

# Crenshaw/LAX Transit Project



Metro<sup>®</sup>

# **CRENSHAW/LAX TRANSIT PROJECT**

## **MONTHLY PROJECT STATUS REPORT**

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

**JULY 2018**

## TABLE OF CONTENTS

	Page No.
Project Overview & Status.....	1-4
Management Issues.....	5
Project Alignment.....	6
Project Scope.....	7-8
Project Status	
• Project Schedule	
○ Key Milestones Six-Month Look Ahead.....	9
○ Project Summary Schedule.....	10
○ Schedule Measurements.....	11
○ Overall Construction Progress Curve.....	12
○ Major Equipment Delivery .....	13
○ Design-Builder's (C0988) Long Lead Item List.....	14
○ Critical Path Narrative.....	15-16
○ Project Schedule Contingency Drawdown.....	17
○ Project Schedule Contingency Drawdown Analysis.....	17
○ Risk Management Narrative.....	18-19
• Project Cost	
○ Project Cost .....	20
○ Project Cost Analysis.....	20-22
○ Project Cost Contingency Drawdown.....	23
○ Project Cost Contingency Drawdown Analysis.....	23-24
○ Disadvantaged Business Enterprise (DBE).....	25-28
○ Project Labor Agreements (PLA) Status.....	25-28
○ Summary of Contract Modifications.....	29-30
• Financial/Grant	
○ Financial/Grant .....	31
○ Status of Funds Anticipated.....	32
• Staffing	
○ Total Project Staffing.....	33
○ Metro Staffing.....	34
○ Construction Management Support Services Consultant.....	34

**TABLE OF CONTENTS (Continued)**

	Page No.
o Engineering Services Consultant.....	35
• Real Estate.....	36
• Quality Assurance.....	36
• Environmental.....	37
• Construction Relations.....	38
• Systemwide Design and Art Program.....	38
• Safety and Security.....	39
• Third Party Agreement .....	40
• CPUC Crossing Summary Status.....	40
• Traffic Closure Key Map.....	41
• Chronology of Events.....	42-45
• Construction Contracts	
o Contract C0988 .....	46
o Contract C0991 .....	47
• Construction Photographs.....	48-56
Appendices	
• Project Cost Status – Southwestern Yard.....	57-58
• Cost and Budget Terminology.....	59

## **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. The contractor continued construction along all areas of the alignment.

The four at-grade stations structure concrete placements are substantially completed. Finish work including mechanical/electrical, plumbing, and communications systems continues. The canopy work is nearing completion for three of the four stations. The aerial station structure concrete placement is substantially complete with glass for roof canopy nearing completion.

The three underground stations remain at various levels of completion with work continuing on wall, roof, and entrance concrete placements. Interior walls are nearing completion and finish work including mechanical/electrical, plumbing, and communications systems continues.

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 work is nearing completion 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 alignment. The contractor has completed construction of 14 of 17 at-grade crossings. The contractor also is continuing overhead catenary and train control systems installation in the south end of the alignment.

Restoration of the road over the three underground stations along Crenshaw Blvd., continues this month. The initial effort commenced with the closure of the area for the Leimert Park Station and the at-grade transition section. This closure will continue for 43-days with the next closure phase to commence at the Martin Luther King Jr. Station area.

## **PROJECT OVERVIEW (Continued)**

**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.

*The contractor continued with yard trackwork activities including installing switch machines, storage track, turnouts, and overhead catenary system poles including the wiring and pole arms. Completed installation of train control bungalows, set generator on the pad, and installed traction power substation. Continued wiring from bungalows to train control devices, TPSS high voltage cables to the buildings including DWP wiring of vista switch.*

*Completed paint and body platform, imbedded track, CMU walls and started preparing for structural steel delivery and subsequent installation.*

*Completed car wash and car cleaning footings, grade beams, underground conduits, piping, walls, installation of the carwash prefabricated structure, exterior framing and cleaning platform canopy. Continued with electrical, mechanical, plumbing, and finishes in main shop, car wash, car cleaning and material storage structures.*

In the main shop the contractor continue installation of roof equipment, car hoists, and cranes and interior wall finishes. Continue framing of interior and exterior of control tower, sealing of CMU walls and installation of exterior panels and windows.

### **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 July 2018.* Thirty-six full takes, 26 part-takes and 14 TCE’s have been provided to 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.

## **PROJECT OVERVIEW (Continued)**

Metro will prepare a design update for the Crenshaw/LAX Project. All work for the ROC is planned to be completed concurrently with WSCC 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 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%.

## **PROJECT OVERVIEW (Continued)**

*The project commitments thru July 2018 are \$2,014.6 million or 98.0% of the Current Budget. The project expenditures thru July 2018 are \$1,673.3 million or 81.3% of the Current Budget.*

The current period expenditures are for WSCC's monthly construction costs, professional services costs such as construction management and administrative staffing and other project costs. 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, WSCC 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.*

*Metro received a January 2018 update from WSCC which forecast a 56-calendar day delay to WSCC's Contract Milestone #1, Substantial Completion date of May 1, 2019.*

*WSCC last submitted a May 2018 schedule update which included alleged delays and potential future delays and was not based on the approved Completion Schedule. Since these inclusions are out of compliance with the Contract, Metro requested WSCC to resubmit the schedule update. No schedule updates have been received as of July 30, 2018.*

*Metro forecasts that based on amount of work completed by the contractor over the last six months since the January 2018 schedule update, the un-mitigated delay is greater than the 56-calendar days shown in the January 2018 schedule update.*



## **MANAGEMENT ISSUES**

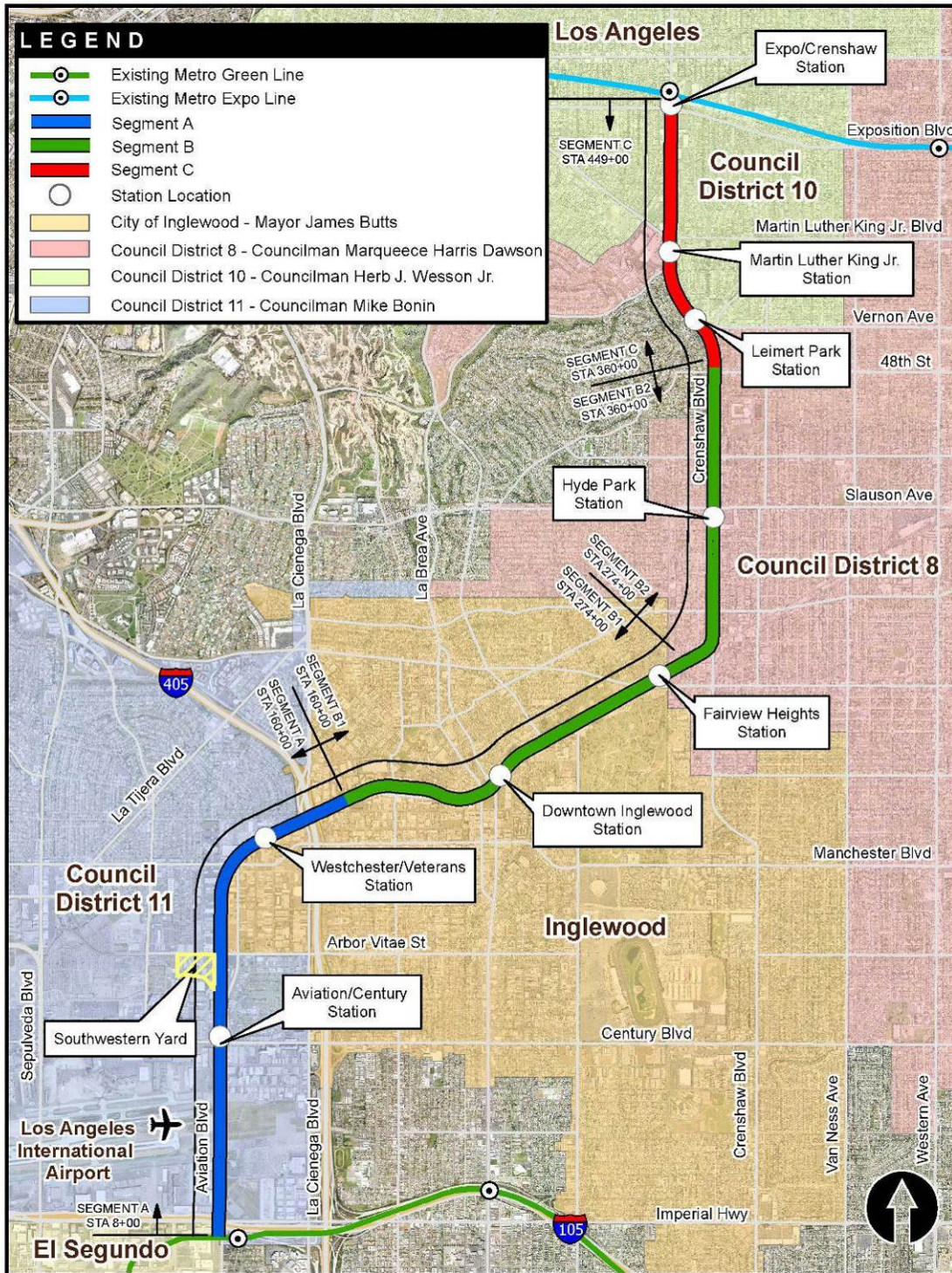
**Concern No. 1:** Design-builders construction schedule

**Status/Action** *Metro received a January 2018 update from WSCC which forecast a 56-calendar day delay to WSCC's Contract Milestone #1, Substantial Completion date of May 1, 2019. WSCC last submitted a May 2018 schedule update which included alleged delays and potential future delays and was not based on the approved Completion Schedule. Since these inclusions are out of compliance with the Contract, Metro requested WSCC to resubmit the schedule update. No schedule updates have been received as of July 30, 2018. Metro forecasts that based on amount of work completed by the contractor over the last six months since the January 2018 schedule update, the un-mitigated delay is greater than the 56-calendar days shown in the January 2018 schedule update. Metro is evaluating the impact on the planned October 2019 revenue service date.*

**Concern No. 2:** 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. The remaining unallocated contingency is 0.6% of total project current forecast and 3.4% of total project cost-to-go. Metro has identified funding available in fiscal year 2019 for specific scope of work that is eligible to be reallocated to a non-project local funding source. Metro has initiated in July reallocating the associated expenditures to date for this specific scope of work. This will allow Metro to replenish a portion of the Project unallocated contingency over the next six months.*

