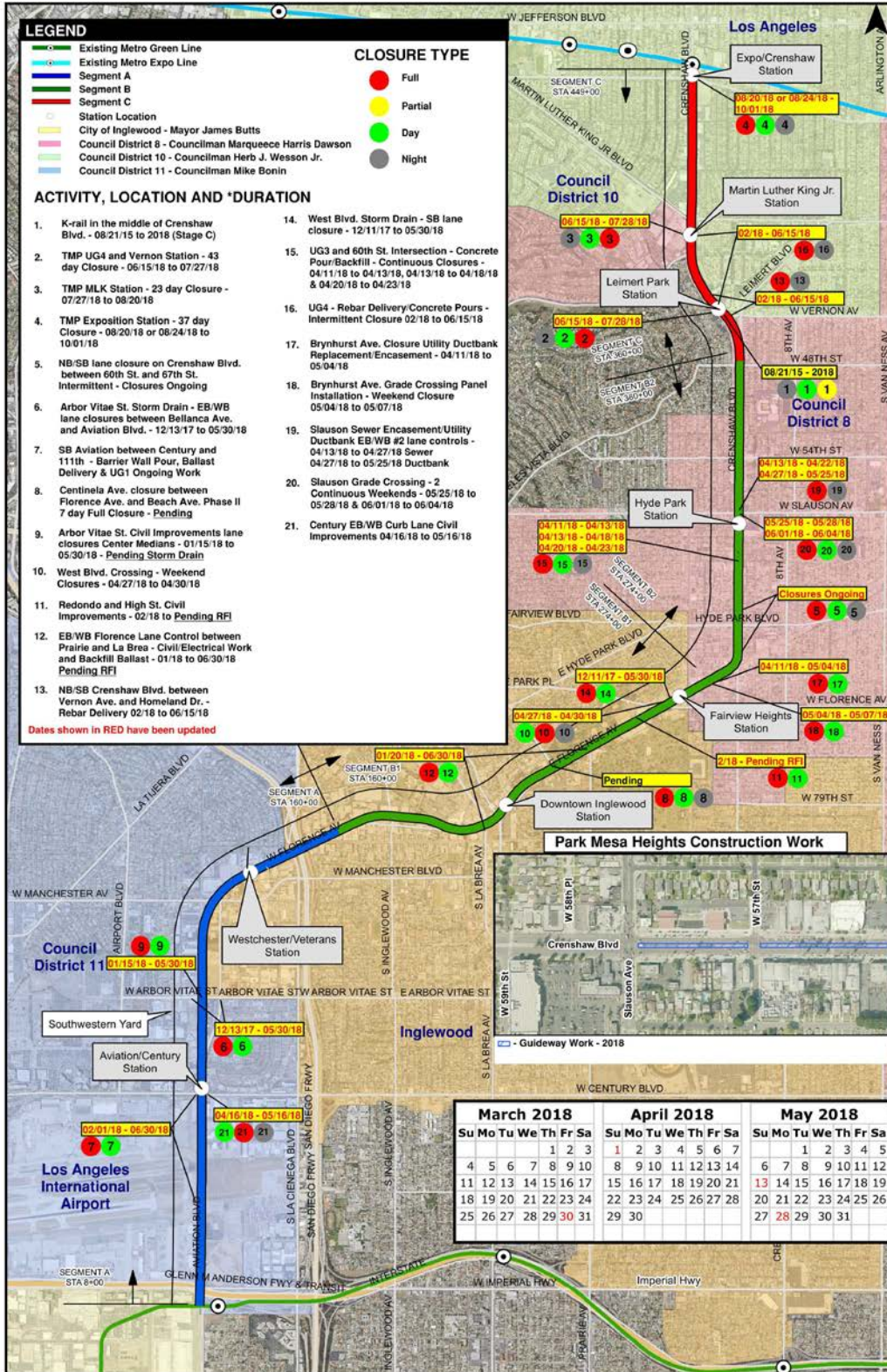
**THIRD PARTY AGREEMENT STATUS**

<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	Amendment to Master Cooperative Agreement	N/A	N/A	Parties will work under 2003 MCA.
City of Inglewood	Master Cooperative Agreement	8/16	N/A	Executed Letter of Agreement April 2012. Metro working on outstanding issues.
Los Angeles Department of Water and Power	Amendment to Memorandum of Understanding	N/A	N/A	Metro and LADWP will work under 2002 Utility Cooperative Agreement which remains in effect.
Los Angeles County Public Works	Letter of Agreement	4/11	3/12	Executed
Caltrans	Amendment	8/11	3/12	Executed
Private Utilities	LOA, MOU or UCA	5/11 to 5/13	N/A	Metro is working with affected third party utilities under work orders unless license agreements dictate relocation by utility company. No additional agreements required.

