

# Crenshaw/LAX Transit Project



# **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).

FEBRUARY 2020

## TABLE OF CONTENTS

	Page No.
Project Overview .....	1-6
Executive Summary.....	7-11
Project Update	
• Project Schedule	
o Project Summary Schedule.....	12
o Progress Summary.....	13
o Planned vs. Actual Progress.....	13
o Key Milestones Six-Month Look Ahead.....	14
o Major Equipment Delivery Status.....	15
o Critical Path .....	16
o Project Schedule Contingency Drawdown.....	17
o Risk Management Narrative.....	18
• Project Cost	
o Project Cost Status & Analysis.....	19-20
o Cost Contingency Drawdown and Analysis.....	21
o Summary of Contract Modifications.....	22
Disadvantaged Business Enterprise (DBE) .....	23
Project Labor Agreement.....	24
Financial/Grant.....	25
Project Staffing .....	26-27
Real Estate .....	28
Quality Assurance.....	28
Environmental .....	28
Construction and Community Relations .....	29
Creative Services .....	29
Safety and Security.....	30
Appendices	
• Chronology of Events.....	31-32
• Project Cost Status – Southwestern Yard.....	33-34

## PROJECT OVERVIEW

### Project Background

The Crenshaw/LAX Transit Project 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.

Two additional stations, Leimert Park and Westchester/Veterans were funded by the City of Los Angeles and by Metro and were approved to be part of the project by the Metro Board in May 2013. The Metro Board in July 2014 and again in May 2015, approved a revision to the project alignment to include accommodations to the alignment at 96<sup>th</sup> street to not preclude a future light rail Metro Rail station being developed as part of the Airport Metro Connector (AMC) project. The accommodations included shifting the ultimate track configuration to the west side of the alignment to confine the revised track-work on Metro right-of-way to mitigate potential cost exposure. These accommodations are not funded by the Crenshaw/LAX Transit Project but are paid for by the AMC project.

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 two locations, utilities, landscaping, roadway improvements required by the project and a maintenance & storage facility (Southwestern Yard).

The Project configuration is based on years of planning and environmental work that is reflected in the following milestones:

- Major Investment Study – 2003
- Metro Board approval of Alternative Analysis – December 2009
- Initiation of Preliminary Engineering – September 2010
- Metro Board certification of Final EIS/EIR – September 2011
- FTA issuance of Record of Decision – December 2011
- TIFIA and TIGER II Grants approved September 2012



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 constructed the Southwestern Yard which consolidated 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. Southwestern Yard is complete and maintained by Metro Operations.

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. Procurement completed and delivered to the project.

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 including a bumping post for the Design-Build Contract C0991 Southwestern Yard. Procurement completed and delivered to the project.

Design-Build Contract C0988 Crenshaw/LAX Transit Corridor

This is the largest project contract which completes final design and construction of the infrastructure required along the corridor alignment. The structures required to be constructed are eight stations (at-grade, elevated and underground), grade separations including flyover structures, cut and cover trenching, tunneling and two park-n-ride facilities. The scope of work includes 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 an RFQ process, prequalification 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).

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 remaining six cars are for replacement of Metro's current fleet. The first Option 1 P3010 car was delivered in May 2017. The final P3010 car (22nd car) for Crenshaw/LAX project 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 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 lab software validation tests were performed prior to implementation on the P3010s. Vehicles software is being field verified in coordination with the mainline contractor for Segment A (south end of alignment) and will continue testing of each successive Segments, including the C Line (Green) junction, through completion of System Integration Testing, Phase 1 (SIT-1).

#### Rail Operations Center (ROC)

The existing functional operations at the ROC are being expanded to accommodate the central control functions associated with five new rail lines including Crenshaw/LAX Project. The Project is contributing \$3.5 million towards this expansion which is scheduled to be completed in time for Crenshaw/LAX Project System Integration Testing, Phase 2 (SIT-2), pre-revenue, safety drills and revenue service.

ROC facilities installation, testing was substantially completed in February 2020. SCADA software development is in final stages of coordination and completion.

#### Fare Collection

A notice-to-proceed was issued on January 30, 2018 to the existing Metro Universal Fare System (UFS) contractor, Cubic Transportation Systems, to procure UFS equipment for the Crenshaw/LAX Project eight stations. The contractor commenced manufacturing of the equipment in February 2018 and completed manufacturing of the equipment and shipped to a local storage area where it is being stored until the Crenshaw/LAX Project stations become ready for its installation. UFS contractor and mainline contractor are coordinating the details required for preparation, access and installation at each station.