**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	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19
988-CT-95178	Setup Form System & Pour plinth - UG #3 STA 274+25 to 296+92 (NB & SB Track)	12-Aug-18						
988-MOD-3180	Deluge System at Expo Crossover	30-Aug-18						
988-TW-4023	Destress DF Track - STA 274+25 to 316+66 (Underground #3) - Seg. B2	30-Aug-18						
988-IFC-ATC06	I-Face: Track Complete @ A06 (294+00 to 364+40)	30-Aug-18						
988-CT-30539	Turnover NB Tunnel to Track	31-Aug-18						
988-ATC-03400	Install ATC Local Cable @ TC #4	05-Sep-18						
991-PR-01250	FAB - Spray Painting Booths	10-Sep-18						
988-CT-34466	Install HVAC - Zone 4B - TPSS Fan	13-Sep-18						
988-CT-5659	Ductbank - Manhole / Vault / Pad / Pull Box - TPSS-07/ Aux. Power (Future)	27-Sep-18						
988-CT-66505	Ventilation Rough-in - UG #3	28-Sep-18						
988-CT-13259	Electrical Rough - Zone 3	28-Sep-18						
988-PCI-50299.01-b	Fabricate & Deliver - UG1 H2S Jet Fans	04-Oct-18						
988-CT-9189	Backup Power (TPSS) - TPSS-04	19-Oct-18						
988-FAT-01A50b	ATC: Post-Termination Field Acceptance Testing @ Aviation TC&C #1 Continental (6+00 to 42+92)	21-Nov-18						
988-CT-40627	Pave - 48 th to Slauson	03-Dec-18						
988-CT-11110	Complete Hardscaping - Cut & Cover #4	05-Dec-18						
988-PR-11725404	Fab/Procure & Deliver Gas Fans - UG #1	25-Dec-18						
988-CT-66515	Ventilation Equipment - UG #3	28-Dec-18						
988-CT-66515	Ventilation Equipment - UG #3	08-Jan-19						
988-CT-1170273	Platform Edge Paver (Yellow) / Pre-Warning Strip (Black) - Hyde Park Station	14-Jan-19						
988-CT-91778	Install Rail/Pour Plinth - Expo NB Track (STA 440+31 to 448+35)	15-Jan-19						
988-CT-87988	Pave Crenshaw Blvd West Southbound Lanes - Expo	15-Jan-19						
988-CT-70865	Grade for Sidewalk Restoration - MLK	21-Jan-19						
988-CT-10780	Complete Hardscaping - Leimert Park Station	24-Jan-19						
988-CT-1170403	Notification to LACMTA - Station Ready for Fare Equip. - Hyde Park Station	28-Jan-19						
988-CT-13649	Backfill & Compact (Site) - Expo	30-Jan-19						
988-CT-41249	Set Lights Poles & Fixtures - MLK	30-Jan-19						
988-CT-90618	Demo Existing Northbound Crenshaw - 48th to Vernon Ave.	30-Jan-19						



MTA Board Action



MTA Staff



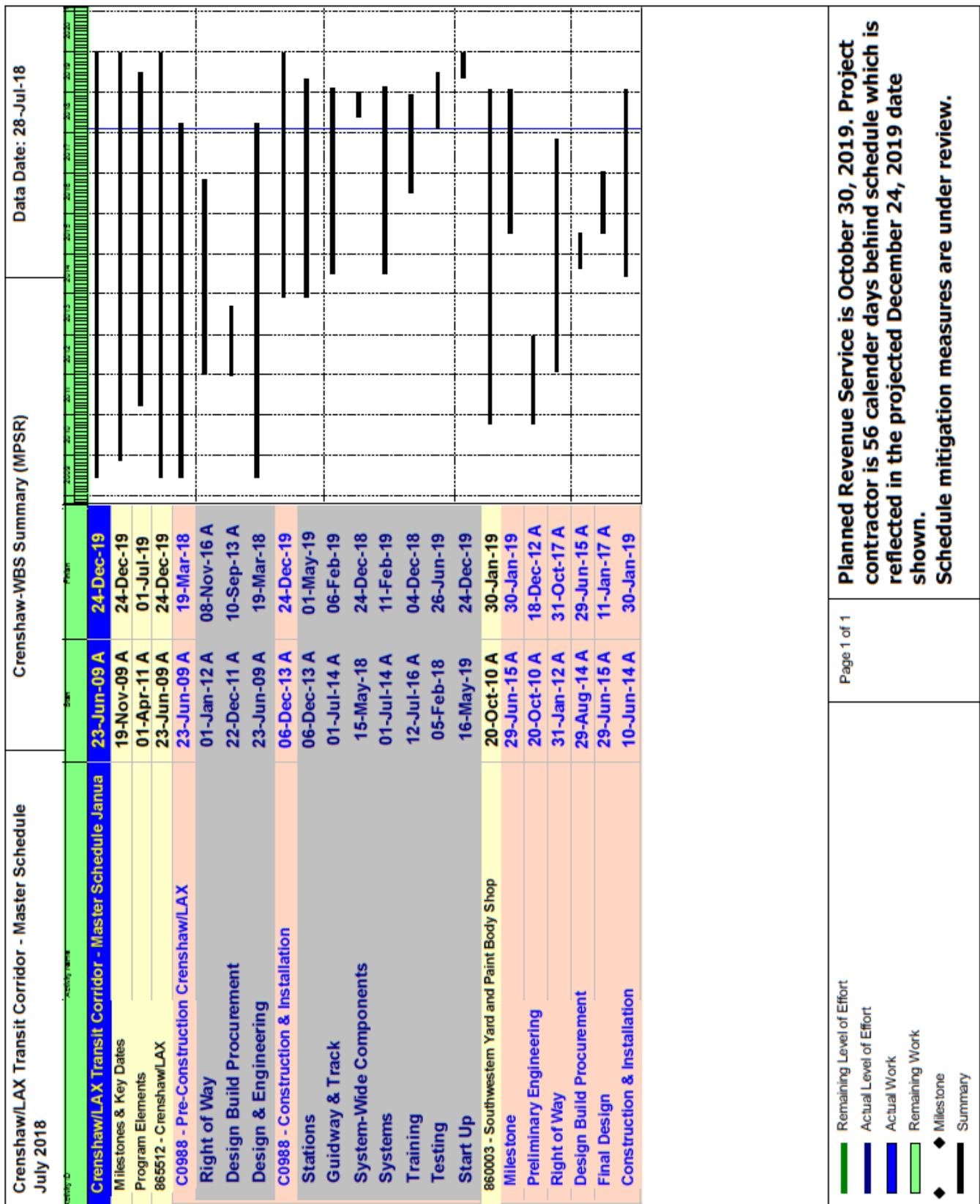
Walsh Shea Corridor Constructors



Hensel Phelps / Herzog

"A" following date is actual and completed

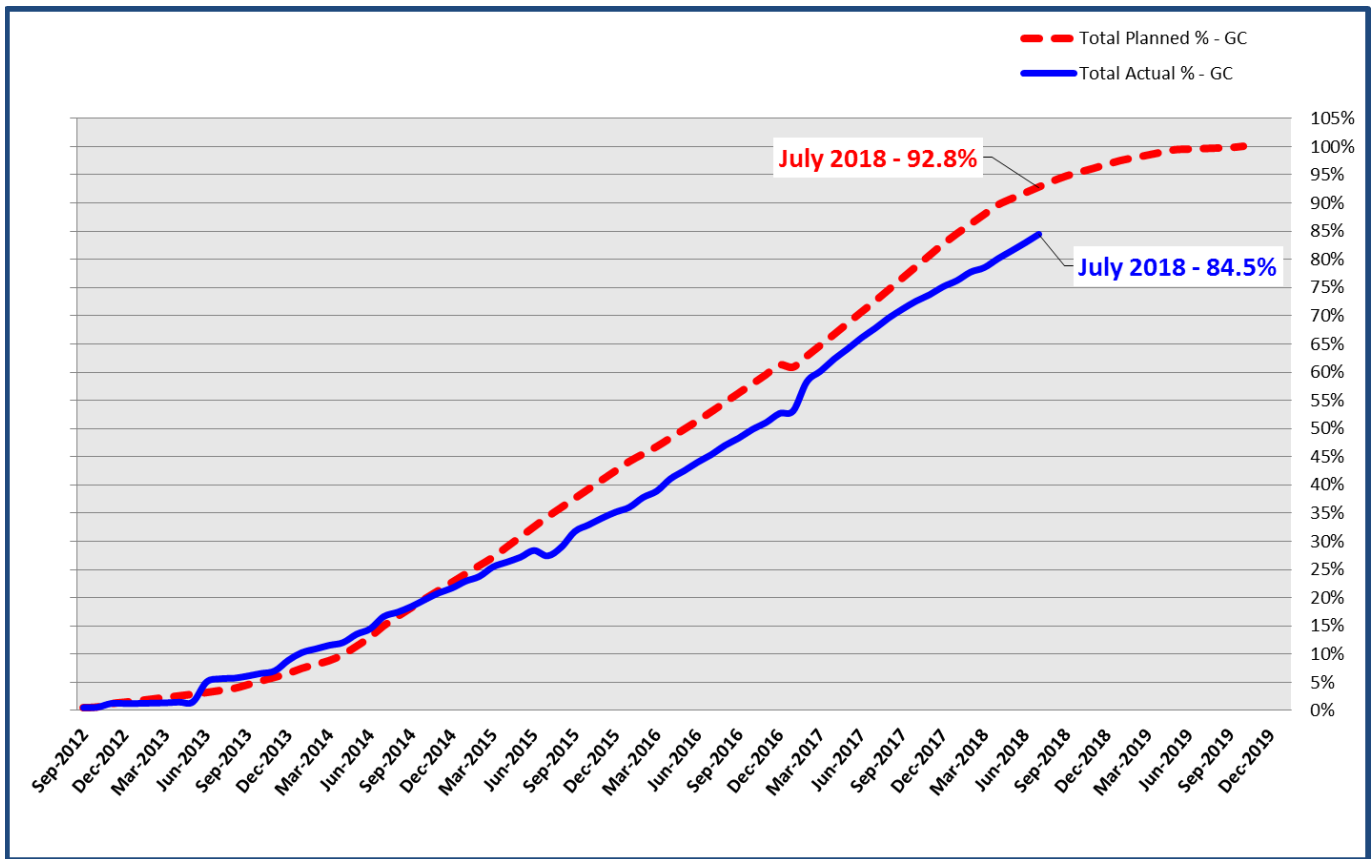
## PROJECT SUMMARY SCHEDULE



**SCHEDULE MEASUREMENTS**

	Status	Change from Last Period	Comment
Current Revenue Service:	10/30/2019	0	
Forecast Revenue Service:	TBD	0	Behind Schedule
TIFIA Revenue Service:	10/30/2019	0	
<b>Final Design Progress:</b>			
Contract C0988	99.2%	0.0%	Design Services During Construction On Schedule
Contract C0990	100%	None	Design Completed
Contract C0991	96.1%	2.3%	Design Services During Construction On Schedule
Contract C0992	100%	None	Design Completed
Contract C0992A	100%	None	Design Completed
<b>Construction Contracts Progress:</b>			
Contract C0988	78.5%	2.4%	Behind Schedule
Contract C0990	100%	None	Completed
Contract C0991	79.47	5.2%	Schedule Mitigation in Progress
Contract C0992	100%	None	Completed
Contract C0992A	100%	None	Completed

**OVERALL CONSTRUCTION PROGRESS CURVE STATUS**



The actual overall construction progress is 84.5% versus a planned progress of 92.8% through July 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 commenced manufacturing of the equipment in February 2018 and will complete manufacturing of the equipment as scheduled by October 2018.

The alignment contractor has a Contract Milestone No. 2 "Complete UFS Station Areas" which is planned to be complete by November 1, 2018. However, this milestone will be missed. Therefore, the UFS equipment will be shipped as scheduled to a local storage area where it will be stored until the Crenshaw/LAX Project stations become ready for its installation.

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

The list below are the top critical long lead procurement items included in the contractor's May 2018 schedule update. The contractor has not submitted a June 2018 schedule update.

<b>WBS Name</b>	<b>Activity ID</b>	<b>Activity Name</b>	<b>Start</b>	<b>Early Finish</b>	<b>Late Finish/Need Date</b>	<b>Total Float</b>
Site/Civil	988-PR-6370	Fab/Procure & Deliver Station Emergency Ventilation Fans	19-May-18	13-Dec-18	24-Sep-18	-80
Procurement - Communication System	988-PRC-C0810	Mfgr/Test/Ship Complete Comm Racks - UG3 Radio Room	27-Oct-17 A	29-Aug-18	04-Jun-18	-90
Procurement - Communication System	988-PRC-C0081	Procure & Deliver UPS & Batteries - TC&C #3 Century	05-Feb-18 A	30-Aug-18	02-Jul-18	-60
Procurement - Communication System	988-PRC-C01020	Deliver & Receive Complete Comm Racks - TC&C #7 Colina	21-Dec-17 A	30-Aug-18	07-May-18	-115
Site/Civil	988-PR-6375	Fab/Procure & Deliver Jet Fans - UG #3, UG#4	09-Jun-18	31-Oct-18	4-Jun-18	-149
Site/Civil	988-PR-11725404	Fab/Procure & Deliver Gas Fans - UG #1	09-Jun-18	25-Dec-18	19-Jul-18	-159

## **CRITICAL PATH NARRATIVE**

### **Revised Baseline Schedule Update – December 2016 Critical Path**

The project's critical path changed in December 2016 due to the addition of construction activities for the accommodations to support a future LRT station at 96th Street. The contractor's critical path 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. The critical path continued 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 48th Street, then track and OCS installation in the five underground structures at the north end of the alignment. The path continued with the contractor's systems integration testing (SIT), phase 1 and Metro's SIT phase 2 followed by Metro's pre-revenue service. The critical path completes with the commencement of revenue service.