**CPUC CROSSING SUMMARY STATUS**

- The CPUC has approved all packages.
- LACMTA filed a response on March 25, 2016 in response to a petition that was filed by a community member, Chandra V. Mosley, to modify the CPUC Decision that approved seven at-grade crossings on Crenshaw Blvd, located from 48<sup>th</sup> St. to 59<sup>th</sup> St.
- Metro attended the Prehearing regarding the petition on May 24, 2016.
- The scoping document (Ruling) was issued on July 1, 2016 by the Administrative Law Judge Scoping which set forth the procedural schedule and address the scope of the proceeding.
- Metro filed a brief on August 5, 2016 and a Reply Brief on August 15, 2016.
- Administrative Law Judge is reviewing the submitted Briefs and will issue a Proposed Decision.

Crenshaw/LAX Transit Corridor Project  
Traffic Closure Key Map - April 2018



Updated : 02/26/2018

\*Note: Traffic closure dates and duration are subjected to change

## **CHRONOLOGY OF EVENTS**

2003	Major Investment Study
April 2007	Board authorized the CEO to award Contract PS 4330-1968 to complete environmental clearance and conceptual engineering.
December 2009	Board adopted the LRT Alternative as the Locally preferred Alternative and received and filed the Crenshaw Transit Corridor DEIS/DEIR.
December 2009	Board authorized the CEO to award Contract No. EO117 for Phase I, Advanced Conceptual Engineering.
September 2010	Board authorized the CEO to exercise option with Contract No. EO117 for Phase II Preliminary Engineering.
April 2011	Board adopted the Arbor Vitae/Bellanca (Site 14) LPA for the Maintenance Facility Site
July 2011	Board approved Southwestern Yard cost allocation.
September 2011	Board approved Project Definition and certified Final Environmental Impact Report
October 2011	Board approved the Life-of-Project Budget of \$1.749 billion.
December 15, 2011	CTC reviewed the FEIS/FEIR and adopted the required resolution for future funding consideration.
December 23, 2011	Request for Qualifications for Contract C0988 C/LAX Transit Corridor was released to Industry.
December 30, 2011	Received Record of Decision from FTA.
February 10, 2012	Released Invitation for Bid for Contract C0990 Crenshaw/LAX Advanced Utility Relocations.
March 12, 2012	Received Statement of Qualifications for Contract C0988 C/LAX Transit Corridor.

### **CHRONOLOGY OF EVENTS (Continued)**

May 16, 2012	Notification of pre-qualified proposers for Contract C0988 C/LAX Transit Corridor.
May 30, 2012	Awarded Contract No. C0990 C/LAX Advanced Utility Relocations to Metro Builders and Engineers Group LTD.
June 22, 2012	Released Request for Proposals for Contract C0988 C/LAX Transit Corridor.
August 24, 2012	Received approval from the Surface Transportation Board regarding BNSF Railway Company abandonment along five-mile Crenshaw Segment of the Harbor Branch ROW.
September 4, 2012	Preparation of a FONSI for Supplemental Environmental Assessment to the FEIS was approved by FTA.
September 28, 2012	Completed abandonment process with BNSF.
September 28, 2012	TIFIA and TIGER II Grants approved.
December 6, 2012	Received proposals for Contract C0988 C/LAX Transit Corridor.
February 22, 2013	Issued Amendment No. 8 requesting Best and Final Offers (BAFO) for Contract C0988 C/LAX Transit Corridor.
March 15, 2013	Received BAFO's for Contract C0988 C/LA Transit Corridor.
May 23, 2013	Board amended the Agency's FY14 Proposed Budget to include funding of \$80 million for an underground station at Leimert Park Village as part of the baseline project.
June 27, 2013	The Board awarded Contract C0988 Crenshaw/LAX Transit Corridor to Walsh-Shea Corridor Constructors.
July 10, 2013	Issued notice of award to Walsh-Shea Corridor Constructors, Contract C0988 Crenshaw/LAX Transit Corridor.