#### **Program Management**

The WSCC contract is being managed by a team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO). Mott MacDonald provides engineering and design support services while Stantec, Inc., provides construction management support services. An overview of staffing is provided under the Staffing section of this report. The on-site program management team is also supported by Metro Headquarters resources to include, but not limited to, engineering, risk management, environmental, quality management, operations, and creative services departments. In addition, a Project Management Support Services (PMSS) consultant is providing resources to supplement staff.

#### Project Schedule and Budget:

A potential Revenue Service Date is under review by Project Management.

In May 2013, the Metro 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 Metro 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 Metro 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 Metro 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 Metro 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 drawdown 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 service as well as an increase in professional services for construction and project management oversight.

Construction and Community Relations: The Construction and Community Relations team is tasked with promoting the Project and performing public outreach within the community to keep stakeholders informed of construction activities occurring along the Project alignment. To facilitate the communication, community leadership councils have been formed which represent geographic-based constituent groups along the Project.

The Project is also engaged in social media outreach and various marketing and advertising efforts designed to keep the public informed and excited about the Project. These efforts are aimed at promoting businesses that are affected by construction.

System Integration:

The Project's integration of three separate lines, each possessing distinct system technologies, presents significant challenges for both the Project and Metro. The Project is coordinating the systems interface design, construction, testing, and commissioning while the Agency maintains revenue service on the operating lines.

Metro project team is coordinating progress with operations, mainline contractor and ROC management team to ensure all requirements are in place to support System Integration Testing Phase 2 (SIT-2).

Rail Activation:

The Project and Metro Operations recognize the extensive planning required in preparation for rail activation of the new regional light rail service the Project will enable through the south Los Angeles area. Associated detailed planning and scheduling efforts to optimize the extensive efforts are underway. Southwestern Yard completed as planned and Metro Operations has implemented rail activation and is in full control of the facility.

## EXECUTIVE SUMMARY

As of the end of February 2020 the Project has achieved 95% completion based on earned value measurements for design and construction. The focus of the Project continues with facilitating critical path construction activities. Work is trending behind schedule due to the alignment contractor's progress. The following is an overview of current design and construction activities.

### Design Status

#### Design - Build Contract C0991 Southwestern Yard Contractor (Division 16) -

Hensel Phelps/Herzog JV (HPH) has completed final design including design and engineering in support of construction and as-builts including record drawings and documents required for Contract closeout.

#### Design - Build Contract C0988 (Mainline Contractor) –

Walsh-Shea Corridor Constructors (WSCC) continues design and engineering in support of construction, installation, testing and commissioning.

### Construction Status

Southwestern Yard (Division 16) – Project has achieved Substantial Completion as of January 30, 2019 and temporary certification of occupancy was issued on February 15, 2019. Metro continues the closeout process for this Contract.

Mainline Contractor - WSCC continues construction along all areas of the alignment. The four at-grade stations, underground structures (UG1, UG3 & UG4) and all six bridge superstructures including the aerial structure concrete placements are substantially complete. Contractor continues with the finishes, systems installations and testing. The three underground stations remain at various levels of completion with emphasis on electrical, mechanical, systems, finish work inside the stations and entrance structures. WSCC is continuing with systems local field acceptance testing (LFAT) and livewire, clearance and train control testing in the south section of the Project.

Trackwork and OCS/OCR are nearing completion with wayside train control installation continuing along the alignment. System installation and wiring continues in the stations for traction power, train control and communication including Local Field Acceptance Test's (LFAT's). WSCC and Metro continue to coordinate with DWP and SCE for power energization and other utilities (water, gas, communication, phone) at various locations.

- Finish work continues at all stations including platform edge pavers, tiles, ceiling system, and lighting.
- Elevators installation is continuing at Century/Aviation station and, with additional crews, in two of the three underground stations (Vernon and MLK).
- All booster fans are installed and are continuing to be wired and finished in the underground structures.

- Underground Emergency Ventilation Fans (EVF) are at various stages of installation, conduits and wiring for power and controls.
- TPSS metering gears are energized by the utility companies for TPSS's 1, 2, 3, 5, 6, 8 and 10. DB contractor is working on testing the equipment and electrical system to provide distributing permanent power at each location.
- Remaining electrical systems (Rectifier Transformers) are delivered in February 2020 and are being installed and prepared at MLK and EXPO stations.
- Auxiliary power sites (104th street, 60th street and Victoria) majority of equipment are delivered and installed. Auxiliary power sites provide power to cross passages, radio equipment, sump pumps, ventilation, booster fans, and other systems in the cross passages.
- Conduit installation including rework for various communication systems are continuing in all stations, including the underground stations and cross passages.
- SIT, Phase 1, including running vehicles for clearance test, live wire, train control and vehicle on board testing, have continued on the south side of the Project. Integration testing is progressing slowly due to incomplete contractor pre-requisites and LFAT's.

**Cost and Schedule Summary**

Metro issued in September 2018 a non-compensable unilateral change order to WSCC to extend their substantial completion milestone to December 11, 2019.