### **Contractor's January 2018 Schedule Update Critical Path**

"The critical path remained consistent with the previous month. The current schedule update's critical path continued with track construction at Segment A. This effort is followed by ballasted track construction from Arbor Vitae to Oak Street, La Brea to Brynhurst, and Brynhurst to 48th Street. Track and OCS installation in the bored tunnel" then continued leading to contractor's SIT, phase 1 and Metro's SIT phase 2 followed by Metro's pre-revenue service. The critical path completes with the commencement of revenue service.

### **Contractor's May 2018 Schedule Update Critical Path**

In the May 2018 schedule update, as with previous non-conforming schedule update, the contractor shifted the critical path away from track construction work to material procurement for fire rated cable work followed by construction UG#4 tunnel emergency lighting conduits changed scope for fire rated cable. This work was followed by installing UG#1 emergency lighting conduits changed scope for fire rated cable.

The critical path then shifts back to installing the booster fan conduit changed scope for fire rated cable at UG#4 cut & cover and Vernon station. The critical path then continues through communications installations and field acceptance testing. The critical path then flows through SIT, pre-revenue services leading to revenue services.

Metro's review of the May 2018 Schedule Update raises concern that this submittal was non-contractually compliant and is not an accurate representation of the Project's critical path. contractor changed the critical path by inserting a longer than expected duration for procurement and construction of fire rated conduit activities throughout the alignment and starting these activities later than necessary (six months after change was issued).

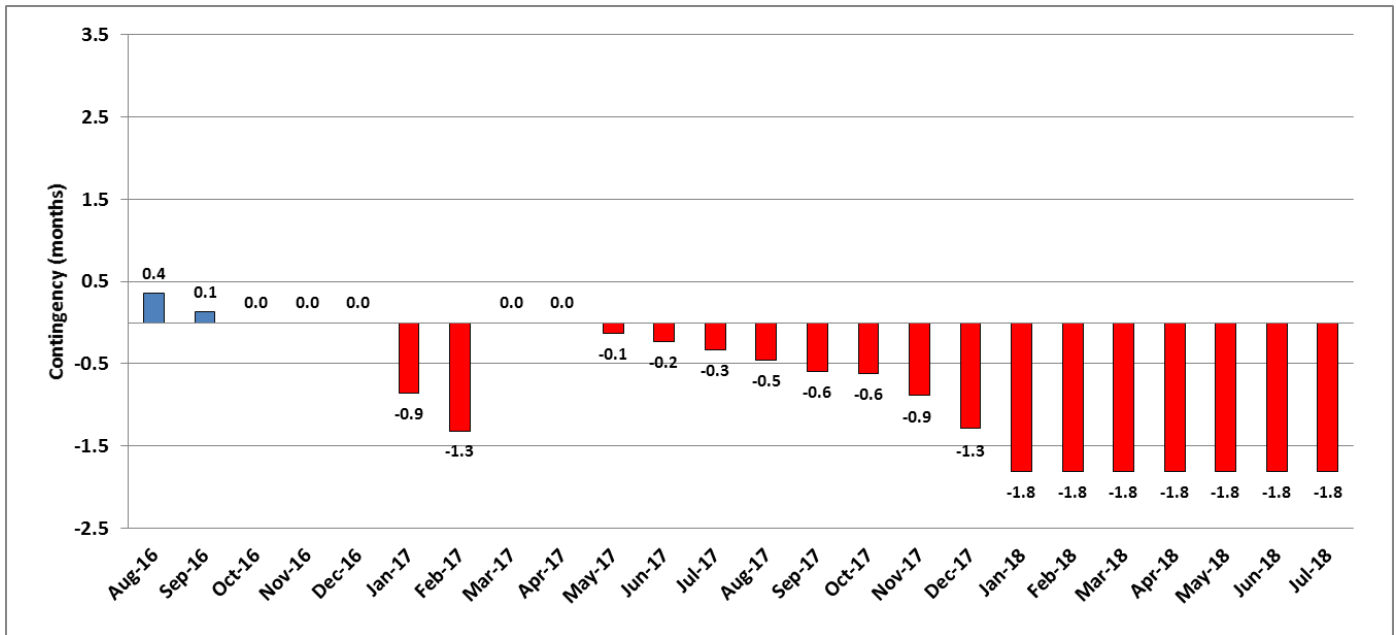
Further, the monthly update ignored the critical track plinth work in UG#3 and UG#4. Preparation of plinth work in UG#4 started in late March 2018 and stopped with no plinths placed. A section of plinth work commenced in UG #3 had to be subsequently demolished.

## **CRITICAL PATH NARRATIVE**

The impact of the demo and removal as well as a re-pour of plinth work created a delay from April 12, 2018 to June 12, 2018, approximately 8.5 weeks. Metro's assessment is that track work and the succeeding systems work are the driving critical items for the project. The critical path then proceeds through systems testing and pre-revenue services leading to revenue services.

There have been no subsequent monthly updates (June or July).

**PROJECT SCHEDULE CONTINGENCY DRAWDOWN**



**PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS**

The contingency drawdown is calculated against an October 30, 2019 Revenue Service.

Metro received and approved a revised baseline schedule (Completion Schedule) from WSCC in December 2016. With the extension of time for WSCC’s Substantial Completion Milestone to May 1, 2019 and a Metro/WSCC commitment to achieving an October 30, 2019 revenue operations date, there is no schedule contingency in the completion schedule.

Metro received a January 2018 schedule update from WSCC which forecast a 56-calendar day delay to WSCC’s Contract Milestone #1 Substantial Completion date of May 1, 2019.

WSCC last submitted a May 2018 schedule update which included alleged delays and potential future delays and was not based on the approved baseline schedule. Since these inclusions are out of compliance with the contract, Metro requested the contractor to resubmit the schedule update. No schedule updates have been received as of July 30, 2018.

Metro forecasts that based on amount of work completed by the contractor over the last six months, the current delay to the contractor’s substantial completion milestone on May 1, 2019, may be up to seven (7) months later if not mitigated.

## RISK MANAGEMENT NARRATIVE

### Summary of Risks

Within this reporting period four (4) active risks were closed and no new risks were identified. There is a total of thirty-seven (37) risks to be managed in the next reporting period.

Of the thirty-seven (37) risks, five (5) are scored as high, thirteen (13) as medium and nineteen (19) as low.

### Top 5 Risks

The table below shows the top 5 project risks

Risk ID	SCC	Risk Description	Risk Rating
124	50	Main Line testing prior to pre-revenue operations may take longer than expected, resulting in increased Main Line Metro and Consultant costs and potential delay to May 1, 2019 - Substantial Completion.	18
359	40	Extended Overhead or productivity loss claims exposure not covered by cost impacts in individual risks.	18
362	30	Schedule activities that are critical to completion.	16
355	50	Issues with long lead delivery or improper planning for integration, testing and startup of Communication systems.	12
354	50	Issues with energization of traction power. DWP and Edison Issues	11

### Newly Identified Risks

- No new risks were added to the risk register.

### Closed Risks

- Four (4) risks were removed from the risk register:

Risk ID	Risk Description	Reason for Closing
363	Southwestern Yard (SWY) contractor testing prior to pre-revenue operations may take longer than expected, resulting in increased SWY, Metro, and consultant costs and potential delay to SWY contractor's January 2019 - Substantial Completion.	SWY testing plan has been submitted and agreed to by Metro.
279	Availability of yard in place to support operating needs.	Contractor completing on time.
249	Metro does not provide info from artists to alignment contractor in a timely manner.	Metro will provide and support alignment contractor's schedule.
274	Initial tie-in to the operating Metro Green Line - construction and testing	Green Line initial tie-in is complete.

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## **RISK MANAGEMENT NARRATIVE**

### **Risk Score Changes**

Two (2) active risks have had risk scoring assessment changes and both have downgraded to a lower risk level:

<b>Risk ID</b>	<b>Risk Description</b>	<b>Reason for Closing</b>
361	Late delivery of test vehicle delays start of testing	August 2018 availability.
365	LFATs & Integrated Testing at ROC and throughout alignment. Commissioning, Start-up Process and Metro functions included in the construction schedule	Completed in February 2018.

### **Actions in Next Reporting Cycle**

Continuous efforts in Risk Management will be made through the following actions:

- Update the project risk register.

**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	1,785,429	453,388,436	3,505,138	414,379,837	1,785,429	453,391,456	3,037,081
20	STATIONS	153,906,000	-	315,050,000	1,068,027	318,790,447	14,707,793	217,903,931	1,068,027	318,790,447	3,740,447
30	SUPPORT FACILITIES SOUTHWEST YARD	66,673,000	-	71,164,000	-	68,132,352	3,596,812	57,470,937	-	71,164,000	-
40	SITWORK/SPECIAL CONDITIONS	235,576,000	-	395,798,361	1,014,459	410,117,454	7,243,954	346,910,862	1,014,459	417,586,630	21,788,268
50	SYSTEMS	125,132,000	-	169,436,000	823,889	162,770,091	7,934,052	88,535,865	821,000	172,176,333	2,740,333
<b>CONSTRUCTION SUBTOTAL (10-50)</b>		<b>1,052,622,000</b>	<b>-</b>	<b>1,401,802,736</b>	<b>4,691,805</b>	<b>1,413,198,780</b>	<b>36,987,749</b>	<b>1,125,201,432</b>	<b>4,688,915</b>	<b>1,433,108,867</b>	<b>31,306,130</b>
60	RIGHT-OF-WAY	132,294,000	-	127,490,000	-	124,785,521	1,915	124,524,211	-	124,785,632	(2,704,368)
70	LRT VEHICLES	87,780,000	-	83,571,544	-	82,158,061	-	70,354,699	-	83,571,544	-
80	PROFESSIONAL SERVICES	273,147,000	-	368,734,466	735,701	368,877,521	4,237,826	327,677,878	91,459	377,560,438	8,825,973
<b>SUBTOTAL (10-80)</b>		<b>1,545,843,000</b>	<b>-</b>	<b>1,981,598,746</b>	<b>5,427,506</b>	<b>1,989,019,883</b>	<b>41,227,490</b>	<b>1,647,758,221</b>	<b>4,780,374</b>	<b>2,019,026,481</b>	<b>37,427,735</b>
90	UNALLOCATED CONTINGENCY	177,157,000	-	50,401,254	-	-	-	-	(4,780,374)	12,973,519	(37,427,735)
<b>TOTAL PROJECT 865512 (10-100)</b>		<b>1,723,000,000</b>	<b>-</b>	<b>2,032,000,000</b>	<b>5,427,506</b>	<b>1,989,019,883</b>	<b>41,227,490</b>	<b>1,647,758,221</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>5,427,506</b>	<b>2,014,568,914</b>	<b>41,227,490</b>	<b>1,673,307,252</b>	<b>-</b>	<b>2,058,000,000</b>	<b>-</b>

1. Expenditures are Cumulative through July 27, 2018.  
 2. Expenditures exclude \$10.7 million for State Board of Equalization (SBOE) decision to tax LRT Vehicle deliveries since August 2016. Metro is appealing the decision by the SBOE but paid tax so as not to incur any late fees.  
 3. Expenditures exclude \$5.5 million for various right-of-way and professional services costs that are being reallocated to other local funding.