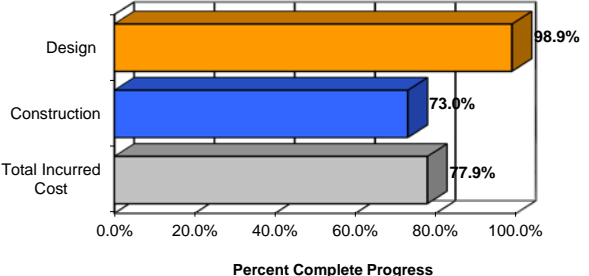
## **CHRONOLOGY OF EVENTS (Continued)**

August 1, 2013	United States Department of Transportation approves Metro's request to increase the Crenshaw/LAX Project Budget to \$2,058 million.
August 8, 2013	Issued notice of execution of the contract was issued to Walsh-Shea Corridor Constructors, Contract C0988 Crenshaw/LAX Transit Corridor.
September 10, 2013	Issued Notice to Proceed to Walsh-Shea Corridor Constructors, Contract C0988 Crenshaw/LAX Transit Project.
December 5, 2013	The Board approved Memorandum of Understanding with the Los Angeles World Airports for a parallel design and possible construction modifications near Aviation/Century Station to accommodate elements of LAWA's SPAS.
December 5, 2013	The Board awarded Contract C0992 with Rocla Concrete Tie, Inc; for the procurement of concrete ties and assembly items.
January 21, 2014	A Groundbreaking Ceremony was held at the Crenshaw/Exposition Station.
January 23, 2014	The Board awarded Contract C0992A Rail and Bumping Posts to LB Foster Rail Technologies Corp.
July 25, 2014	Century Crunch" – weekend demolition of the defunct Century railroad bridge at the intersection of Century Blvd. and Aviation.
August 21, 2014	Substantial Completion issued for Advanced Utility Relocations Contract C0990.
August 29, 2014	Released Invitation for Bid for Contract C0991 Crenshaw/LAX Southwestern Yard (Division 16) Maintenance Facility.
September 19, 2014	CPUC has approved all five (5) grade crossing applications and no further actions are required.
January 22, 2015	Received Technical and Price Bids for the Southwestern Yard (Division 16) Maintenance Facility.
March 25, 2015	Opened Price Bids for the Southwestern Yard (Division 16) Maintenance Facility.


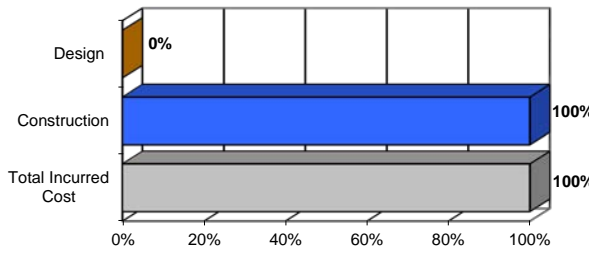
### **CHRONOLOGY OF EVENTS (Continued)**

May 28, 2015	The Board awarded Contract C0991 Division 16: Southwestern Yard to Hensel Phelps/Herzog JV. Also increased by \$22.0 million the Life of Project Budget for the Southwestern Yard Project to a new amount of \$307.2 million.
May 28, 2015	The Board approved Design Option 3 for the track alignment to accommodate the future Metro Connector Transit Station (96 <sup>th</sup> St. Station).
June 29, 2015	Issued Notice to Proceed to Hensel Phelps/Herzog JV, Contract C0991 Division 16: SouthwesternYard.
July 23, 2015	The Board approved the Official and Operational Names of the eight stations.
April 27, 2016	The Tunnel Boring Machine was launched and drilling from north to south of the alignment started.
May 7, 2016	Held Halfway There Community Celebration at Leimert Park marking the halfway point of the project.
May 27, 2016	Held Groundbreaking Ceremony for the Southwestern Yard (Division 16).
October 20,2016	The southbound tunnel boring machine completed mining with the hole thru at Leimert Park Station.
April 6, 2017	The northbound tunnel boring machine completed mining with the hole thru at Leimert Park Station.


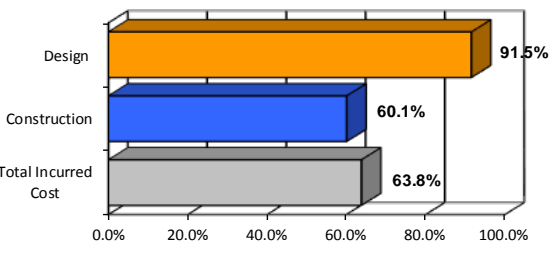
**CONTRACT C0988 STATUS**  
*Crenshaw/LAX Transit Corridor*

<p><b>PE Design Contractor: Hatch Mott (HM)</b>  <b>CM Consultant: Stantec</b>  <b>Contractor: - Walsh Shea Corridor Constructors (WSCC)</b></p>	<p><b>Contract No.: C0988</b>  <b>Status as of March 30, 2018</b></p> 																																								
<p><b>Progress/Work Completed: Construction</b></p> <ul style="list-style-type: none"> <li>Continued wall and roof concrete placements at Expo, MLK Jr and Leimert Park stations.</li> <li>Continued wall and roof placements at underground structure #3 and #4.</li> <li>Continued track work installations at available areas along alignments.</li> <li>Continued overhead catenary system installation at south end of alignment.</li> <li>Continued civil construction work within Park Mesa Heights area.</li> <li>Completed Green line tie-in efforts.</li> </ul>	<p><b>Areas of Concern:</b></p> <ul style="list-style-type: none"> <li>Timely submittal of WSCC's design submittals and review by City of Los Angeles.</li> <li>WSCC's ability to mitigate potential schedule delay to their substantial completion milestone of May 1, 2019.</li> </ul>																																								
<p><b>Schedule Assessment:</b></p> <ul style="list-style-type: none"> <li>WSCC's January 2018 schedule update reflects a 56 days delay to Milestone 1. WSCC is looking at several options to mitigate the forecast delay.</li> <li>Metro's assessment is that WSCC is responsible to mitigate the 56 days.</li> <li>Metro has not received a February or March 2018 update from WSCC. Therefore, Metro continues to show a 56 calendar day delay to WSCC's Contract Milestone #1 Substantial Completion date of May 1, 2019.</li> </ul>	<p><b>Cost Assessment:</b></p> <ul style="list-style-type: none"> <li>The current construction contract cost forecast from pay application is \$1,398,259,425.65 and is within the Board authorized budget.</li> <li>The Contractor submitted their 56th payment application in the approved amount of \$18,940,000.00</li> </ul> <p>* Please note that not all executed modifications may have been included in the Contractor current payment application.</p>																																								
<p><b>Schedule Summary:</b></p> <table border="0"> <tr> <td>1. Date of Award:</td> <td>08/01/13</td> </tr> <tr> <td>2. Notice to Proceed:</td> <td>09/10/13</td> </tr> <tr> <td>3. Original Substantial Completion Duration:</td> <td>1824</td> </tr> <tr> <td>4. Current Substantial Completion Duration:</td> <td>2059</td> </tr> <tr> <td>5. Elapsed Time from NTP:</td> <td>1663      80.8%</td> </tr> </table>	1. Date of Award:	08/01/13	2. Notice to Proceed:	09/10/13	3. Original Substantial Completion Duration:	1824	4. Current Substantial Completion Duration:	2059	5. Elapsed Time from NTP:	1663      80.8%	<p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <table border="0"> <tr> <td>1. Award Value:</td> <td>1,272.63</td> </tr> <tr> <td>2. Executed Modifications:</td> <td>115.59</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td>15.16</td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td>1,403.38</td> </tr> <tr> <td>5. Incurred Cost:</td> <td>1,088.57</td> </tr> </table>	1. Award Value:	1,272.63	2. Executed Modifications:	115.59	3. Approved Change Orders:	15.16	4. Current Contract Value (1 + 2 + 3):	1,403.38	5. Incurred Cost:	1,088.57																				
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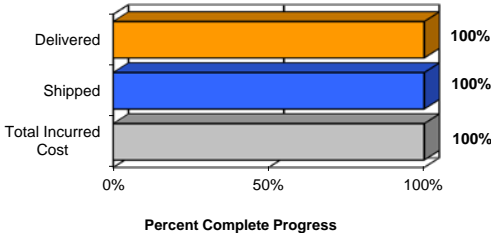
**CONTRACT C0990 STATUS**  
*Crenshaw/LAX Advanced Utility Relocations*