**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 budget line items.

### **Commitments:**

The commitments are cumulative through July 27, 2018. The total commitments increased by \$5.4 million this period primarily due to the following:

- SCC-10 (Guideways) has increased by \$1.8 million for executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$1.1 million for executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-40 (Sitework and Special Conditions) has increased by \$1.0 million for executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-50 (Systems) has increased by \$0.8 million for executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-80 (Professional Services) has increased by \$0.7 million for executed modifications associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, land space lease with Los Angeles World Airports and legal services. The total commitment of \$368.8 million includes \$23.8 million for the Southwestern Yard 49% allocation.

The \$2,014.6 million in commitments to date represents 98.0% of the current budget.

**PROJECT COST ANALYSIS (Continued)**

**Expenditures:**

The expenditures are cumulative through July 27, 2018. The total expenditures increased by \$41.2 million this period due to the following:

- SCC-10 (Guideways) has increased by \$3.5 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$14.7 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-30 (Southwestern Yard) has increased by \$3.6 million for costs associated with the design-build Contract C0991 Division 16: Southwestern Yard.
- SCC-40 (Sitework and Special Conditions) has increased by \$7.3 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor, Metro Art Program and third party utility relocation scope of work with AT&T California.
- SCC-50 (Systems) has increased by \$7.9 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-80 (Professional Services) has increased by \$4.2 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor, design-build Contract C0991 Division 16: Southwestern Yard, Metro project administration, IPMO field office lease and utilities, construction management support contract MC069 with STANTEC CONSULTING INC, legal services, third party scope of work with Los Angeles City Departments, project management support contract AE35279 with KKCS/TRIUNITY, labor compliance monitoring and environmental consultant services. The total expenditure of \$327.7 million includes \$20.6 million for the Southwestern Yard 49% allocation.

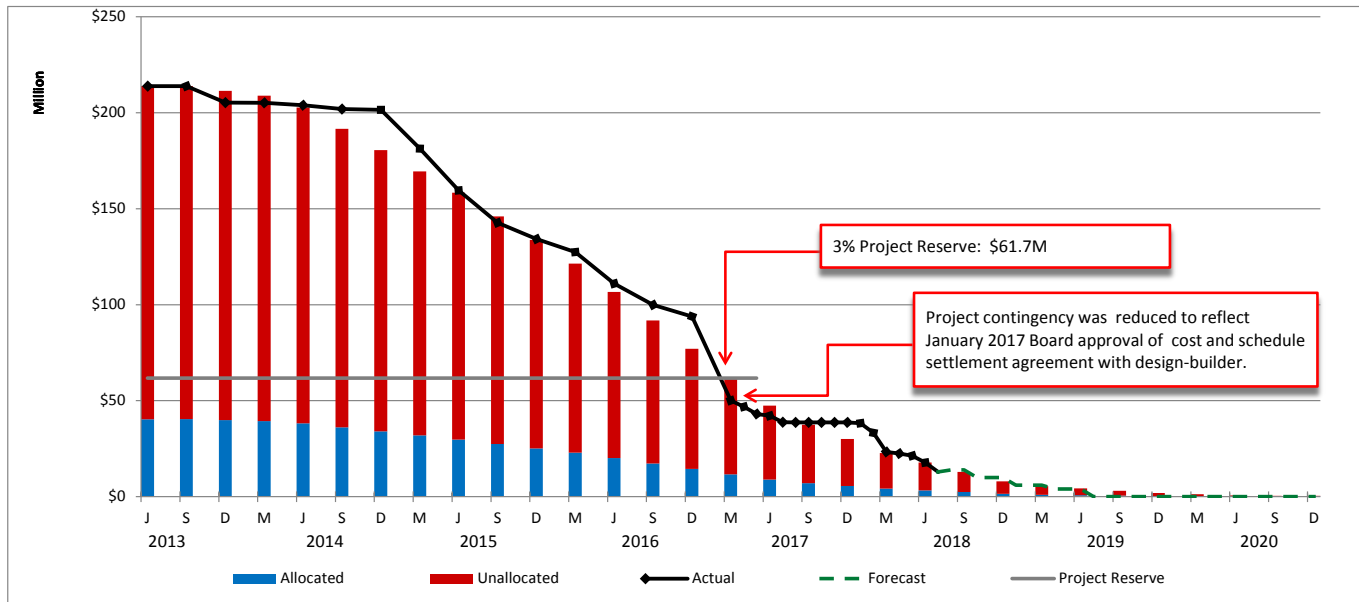
The \$1,673.3 million in expenditures to date represents 81.3% of the current budget.

**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	-	320,035	-	175,495	-
210090/93 FARE GATE PROJECT	-	2,566,226	-	2,566,226	762,300	1,018,526	-	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	1,253,503	37,047,674	753,503	36,345,593	-	37,914,465	-
500013 C/LAX LAWA SCOPE OF WORK	-	1,575,362	-	914,613	-	741,407	-	1,575,362	-
TOTAL	-	44,431,548	1,253,503	43,048,548	1,515,803	38,828,895	-	44,431,548	-

**PROJECT COST CONTINGENCY DRAWDOWN**



Through 27-Jul-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 \$200,893,273 or 93.9% for both allocated and unallocated contingency through July 2018.

- The unallocated contingency decreased by \$4,780,374 for executed modifications for design-build contract C0988 Crenshaw/LAX Transit Corridor and extension of Agreement with Los Angeles World Airports contract UTC-012355 for Right of Way entry during construction through July 27, 2018.
- There is no allocated contingency remaining as of February 2017 month-end reporting.

<b>PROJECT COST CONTINGENCY (through 27-Jul-2018)</b>					
<b>UNITS IN DOLLARS</b>					
	Original Contingency (Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	173,500,000	(155,746,107)	(4,780,374)	(160,526,481)	12,973,519
Allocated Contingency	40,366,792	(40,366,792)	-	(40,366,792)	-
<b>Total Contingency</b>	<b>213,866,792</b>	<b>(196,112,899)</b>	<b>(4,780,374)</b>	<b>(200,893,273)</b>	<b>12,973,519</b>

- The contingency as a % of the Total Project Current Forecast (SCC 10-80) is 0.6%.
- The contingency as a % of the Remaining Cost-To-Go (SCC 10-80) is 3.4%.

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS**

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

(Reported Data as of June 2018)

- DBE Goal (Design)** – A numerically expressed **20.00%**  
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.
- Current DBE Commitment** – Total DBE Committed Dollars divided by Total Contract Value for Design or Construction. **\$24,883,823 (20.00%)**
- Current DBE Participation** – Total amount paid to date to DBEs divided by the amount paid to date to Prime. **\$28,635,975 (25.42%)**

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. **\$251,040,878 (20.00%)**
- Current DBE Commitment** - Actual commitments as Construction work is awarded. **\$255,243,930 (20.34%)**
- Current DBE Participation** - Total amount paid to date to DBEs divided by the amount paid to date to Prime **\$245,454,645 (25.52%)**

260 Construction subcontractors have been identified to-date.

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

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

(Reported Data as of May 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>60.04%</b>
• <b>Apprentice Worker Goal</b> – Construction work to be performed by Apprentices	<b>20.00%</b>
<b>Apprentice Worker Current Attainment</b>	<b>23.21%</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>12.14%</b>

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS**

**Contract C0991 Division 16: Southwestern Yard Design-Build**  
(Reported Data as of June 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. **\$2,026,893 (19.02%)**

Nine (9) 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 **\$29,880,396 (18.44%)**
- Current DBE Participation** - Total amount paid to date to DBEs divided by the amount paid to date to Prime **\$17,803,784 (17.29%)**

Eighty-Five (85) Construction subcontractors have been identified to-date.

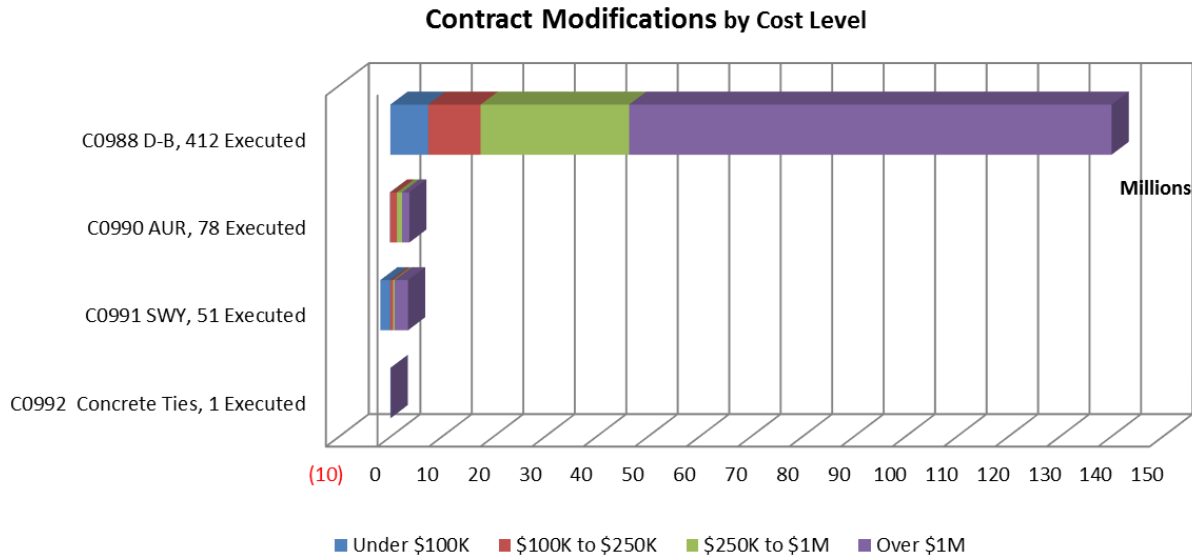
## **PROJECT LABOR AGREEMENTS (PLA) STATUS**

**Contract C0991 Division 16: Southwestern Yard Design-Build**  
(Reported Data as of May 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>52.04%</b>
• <b>Apprentice Worker Goal</b> – Construction work to be performed by Apprentices	<b>20.00%</b>
<b>Apprentice Worker Current Attainment</b>	<b>26.95%</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>8.32%</b>



**SUMMARY OF CONTRACT MODIFICATIONS**



	<b>C0988</b>	<b>C0990</b>	<b>C0991</b>	<b>C0992</b>
	<b>412 Executed</b>	<b>78 Executed</b>	<b>51 Executed</b>	<b>1 Executed</b>
<b>Under \$100K</b>	\$ 7,363,189	(\$ 70,251)	(\$ 1,924,680)	\$ 81,738
<b>\$100k to \$250K</b>	\$ 10,160,158	\$ 1,280,184	\$ 539,625	\$ 0
<b>\$250K to \$1M</b>	\$ 28,865,086	\$ 984,662	\$ 306,334	\$ 0
<b>Over \$1M</b>	\$ 93,731,379	\$ 1,417,202	\$ 2,590,000	\$ 0
<b>Total Contract MODs</b>	<b>\$ 140,119,812</b>	<b>\$ 3,611,797</b>	<b>\$ 1,511,279</b>	<b>\$ 81,738</b>
<b>% of Contract MODs</b>	<b>11.01%</b>	<b>46.14%</b>	<b>0.88%</b>	<b>3.78%</b>

Four hundred and twelve (412) changes with a total value of \$140.12 million have been executed since award of Contract C0988. There are an additional forty (40) changes with a total value of \$2.19 million pending the administrative approval process.

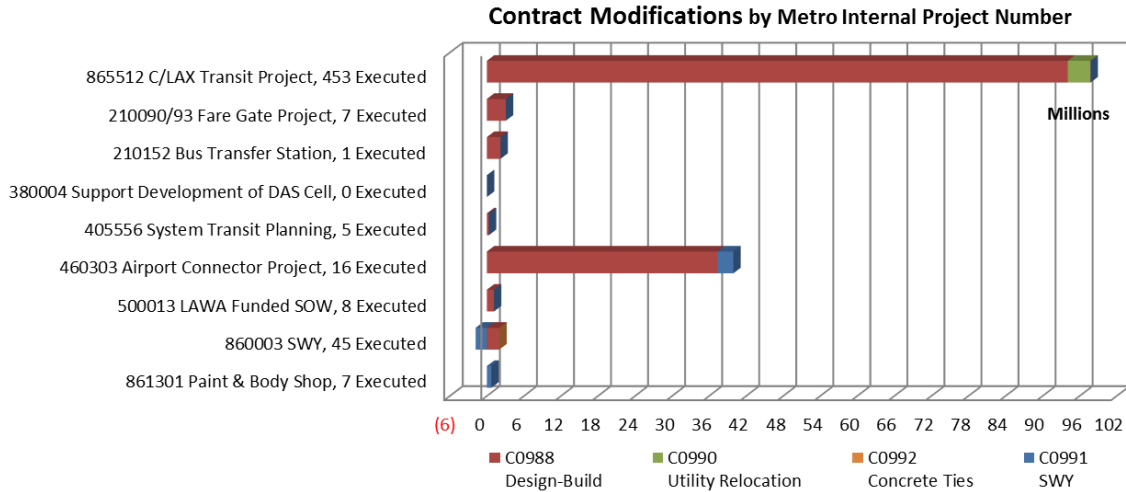
Seventy-eight (78) changes with a total value of \$3.61 million have been executed for completed Contract C0990.

Fifty-one (51) changes with a total value of \$1.51 million have been executed since award of Contract C0991.

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>	374	7	1	0	5	13	8	4	0
<b>C0988 - \$</b>	94,072,681	3,066,226	2,200,000	0	320,035	37,322,776	1,134,613	2,003,482	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	3	0	41	7
<b>C0991 - \$</b>	0	0	0	0	0	2,592,580	0	(1,806,437)	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>453</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>16</b>	<b>8</b>	<b>45</b>	<b>7</b>
<b>Total - \$</b>	<b>97,766,215</b>	<b>3,066,226</b>	<b>2,200,000</b>	<b>0</b>	<b>320,035</b>	<b>39,915,356</b>	<b>1,134,613</b>	<b>197,045</b>	<b>725,136</b>

Four hundred and fifty-three (453) changes with a total value of \$97.77 million have been executed for Project 865512 Crenshaw/LAX Transit Project. There are an additional thirty-nine (39) changes with a total value of \$2.16 million pending the administrative approval process.

Seven (7) changes with a value of \$3.07 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.

Sixteen (16) changes with a value of \$39.92 million have been executed for Project 460303 Airport Metro Connector Project.

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

Forty-five (45) changes with a credit value of \$0.20 million have been executed for Project 860003 Southwestern Yard project.

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	99.9	99.9	99.9	100%	99.9	100%	91.2	91%
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	129.0	129.0	129.0	100%	129.0	100%	129.0	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	530.3	530.3	530.3	100%	474.6	89%	474.0	89%
CITY CONTRIBUTION	52.4	101.7	40.0	58.3	57%	40.0	39%	34.0	33%
GENERAL FUNDS	0.0	53.0	53.0	53.0	100%	53.0	100%	48.5	92%
PROP C 25% HIGHWAY	148.9	383.9	383.9	383.9	100%	189.7	49%	170.9	45%
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%	4.9	10%	4.9	10%
<b>TOTAL</b>	<b>1,749.0</b>	<b>2,058.0</b>	<b>1,968.8</b>	<b>2,014.6</b>	<b>98.0%</b>	<b>1,673.3</b>	<b>81.0%</b>	<b>1,634.8</b>	<b>79.0%</b>

NOTE: Expenditures are cumulative through July 27, 2018

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

Expenditures exclude \$10.7 Mil awaiting State Board of Equalization decision whether to tax LRT vehicle deliveries and \$5.5 Mil for various right of way and professional services cost being reallocated to other local funding.

## **STATUS OF FUNDS ANTICIPATED**

**FEDERAL – CMAQ:** \$54M of CMAQ Funds for construction has been spent as of June 2016.

**FEDERAL – RSTP:** Rail car purchase is being managed separately. See P3010 Report. \$28.2M of RSTP Funds for construction has been spent as of June 2016.

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

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

**STATE PROP RIP:** \$6.88 is spent as of April 2018. FY19 \$17.2M allocation has been submitted for the August 2018 CTC Meeting.

**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:** *\$530.280M of Measure R Funds have been committed for this project. Funds are budgeted annually based on cashflow needs.*

**CITY CONTRIBUTIONS:** Based on the funding agreement between Metro and the City of LA. \$28M is available for drawdown through FY2018.

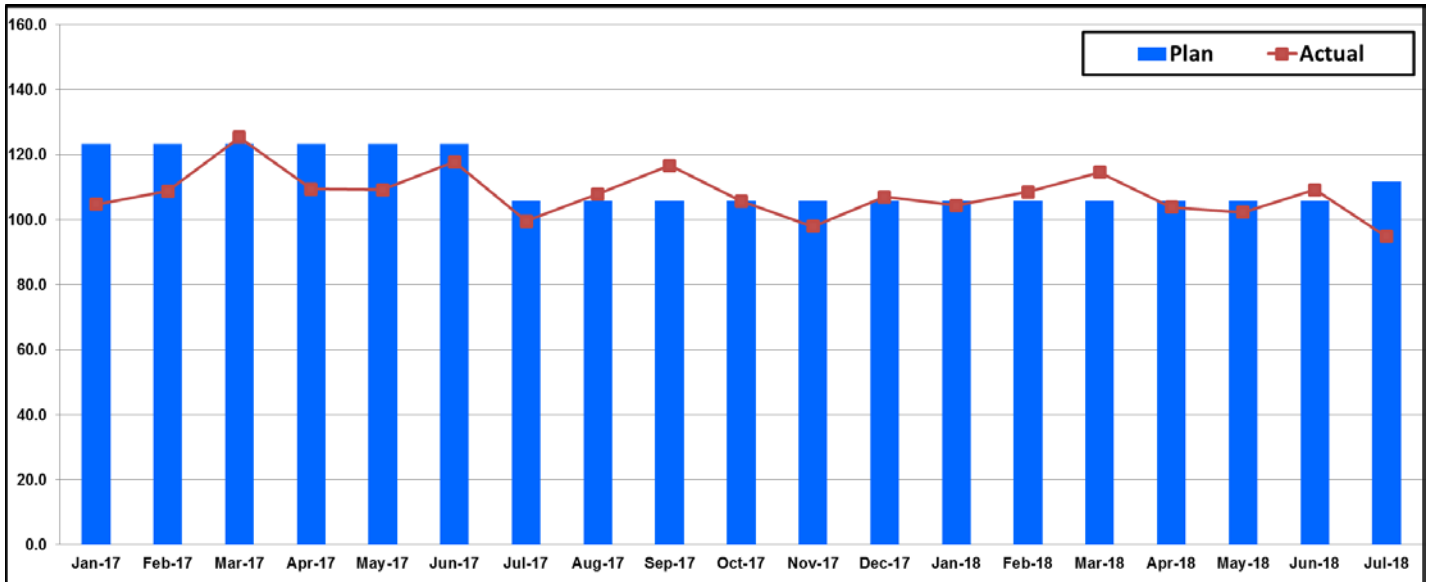
**GENERAL FUNDS:** *\$53M of General Funds have been committed for this Project. \$47.9M has been spent as of June 2018.*

**PROP C 25% HIGHWAY:** \$383.9M 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 July 2018.

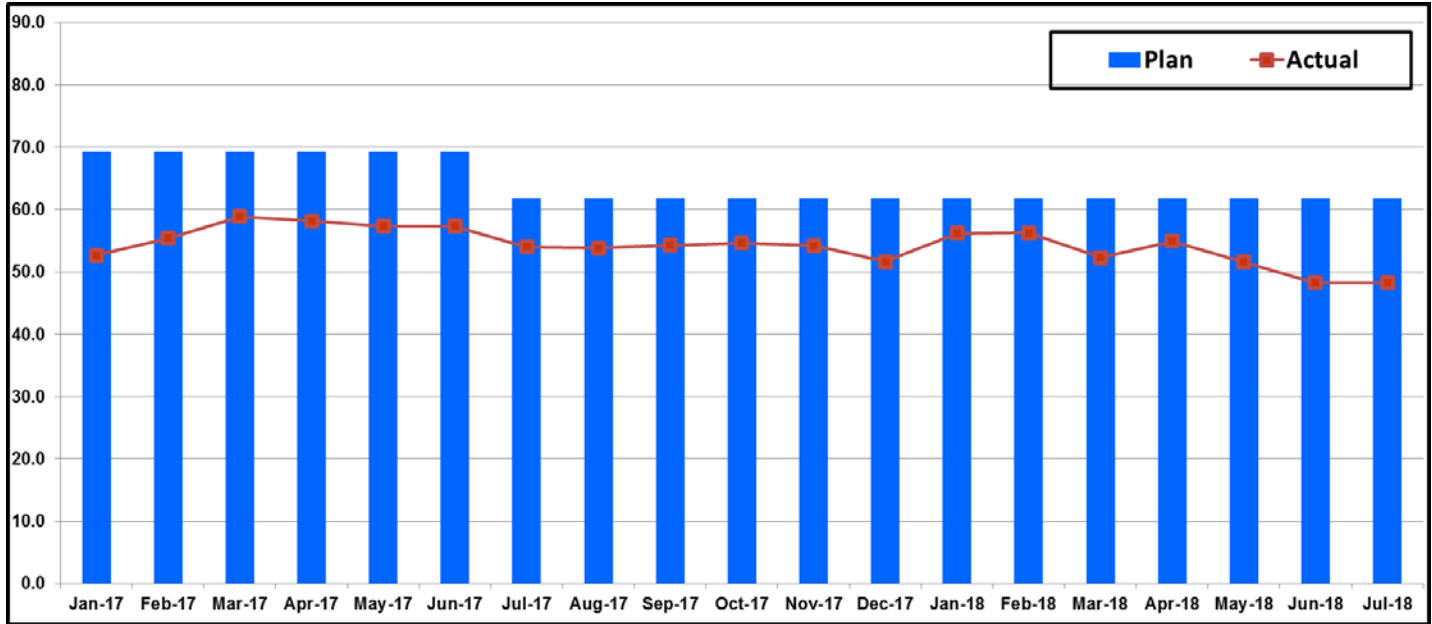
**TOTAL PROJECT STAFFING**

The overall FY19 Total Project Staffing Plan averages 111.7 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.