<b>PE Design Contractor: Hatch Mott (HM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: - Metro Builders and Engineers Group LTD</b>		<b>Contract No.: C0990</b>  <b>Status: Completed</b>																																				
<b>Progress/Work Completed:</b> - The construction was substantially completed on August 21, 2014 - Board authorized in March a settlement with the contractor. - Contract is closed out.		<b>Areas of Concern:</b>																																				
<b>Schedule Assessment:</b> - Metro granted substantial completion to Metro Builders on August 21, 2014, which is 276 calendar days behind. - The settlement with the contractor settled all time issues.		<b>Cost Assessment:</b> - The final contract is \$11,316,140.00 and has been completely paid to contractor.  * A modification in process for credit of unused provisional sums in the amount of \$123,156.85.																																				
<b>Schedule Summary:</b> 1. Date of Award: 05/30/12 2. Notice to Proceed: 07/17/12 3. Original Substantial Completion Duration: 365 4. Current Substantial Completion Duration: 468 5. Elapsed Time from NTP: 753		<b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span> 1. Award Value: 7.83 2. Executed Modifications:* 3.49 3. Approved Change Orders: - 4. Current Contract Value (1 + 2 + 3): 11.32 5. Incurred Cost: 11.32																																				
<table border="1"> <thead> <tr> <th>Milestones</th> <th>Original Contract</th> <th>Current Contract</th> <th>Forecast</th> <th>Calendar Day Variance</th> </tr> </thead> <tbody> <tr> <td>Milestone 1 - Contract Substantial Completion</td> <td>07/17/13</td> <td>11/18/13</td> <td>08/21/14A</td> <td>-276</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	Milestone 1 - Contract Substantial Completion	07/17/13	11/18/13	08/21/14A	-276																										<p align="center"><b>PERCENT COMPLETE</b> <i>from 7/17/12 to 8/21/14</i></p>  <p align="center"><i>Construction physical percent complete excludes mobilization and general requirements</i></p>	
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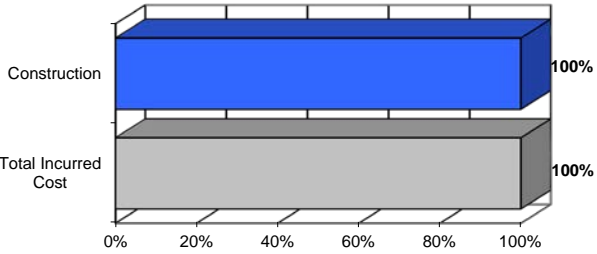
**CONTRACT C0991 STATUS**  
*Southwestern Yard*

<p><b>PE Design Contractor: Hatch Mott (HM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: - Hensel Phelps / Herzog JV</b></p>	<p><b>Contract No.: C0991</b></p> <p><b>Status as of March 30, 2018</b></p> 																									
<p><b>Progress/Work Completed:</b></p> <ul style="list-style-type: none"> <li>Continued with electrical and communication signaling and TPSS, duct banks, gas, storm drain, sewer connection, fire water lines, OCS and lighting, foundations</li> <li>Completed exterior skin framing of material storage building and sidewalk around the structure.</li> <li>Completed car wash and car cleaning foundations, grade beams and pit construction and erected prefabricated structures and canopy.</li> <li>Continued with main shop CMU wall construction, exterior/interior framing, drywall/tape/finish, electrical, duct work, mechanical, plumbing roof drain and roofing activities.</li> <li>Continued with under drain ballast, storage track installation and turnouts including double cross-over.</li> <li>Continued Paint &amp; Body duct bank, conduits, underground piping, foundation, excavation of footings and setting clarifier.</li> <li>Continued installation of roof equipment, car hoists and 15-Ton, and 10-Ton cranes in main shop.</li> </ul>	<p><b>Areas of Concern:</b></p> <ul style="list-style-type: none"> <li>Paint and Body Shop steel fabrication is impacting the contract critical path.</li> <li>Metro and HPH are working on a mitigation recovery plan.</li> </ul>																									
<p><b>Schedule Assessment:</b></p> <ul style="list-style-type: none"> <li>Interface coordination between HPH, WSCC, City, 3rd Parties are being managed proactively to address and to minimize any impact on the project cost and</li> <li>All phase II access dates were achieved ahead of time.</li> <li>HPH is re-evaluating schedule activities for the buildings, system work including, installation, testing, commissioning and integration testing.</li> </ul>	<p><b>Cost Assessment:</b></p> <ul style="list-style-type: none"> <li>The current construction contract cost forecast from pay application is \$173,737,773.67 is within the Board authorized budget.</li> <li>The Contractor submitted their 32nd payment application in the approved amount of \$5,643,861.41</li> </ul> <p>Please note that not all executed modifications may have been included in the Contractor current payment application.</p>																									
<p><b>Schedule Summary:</b></p> <table border="0"> <tr> <td>1. Date of Award:</td> <td>28-May-15</td> </tr> <tr> <td>2. Notice to Proceed:</td> <td>29-Jun-15</td> </tr> <tr> <td>3. Original Substantial Completion Duration:</td> <td>1,220</td> </tr> <tr> <td>4. Current Substantial Completion Duration:</td> <td>1,311</td> </tr> <tr> <td>5. Elapsed Time from NTP:</td> <td>1,005      76.7%</td> </tr> </table>	1. Date of Award:	28-May-15	2. Notice to Proceed:	29-Jun-15	3. Original Substantial Completion Duration:	1,220	4. Current Substantial Completion Duration:	1,311	5. Elapsed Time from NTP:	1,005      76.7%	<p><b>Cost Summary:</b> <span style="float:right"><b>\$ In millions</b></span></p> <table border="0"> <tr> <td>1. Award Value:</td> <td>172.31</td> </tr> <tr> <td>2. Executed Modifications:</td> <td>1.38</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td>0.13</td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td>173.82</td> </tr> <tr> <td>5. Incurred Cost (thru January 2018):</td> <td>110.86</td> </tr> </table>	1. Award Value:	172.31	2. Executed Modifications:	1.38	3. Approved Change Orders:	0.13	4. Current Contract Value (1 + 2 + 3):	173.82	5. Incurred Cost (thru January 2018):	110.86					
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MS#4 Southwestern Yard Substantial Completion	31-Oct-18	30-Jan-19	1-Feb-19	-2																						

**CONTRACT C0992 STATUS**  
*Concrete Ties*

<b>PE Design Contractor: Hatch Mott (HM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: Rocla Concrete Tie Inc.</b>		<b>Contract No.: C0992</b> <b>Status: Completed</b>																																											
<b>Progress/Work Completed:</b> - All 19,936 concrete ties have been received onsite by the design-builder (Contract C0988). - Contract is closed out.		<b>Areas of Concern:</b>																																											
<b>Schedule Assessment:</b> All concrete ties were delivered to job site by August 15, 2014.		<b>Cost Assessment:</b> The final contract cost is \$2.25 million and has been completely paid to contractor.																																											
<b>Schedule Summary:</b>		<b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span>																																											
1. Date of Award: <span style="float: right;">12/10/13</span> 2. Notice to Proceed: <span style="float: right;">12/23/13</span> 3. Original Substantial Completion Duration: <span style="float: right;">220</span> 4. Current Substantial Completion Duration: <span style="float: right;">235</span> 5. Elapsed Time from NTP: <span style="float: right;">235</span>		1. Award Value: <span style="float: right;">2.16</span> 2. Executed Modifications: <span style="float: right;">0.09</span> 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3): <span style="float: right;">- 2.25</span> 5. Incurred Cost: <span style="float: right;">2.25</span>																																											
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**CONTRACT C0992A STATUS**  
*Running Rail and Bumping Posts*

<p><b>PE Design Contractor: Hatch Mott (HM)</b>  <b>CM Consultant: Stantec</b>  <b>Contractor: LB Foster Rail Technology Corp</b></p>	<p><b>Contract No.: C0992A</b>  <b>Status: Completed</b></p> 																																			
<p><b>Progress/Work Completed:</b>          - All 115RE SS Blank Stick Rails have been delivered to the job site.          - All 115RE HH rail have been delivered to job site.          - All Bumping Posts have been delivered to job site on 5/8/2015.          - Contract is closed out.</p>	<p><b>Areas of Concern:</b>          .</p>																																			
<p><b>Schedule Assessment:</b>          All running rails and bumping posts were delivered ahead of the schedule.</p>	<p><b>Cost Assessment:</b>          The final contract cost is \$5,2 million and has been completely paid to contractor.</p>																																			
<p><b>Schedule Summary:</b></p> <table border="0"> <tr> <td>1. Date of Award:</td> <td align="right">01/23/14</td> </tr> <tr> <td>2. Notice to Proceed:</td> <td align="right">03/07/14</td> </tr> <tr> <td>3. Original Substantial Completion Duration:</td> <td align="right">300</td> </tr> <tr> <td>4. Current Substantial Completion Duration:</td> <td align="right">558</td> </tr> <tr> <td>5. Elapsed Time from NTP:</td> <td align="right">448</td> </tr> </table>	1. Date of Award:	01/23/14	2. Notice to Proceed:	03/07/14	3. Original Substantial Completion Duration:	300	4. Current Substantial Completion Duration:	558	5. Elapsed Time from NTP:	448	<p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <table border="0"> <tr> <td>1. Award Value:</td> <td align="right">5.2</td> </tr> <tr> <td>2. Executed Modifications:</td> <td></td> </tr> <tr> <td>3. Approved Change Orders:</td> <td></td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td align="right">- 5.2</td> </tr> <tr> <td>5. Incurred Cost:</td> <td align="right">5.2</td> </tr> </table>	1. Award Value:	5.2	2. Executed Modifications:		3. Approved Change Orders:		4. Current Contract Value (1 + 2 + 3):	- 5.2	5. Incurred Cost:	5.2															
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## CONSTRUCTION PHOTOGRAPHS