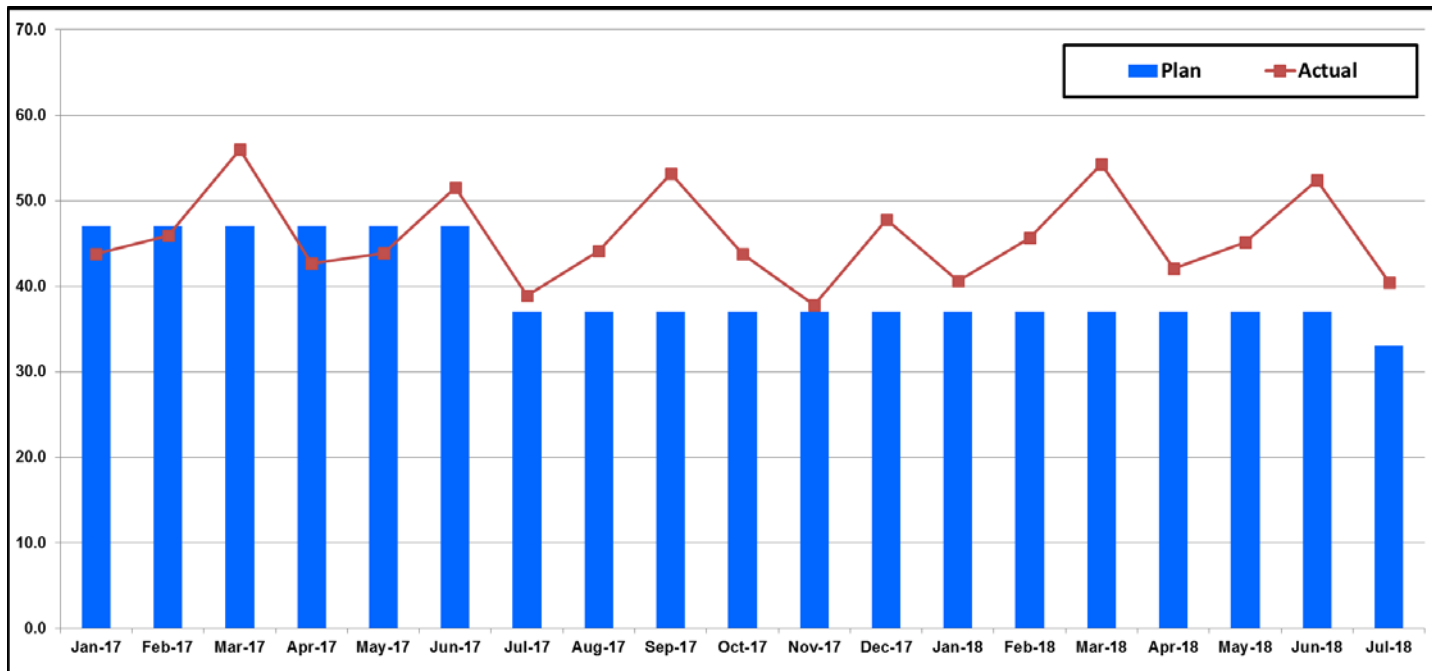
For July 2018, total project staffing were 94.9 FTEs for the month consisting of 48.3 FTEs for Metro’s project administration staff, 40.4 FTEs for Construction Management Support Services Consultant and 6.2 FTEs for Design and Engineering Support Services Consulting staff.

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

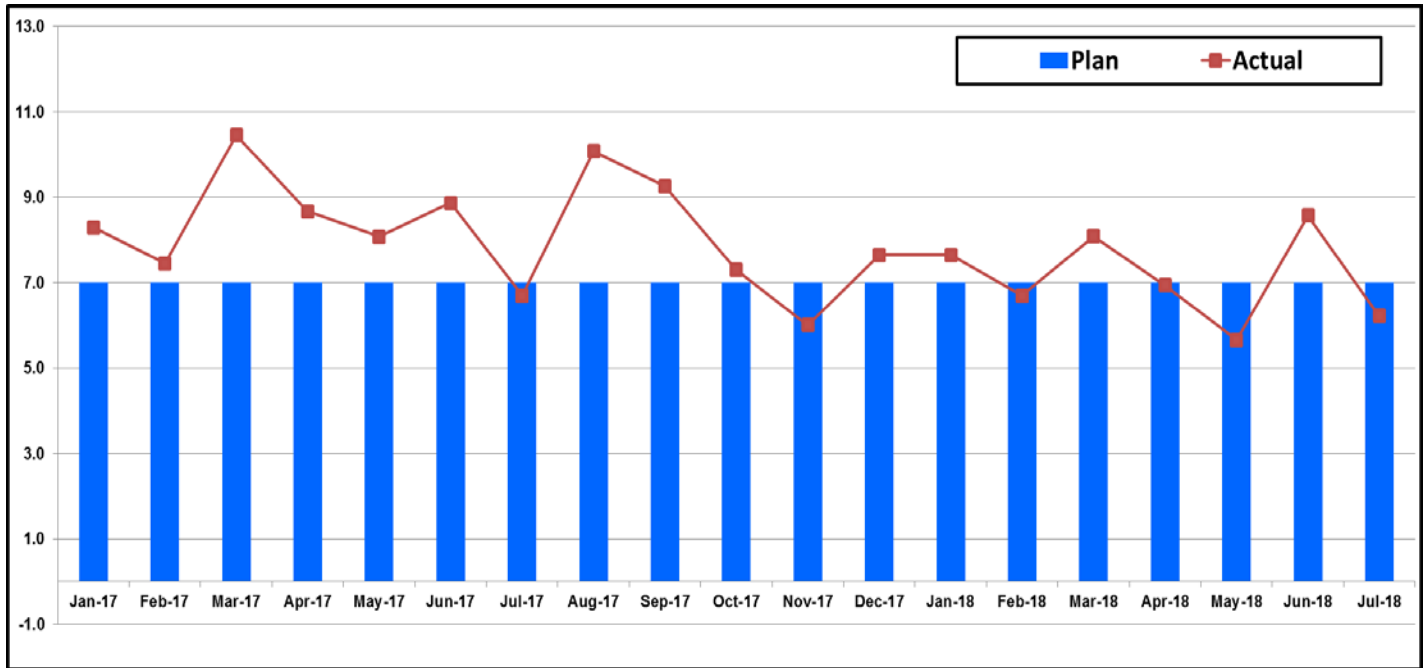
**STAFFING STATUS (Continued)**  
**METRO STAFFING – FTES**



**CONSTRUCTION MANAGEMENT  
 SUPPORT SERVICES CONSULTANT – FTES**



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



## **REAL ESTATE STATUS**

- 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 five (5) Nonconformance Reports (NCR's) during this period.
- *Metro Quality participated in Readiness Review Meetings for Metal Ceiling Systems and Finishing Roofs.*
- No inspections scheduled for Metro Independent Testing Lab (ITL).



## **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
  - Quarterly Noise Control Plans
  - Monthly Mitigation Monitoring Reports
  - Monthly Sustainability 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 MLK Station on multiple days in July 2018.*
- *Conducted night time noise monitoring at Expo Yard on multiple days in July 2018.*
- *Conducted night time noise monitoring at UG3 operations on multiple days in July 2018.*
- *Conducted night time noise monitoring at UG4 operations on multiple days in July 2018.*
- *Held bi-weekly EMS and Environmental Team Meetings on 7/18 and 8/1.*

## **CONSTRUCTION RELATIONS STATUS**

- Continued working with WSCC to minimize the impacts of lane and street closures along the Crenshaw/LAX alignment.
- Circulated restoration closure information via-email, social media networks, local publication and radio and hand delivered to key stakeholders.
- Ongoing coordination with Metro Transit Safety and Security to address homeless encampments on Metro property.
- Ongoing coordination with Metro Bus Operations to plan for bus detour routes for restoration closures.
- Continued outreach to stakeholders in the LAX area regarding ongoing construction activities.
- Continued face to face outreach to key stakeholders and community organizations along the alignment.
- *Gave project presentations to key stakeholder groups.*
- *Ongoing communication with key stakeholders impacted by the Crenshaw Blvd. restoration.*
- *Continued planning for Construction Update Community Meeting, CLAX/Greenline Operations Plan Meetings and Community Leadership Council Quarterly Meeting.*
- *Distributed Construction Notices along the project area, via-email and posted on the project website in advance of required lane closures.*

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

- Facilitated coordination between artists and fabrication firms.
- Responded to RFI's and RFC's.
- *Reviewed materials and finished samples and mockups.*
- *Delivered original artwork designs to Design Builder for fabrication by specialized fabricators.*

## **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 to ensure compliance with contract specifications.
- Conducted Monthly All Hands Safety and Security Meeting to discuss housekeeping, underground ventilation of stations and concourses, security issues, teamwork and partnering.
- *Participated in safety walk at Metro's Southwest Yard with Metro's Safety Specialist and Contractor's Safety Representative.*
- Participated in WSCC's Readiness Review/CWP Meeting and Workshops.
- *Conducted safety walk with WSCC Safety Manager and Metro Safety Staff to evaluate underground ventilation, access and egress (elevator), communication, lighting and emergency procedures.*
- *Conducted Safety Briefing with WSCC's Site Safety Manager to review upcoming MLK Street restoration activities.*
- 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 406,658 work hours with 3 recordable injuries. Hensel Phelps and their subcontractors completed 37,146 work hours and one recordable injury for the month of July 2018.*
- *Contract C0988 (WSCC) completed 209,508 work hours with two recordable injuries for the month of July 2018. Total Project to Date work hours are 6,926,003 with a total of eighty-seven recordable incidents. The Project Recordable Rate is 2.5. The Bureau of Labor Statistics average recordable rate per 200,000 work hours is 2.8.*
- Project-to-Date Total Days Away (DART) Injury Rate. Six Days Away from Work Injuries 0.1 (DART). The National Average is 1.7.
- Project-to-Date Total Days Away Rate 17.1 (561 Days Away from Work). No National Published Rate.

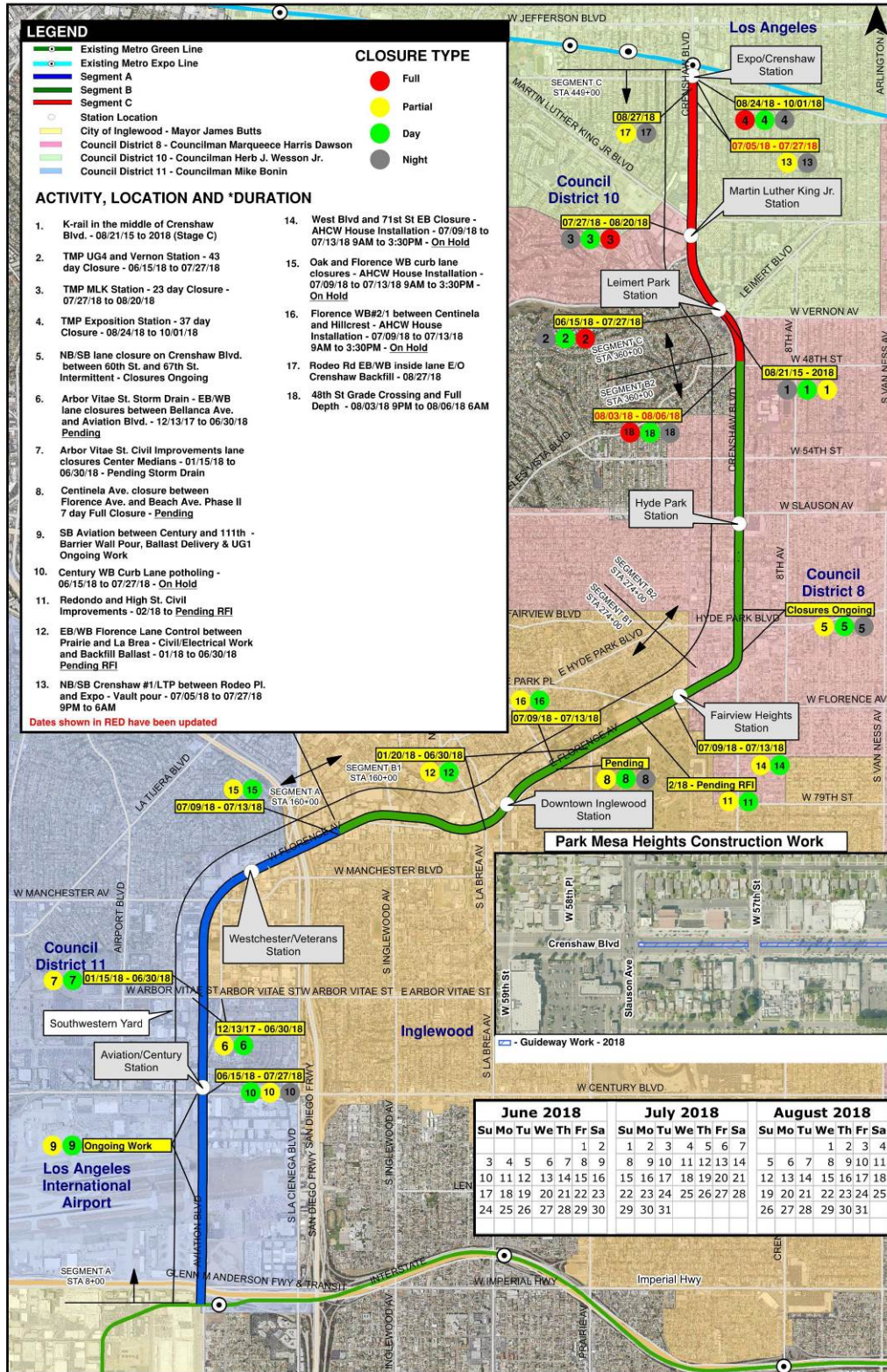
**THIRD PARTY AGREEMENT STATUS**

<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.
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 - July 2018