**UG1**– Installation of counter weight balance and down guy cable inside the OCS pole Str. 1028 and 1029.

## CONSTRUCTION PHOTOGRAPHS (Continued)



**AVIATION/CENTURY STATION** – Station platform overhang formwork installation at the Service Building Exit Corridor staircase.



**AVIATION/CENTURY STATION** – Installation of the HVAC ducts inside the Service Building TC&C room.

## CONSTRUCTION PHOTOGRAPHS (Continued)



**(AG-4) MANCHESTER BRIDGE** – Tamping of SB track and flooding of ballast rock along NB track.



**B1 GUIDEWAY** - Placing curb & gutter on Florence close to Hillcrest.

### CONSTRUCTION PHOTOGRAPHS (Continued)



**TPSS - TPSS 4-** Placing concrete for slab on grade.



**UG3 -** Southbound tunnel with completed emergency walkway.

**CONSTRUCTION PHOTOGRAPHS (Continued)**



**UG3** - Ironhorse direct fixation plinth construction alongside walkway reinforcement.



**HYDE PARK STATION** - Trenching for systems duct bank.

**CONSTRUCTION PHOTOGRAPHS (Continued)**



**UG4** – Southbound walkway forms (pre-strip).



**UG4** – Grading and compaction of backfill at roof level.

### CONSTRUCTION PHOTOGRAPHS (Continued)



**LEIMERT PARK STATION** – Installation of formwork for roof plenum walls.



**MARTIN LUTHER KING JR. STATION** Installation of false work for phase 2 roof construction.

### CONSTRUCTION PHOTOGRAPHS (Continued)



**EXPOSITION/CRENSHAW STATION** – Concrete placement at section F1 of Phase 4 Roof.



**SOUTHWESTERN YARD** – Looking south showing yard and automated people mover columns.

**CONSTRUCTION PHOTOGRAPHS (Continued)**



**SOUTHWESTERN YARD** – Main shop equipment turn tables, truck lift, 10 ton cranes.



**SOUTHWESTERN YARD** – looking west, car wash, cleaning, storage buildings.

**CONSTRUCTION PHOTOGRAPHS (Continued)**



**SOUTHWESTERN YARD – Main shop.**



**SOUTHWESTERN YARD – Main shop.**

**APPENDIX**

**PROJECT COST STATUS – SOUTHWESTERN YARD**

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAYS	0	0	0	0	40,000	0	40,000	0	40,000	40,000
20	STATIONS	0	0	0	0	0	0	0	0	0	0
30	SUPPORT FACILITIES (Y & S)	85,546,835	0	85,189,999	106,655	86,507,266	4,530,170	46,817,372	1,052,427	86,864,102	1,674,103
40	SITWORK/SPECIAL CONDITIONS	35,932,000	0	38,273,000	461,485	40,971,933	622,179	29,191,206	461,485	41,182,604	2,909,604
50	SYSTEMS	25,784,616	0	32,991,000	0	33,115,119	1,462,296	18,321,882	0	33,115,119	124,119
	(10-50) CONSTRUCTION	147,263,451	0	156,453,999	568,140	160,634,319	6,614,646	94,370,460	1,513,912	161,201,825	4,747,826
60	RIGHT-OF-WAY	99,910,000	0	100,000,000	806	102,475,012	806	102,419,416	0	102,420,623	2,420,623
70	VEHICLES	0	0	0	0	0	0	0	0	0	0
80	PROFESSIONAL SERVICES	35,601,095	0	33,639,631	0	33,626,532	569,169	28,114,885	0	36,337,738	2,698,107
90	PROJECT CONTINGENCY	13,659,732	0	17,106,370	0	0	0	0	(568,140)	7,239,814	(9,866,556)
<b>TOTAL</b>		<b>296,434,278</b>	<b>0</b>	<b>307,200,000</b>	<b>568,946</b>	<b>296,735,863</b>	<b>7,184,621</b>	<b>224,904,760</b>	<b>945,772</b>	<b>307,200,000</b>	<b>0</b>