June 2018							July 2018							August 2018						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
					1	2	1	2	3	4	5	6	7	1	2	3	4	5	6	7
3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11
10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18
17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25
24	25	26	27	28	29	30	29	30	31					26	27	28	29	30	31	

Updated : 07/25/2018

\*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)**


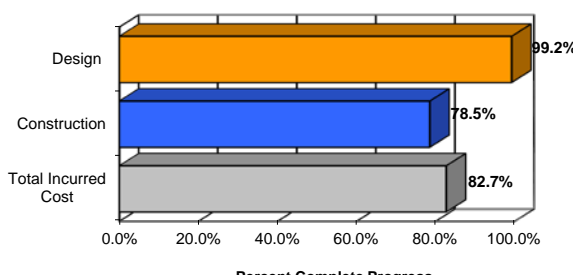
August 1, 2013	United States Department of Transportation approves Metro's request to increase the Crenshaw/LAX Project Budget to \$2,058 million.
August 8, 2013	Issued notice of execution of the contract was issued to Walsh-Shea Corridor Constructors, Contract C0988 Crenshaw/LAX Transit Corridor.
September 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.




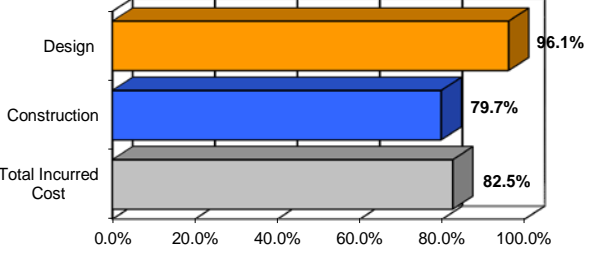
## **CHRONOLOGY OF EVENTS (Continued)**

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.
June 15, 2018	<i>Restoration of the road over the three underground stations along Crenshaw Blvd. commenced at Leimert Park Station area and the at-grade transition section.</i>

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

<b>PE Design Contractor: Hatch Mott (HM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: - Walsh Shea Corridor Constructors (WSCC)</b>		<b>Contract No.: C0988</b> <b>Status as of July 27, 2018</b>																																									
<b>Progress/Work Completed: Construction</b> <ul style="list-style-type: none"> <li>Continued concrete placements that remain at all three underground stations.</li> <li>Continued to install plinths in the north bound tunnel at north end.</li> <li>Continued preparation at Expo and MLK Jr. atations for removal of deck beams.</li> <li>Continued trackwork 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>Continued restoration of the road over the three underground stations along Crenshaw Blvd.</li> </ul>		<b>Areas of Concern:</b> <ul style="list-style-type: none"> <li>WSCC's ability to mitigate schedule delays to their substantial completion milestone of May 1, 2019.</li> <li>Metro is concerned about the amount of rework that is required for trackwork plinths in UB #3 which is impacting critical path.</li> <li>Lower than anticipated monthly pay applications amounts.</li> </ul>																																									
<b>Schedule Assessment:</b> <ul style="list-style-type: none"> <li>WSCC's January 2018 schedule update reflected a 56 days delay to Milestone 1.</li> <li>WSCC submitted a non-contractually compliant May 2018. No schedule update has been submitted for June or July.</li> <li>Metro's assessment is that the contractor may be further behind than 56 calendar days.</li> <li>Metro is evaluating the slippage delay impact on the planned October 2019 revenue service date.</li> </ul>		<b>Cost Assessment:</b> <ul style="list-style-type: none"> <li>The current construction contract cost forecast from pay application is \$1,411,552,433.47 and is within the Board authorized budget.</li> <li>The Contractor submitted their 60th payment application in the approved amount of \$24,026,813.45</li> </ul> <p>* Please note that not all executed modifications may have been included in the Contractor current payment application.</p>																																									
<b>Schedule Summary:</b> <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>1782      86.5%</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:	1782      86.5%	<b>Cost Summary:</b> <table border="0"> <tr> <td></td> <td style="text-align: right;"><b>\$ In millions</b></td> </tr> <tr> <td>1. Award Value:</td> <td style="text-align: right;">1,272.63</td> </tr> <tr> <td>2. Executed Modifications:</td> <td style="text-align: right;">120.09</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td style="text-align: right;">20.03</td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td style="text-align: right;">1,405.88</td> </tr> <tr> <td>5. Incurred Cost:</td> <td style="text-align: right;">1,162.21</td> </tr> </table>			<b>\$ In millions</b>	1. Award Value:	1,272.63	2. Executed Modifications:	120.09	3. Approved Change Orders:	20.03	4. Current Contract Value (1 + 2 + 3):	1,405.88	5. Incurred Cost:	1,162.21																		
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Milestone 6 - Const./Turnover Parcels SW-0001	08/01/17	08/01/17	07/10/17A	0																																							
Milestone 7 - Provide Access for Division 16 Southwestern Yard	01/23/16	01/23/16	02/22/16A	-30																																							

**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: July 28, 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 poles.</li> <li>Continued with main shop, control tower, exterior/interior framing, panels, windows, drywall/tape/finish, painting handrails, electrical, duct work, mechanical, plumbing roof drain and roofing activities.</li> <li>Continued with under drain ballast, tamping, crossing pads, switch machines, track installation and turnouts including double cross-over, and main shop blow down pit track, car cleaning platform and paint bodyshop.</li> <li>Completed installation of train control bungalows, generator and TPSS on their pads and wiring to devices, and continued parameter pre-cast wall panels.</li> <li>Fabrication and delivery of equipment continues.</li> </ul>	<p><b>Areas of Concern:</b></p> <ul style="list-style-type: none"> <li>Paint and bodyshop steel fabrication is impacting the contract critical path. Metro and HPH are looking into possible mitigation measures.</li> <li>Main shop completion is behind schedule due to elevators delivery. Metro is exploring mitigation strategies or potential adjustment of milestone No. 3 completion date.</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 Schedule.</li> <li>HPH re-submitted schedule update incorporating Metro's comments, currently under review by Metro.</li> <li>Metro reviewing extending completion of milestone #2 until August 2018 as part of coordination effort with mainline contractor.</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 \$173,823,973.67 is within the Board authorized budget.</li> <li>The Contractor submitted their 36th payment application in the approved amount of \$7,964,419.88</li> <li>Please note that not all executed modifications may have been included in the Contractor current payment application.</li> </ul>																									
<p><b>Schedule Summary:</b></p> <table border="0"> <tr> <td>1. Date of Award:</td> <td>05/26/15</td> <td></td> </tr> <tr> <td>2. Notice to Proceed:</td> <td>06/29/15</td> <td></td> </tr> <tr> <td>3. Original Substantial Completion Duration:</td> <td>1220</td> <td></td> </tr> <tr> <td>4. Current Substantial Completion Duration:</td> <td>1311</td> <td></td> </tr> <tr> <td>5. Elapsed Time from NTP:</td> <td>1125</td> <td>85.8%</td> </tr> </table>	1. Date of Award:	05/26/15		2. Notice to Proceed:	06/29/15		3. Original Substantial Completion Duration:	1220		4. Current Substantial Completion Duration:	1311		5. Elapsed Time from NTP:	1125	85.8%	<p><b>Cost Summary: \$ In millions</b></p> <table border="0"> <tr> <td>1. Award Value:</td> <td>172.31</td> </tr> <tr> <td>2. Executed Modifications:</td> <td>1.40</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td>0.11</td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td>- 173.82</td> </tr> <tr> <td>5. Incurred Cost:</td> <td>143.47</td> </tr> </table>	1. Award Value:	172.31	2. Executed Modifications:	1.40	3. Approved Change Orders:	0.11	4. Current Contract Value (1 + 2 + 3):	- 173.82	5. Incurred Cost:	143.47
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Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																						
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MS#4 Southwestern Yard Substantial Completion	10/31/18	01/30/19	01/30/19	0																						

## CONSTRUCTION PHOTOGRAPHS



Main shop exterior finishes within the Southwestern yard site looking southwest.



Aerial of Southwestern Yard site.

## CONSTRUCTION PHOTOGRAPHS (Continued)



**MSE 17** – Working on the Concrete Finish at MSE RW 1716+63.



**UG1** - LKC Crew Scanning for Rebar at UG-1.

## CONSTRUCTION PHOTOGRAPHS (Continued)



**AVIATION/CENTURY STATION** - All PVS Stubs have been raised above the pour line for the forms for the TVM's.



**FAIRVIEW HEIGHTS STATION**- Track 4 tamping and ballast regulating at the Fairview Heights Station.

**CONSTRUCTION PHOTOGRAPHS (Continued)**



**TPSS- TPSS#3 – Preparation for the Jack and Slide to Set TPSS.**



**UG3 - SB track work at the south tunnel portal**

**CONSTRUCTION PHOTOGRAPHS (Continued)**



**UG4/VERNON RESTORATION** – Formwork for east curb and gutter between 43rd street and Vernon.



**UG4** – Formwork for the remaining section of the emergency walkway at the south portal



### CONSTRUCTION PHOTOGRAPHS (Continued)



**UG4** – Installation of formwork for the barrier wall.

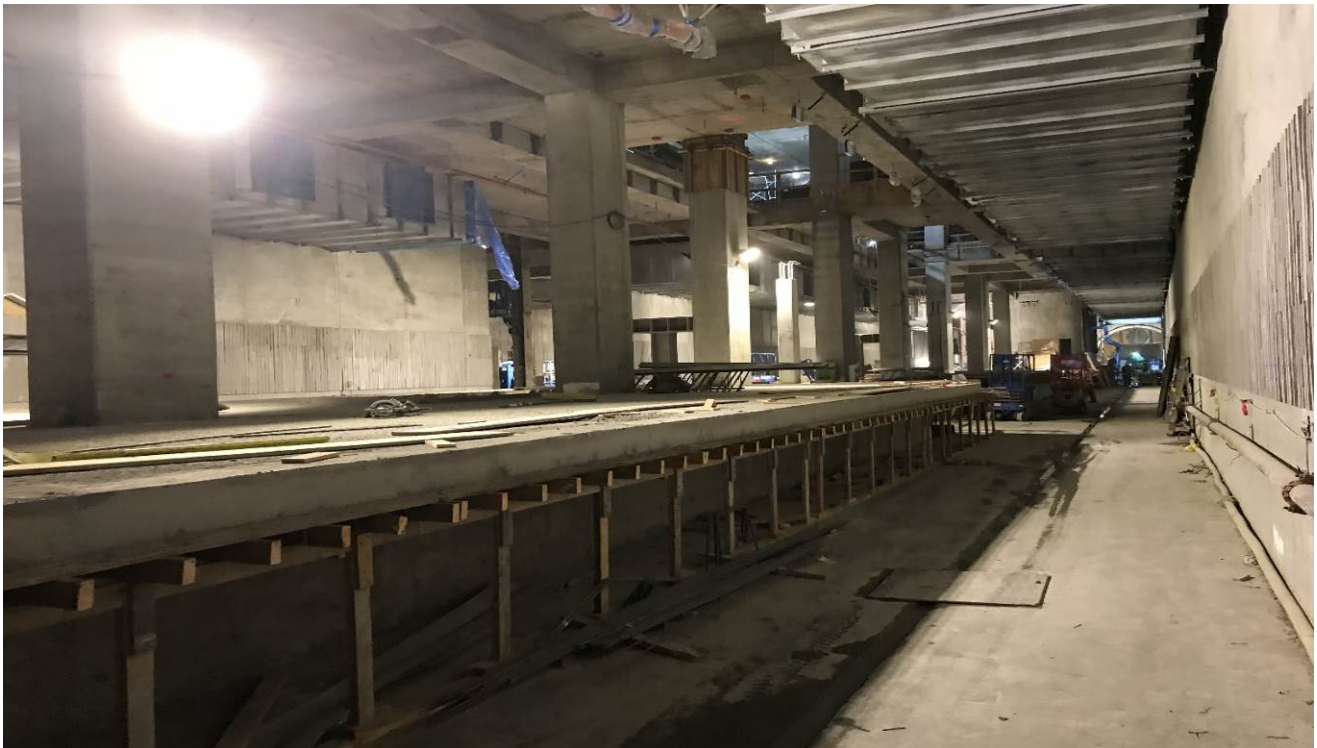


**LEIMERT PARK STATION** – Rebar installation at the emergency ventilation shaft.

**CONSTRUCTION PHOTOGRAPHS (Continued)**



**LEIMERT PARK STATION** – Installation of anchors for the metal ceiling system above the platform.

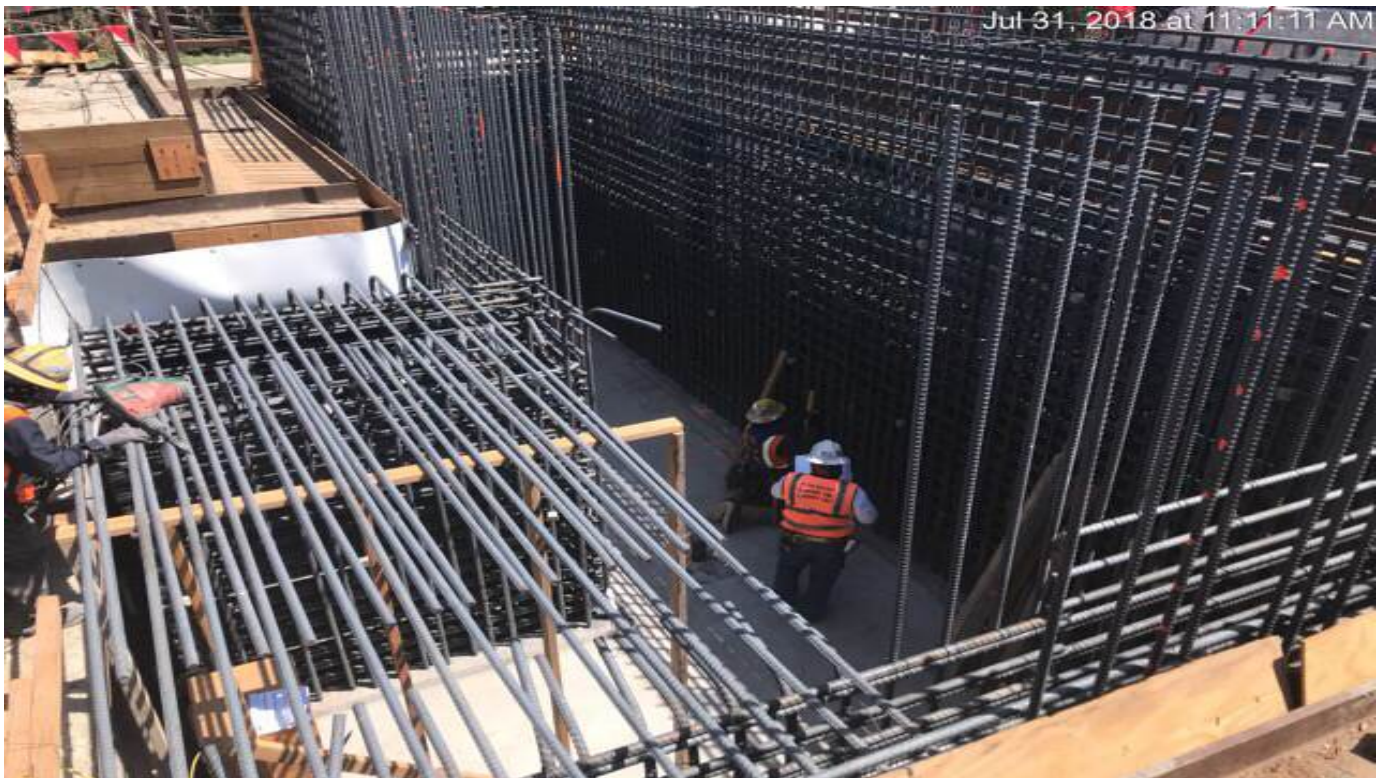


**MARTIN LUTHER KING JR. STATION**- Platform at escalator 3/stair 2.

**CONSTRUCTION PHOTOGRAPHS (Continued)**

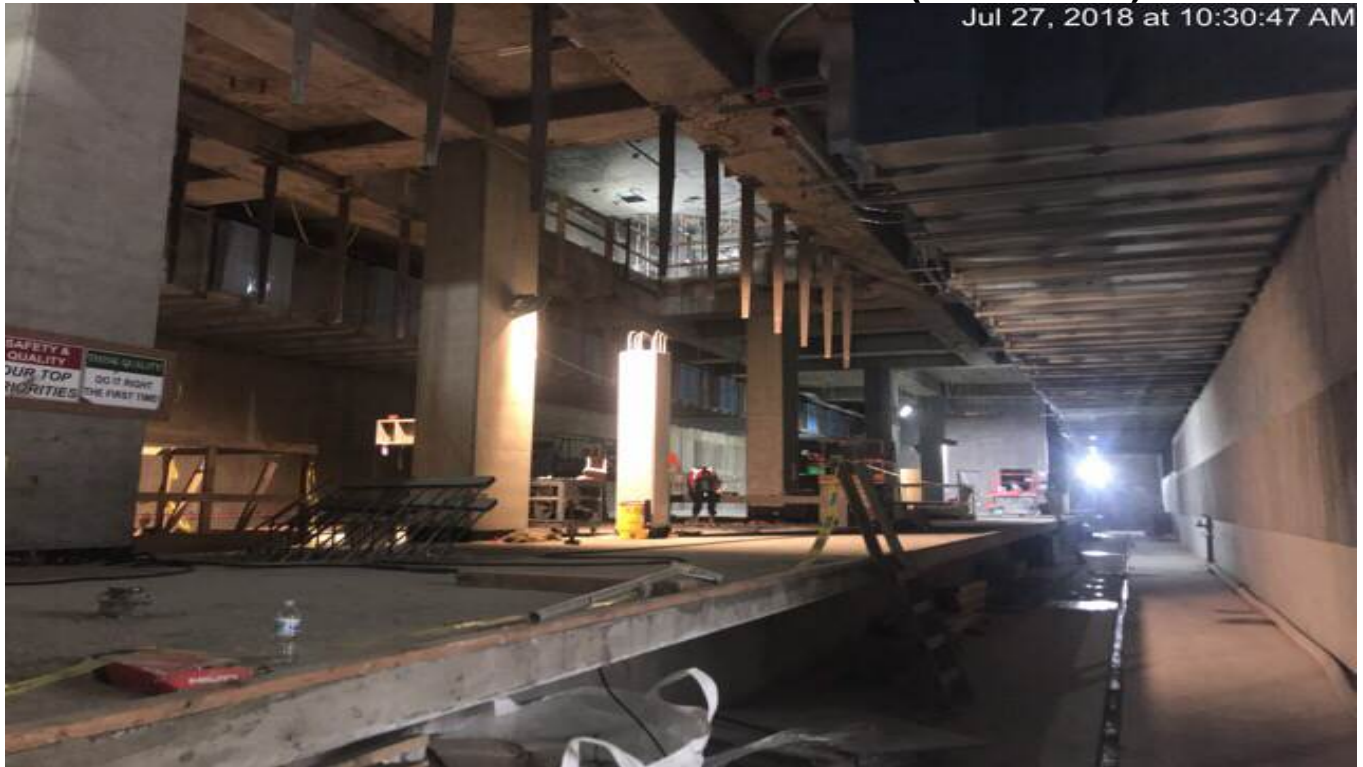


**MARTIN LUTHER KING JR. STATION-** Slurry backfill underneath utilities at the roof.



**EXPOSITION/CRENSHAW STATION –** Rebar for Air Exhaust Shaft 2.

**CONSTRUCTION PHOTOGRAPHS (Continued)**



**EXPOSITION/CRENSHAW STATION – Platform at escalator 4/stair 3.**



**TUNNEL – SB tunnel to Vernon station at the south end of MLK station.**

**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	0	86,507,266	5,104,781	64,809,007	0	86,864,102	1,674,103
40	SITWORK/SPECIAL CONDITIONS	35,932,000	0	38,273,000	0	40,700,956	1,563,839	32,933,197	0	43,832,604	5,559,604
50	SYSTEMS	25,784,616	0	32,991,000	0	33,190,119	2,147,200	25,994,194	0	33,190,119	199,119
	(10-50) CONSTRUCTION	147,263,451	0	156,453,999	0	160,438,341	8,815,820	123,776,398	0	163,926,825	7,472,826
60	RIGHT-OF-WAY	99,910,000	0	100,000,000	0	102,420,623	0	102,418,610	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	34,963,503	524,833	30,333,576	0	37,221,379	3,581,748
90	PROJECT CONTINGENCY	13,659,732	0	17,106,370	0	0	0	0	0	3,631,173	(13,475,197)
<b>TOTAL</b>		<b>296,434,278</b>	<b>0</b>	<b>307,200,000</b>	<b>0</b>	<b>297,822,468</b>	<b>9,340,653</b>	<b>256,528,584</b>	<b>0</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	0	10,930,000	585,300	5,246,725	0	11,000,000	0	

<b>GRAND TOTAL</b>	<b>307,434,278</b>	<b>0</b>	<b>318,200,000</b>	<b>0</b>	<b>308,752,468</b>	<b>9,925,953</b>	<b>261,775,309</b>	<b>0</b>	<b>318,200,000</b>	<b>0</b>
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NOTE: EXPENDITURES ARE CUMULATIVE THROUGH JULY 27, 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-10 (Guideways), SCC-30 (Support Facilities), SCC-50 (Systems), SCC-80 (Professional Services), and SCC-90 (Project Contingency).

**Commitments:**

The commitments are cumulative through July 27, 2018.  
Total commitments, no change to report for this period:

- SCC-10
  - No change to commitments to report.
- SCC-30
  - No change to commitments to report.
- SCC-40
  - No change to commitments to report.
- 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 \$308.75 million in commitments to date represents 97.03% of the current budget.

**Expenditures:**

The expenditures are cumulative through July 27, 2018.  
The total expenditures increased by \$9.93 million for this period due to the following:

- SCC-10
  - No change Guideways expenditure.
- SCC-30
  - Hensel Phelps/Herzog JV expenditure increased by \$5.69 million.
- SCC-40
  - Hensel Phelps/Herzog JV expenditure increased by \$1.56 million.
- SCC-50
  - Hensel Phelps/Herzog JV expenditure increase by \$2.15 million.
- SCC-60
  - No change Right-Of-Way expenditure.
- SCC-80
  - Hensel Phelps/Herzog JV, agency expenditure and professional services expenditure increase by \$0.52 million.

The \$261.78 million in expenditures to date represents 82.27% 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.