**C0991 PAINT & BODY SHOP PROJECT**

DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
		PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
861301 DIV 22 PAINT & BODY SHOP	11,000,000	0	11,000,000	34,856	10,325,552	75,225	3,745,899	0	11,000,000	0

<b>GRAND TOTAL</b>	<b>307,434,278</b>	<b>0</b>	<b>318,200,000</b>	<b>603,802</b>	<b>307,061,415</b>	<b>7,259,846</b>	<b>228,650,659</b>	<b>945,772</b>	<b>318,200,000</b>	<b>0</b>
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NOTE: EXPENDITURES ARE CUMULATIVE THROUGH MARCH 30, 2018.

**PROJECT COST ANALYSIS**

The project number 865512, 860003 and 861301 are internal to Metro and are used to differentiate between various components of the project.

**Original Budget:**

The Board in May 2015 established the Life-of-Project (LOP) budget of \$307.2 million for the Southwestern Yard Project.

**Current Budget:**

The Board in May 2015 approved an increase for the funding for the Southwestern Yard by \$22.0 million to increase the LOP budget to \$307.2 million to allow for the award of design-build Contract C0991 Southwestern Yard Project. Of the total \$307.2 million, \$150.2 million is funded in the Crenshaw/LAX Transit Project LOP budget which includes the original 49% allocation amount of \$139.4 million plus a new \$10.8 million reduction from the Crenshaw/LAX Transit Project contingency line item in the budget. There is no increase in the LOP for the Crenshaw/LAX Transit Project. The original 51% share associated with future Green Line related extensions in an amount of \$145.8 million was increased by \$11.2 million for a new total of \$157.0 million.

In addition to the \$307.2 million there is another \$11.0 million that is the budget for the paint and body shop, under another Metro internal cost project number, which funding was approved by a prior agreement for a paint and body shop to support the Green Line shops and was required for the award of the design-build Contract C0991 Southwestern Yard Project.

The grand total of the combined budget is \$318.2 million.

## **APPENDIX**

### **PROJECT COST ANALYSIS (Continued)**

**Current Forecast:**

The current project forecast is \$318.20 million. However, there was a reallocation of forecast within the SCC-30 (Support Facilities), SCC-80 (Professional Services), and SCC-90 (Project Contingency).

**Commitments:**

The commitments are cumulative through March 30, 2018.

Total commitments increased by \$0.60 million for this period due to the following:

- SCC-10
  - No change to commitments to report.
- SCC-30
  - Hensel Phelps/Herzog JV commitments increase by \$0.11 million.
- SCC-40
  - Hensel Phelps/Herzog JV commitments increase by \$0.46 million.
- SCC-50
  - No change to commitments to report.
- SCC-60
  - No change to commitments to report.
- SCC-80
  - No change to commitments to report.

The \$307.06 million in commitments to date represents 96.5% of the current budget.

**Expenditures:**

The expenditures are cumulative through March 30, 2018.

The total expenditures increased by \$7.26 million for this period due to the following:

- SCC-10
  - No change Guideways expenditure.
- SCC-30
  - Hensel Phelps/Herzog JV expenditure increase by \$4.53 million.
- SCC-40
  - Hensel Phelps/Herzog JV expenditure increased by \$0.62 million.
- SCC-50
  - Hensel Phelps/Herzog JV expenditure increase by \$1.46 million.
- SCC-60
  - No change to Right-of-Way expenditure.
- SCC-80
  - Hensel Phelps/Herzog JV, agency expenditure and professional services expenditure increase by \$0.65 million.

The \$228.65 million in expenditures to date represents 71.86% of the current budget.

**COST AND BUDGET TERMINOLOGY**

**Project Cost  
Descriptions -**

ORIGINAL BUDGET	The Original Project Budget as established by the Metropolitan Transportation Authority (Metro) Board on October 27, 2011.
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, 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 invoices, third party invoices, staff salaries, real estate and other expenses that is reported in Metro's Financial Information System (FIS).
CURRENT FORECAST	The best estimate of the final cost of the project when all checks have been issued and the project is closed out. Current Forecast is composed of actual costs incurred to date, the best estimate of work remaining and a current risk assessment for each budgeted cost item.

**Cost Report by Element Descriptions -**

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