WSCC in February 2020, submitted monthly schedule update for a combined November/December 2019 period of performance. The contractor has alleged an additional 151 calendar days delay to their Substantial Completion date. Metro is evaluating the monthly update.

A potential Revenue Service Date is under review by Project Management.

**WSCC Schedule Metrics – Mainline Contractor**

	<b>Original Contract Date/Duration</b>	<b>Time Extension (CD)</b>	<b>Current Contract Schedule</b>	<b>Forecast (Contractor)</b>	<b>Variance CD (Trending)</b>
NTP	09/10/13				
Substantial Completion	09/08/18	459	12/11/19	12/22/2020	-378 days

Project costs continue to track within budget and projected contingency limits. To date, the design and construction changes for WSCC related to base scope represent approximately 14.2% of the contract value with a potential to increase to 15%. Detailed cost information is provided later in this report.

### **Key Management Concerns**

#### No. 1: WSCC Construction Schedule Progress

##### Status/Action

A potential Revenue Service Date is under review by Project Management. This review is required due to WSCC's revised forecast of achieving Substantial Completion by December 2020. Major scheduling efforts continuing between Metro and WSCC to verify durations, number of work crews required, and sequence of work for major elements of scope of work.

#### No 2: Remaining Contingency is less than 2% of Total Project Budget.

##### Status/Action

Metro monthly monitors and reports on the drawdown of contingency. In February 2020 there was a contingency drawdown of \$3.9 million which reduced the remaining contingency to \$17.8 million. The remaining contingency is 0.9% of total project current forecast and 11.3% of total project cost-to-go.

Metro initiated in July 2018 reallocating the associated expenditures to date for specific scope of work. The reallocation allows the Project to use these funds for additional contractor modifications, increased third party requirements and professional services modifications to support a revised forecast completion schedule. The reallocation therefore allows Metro to replenish a portion of the Crenshaw/LAX Project contingency.

Metro has \$60 million in fiscal year 2020 available for specific scope of work that is eligible to be reallocated to a non-Crenshaw/LAX Project. This \$60 million is in addition to the \$68 million made available in fiscal year 2019, for a combined total of \$128 million. In fiscal year 2019, \$67.2 million was reallocated. In fiscal year 2020, of the \$60 million available, there has been \$45.1 million reallocated through the end of February 2020.

#### No. 3: WSCC Design/Engineering Support during Construction, Installation and Testing

##### Status/Action

Various elements of design support during construction are affecting and impacting the field work progress causing some work proceeding at risk without approved submittals and creating potential delays to construction, installation and testing schedule.

There are engineering/design support activities that are continuing to impact progress such as test procedures, power coordination studies, submittals, requests for information (RFI's), and deviation requests. Metro supports that the Engineer of Record (EOR) needs to be present during LFAT's and SIT-1 to address field issues and mitigate potential delays due to test failures.

No. 4: WSCC Required Rework

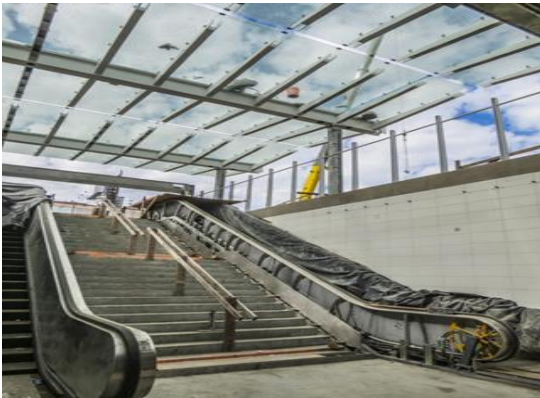
Status/Action

Several areas of work along the alignment that is the responsibility of the contractor to perform could not be completed due to damaged, incomplete and missing components. This has caused the contractor's base work progress to be less than planned, impacting the follow-on subcontractors work and creating inefficient performance, slows down progress and additional impact on design, procurement, installation, testing and commissioning progress. Contractor has been investigating and reworking blocked, damaged conduits and systems pathways in tunnels and underground stations since March 2019, affecting and slowing down progress on various stations systems work including fire alarm system

No. 5: 3<sup>rd</sup> Party Coordination and Impact on follow on activities

Status/Action

Multiple areas of work along the alignment are being affected due to WSCC coordination issues with 3<sup>rd</sup> parties. Interface items such as power, water, gas, telephone, communication and City of Los Angeles are affecting work progress. Metro is working with WSCC to resolve and coordination issues. WSCC needs to mitigate any issues to avoid impact to train testing and other testing activities.



Leimert Park Station plaza glass canopy, metal frame and elevator structure



Leimert Park Station plaza glass canopy and elevator structure



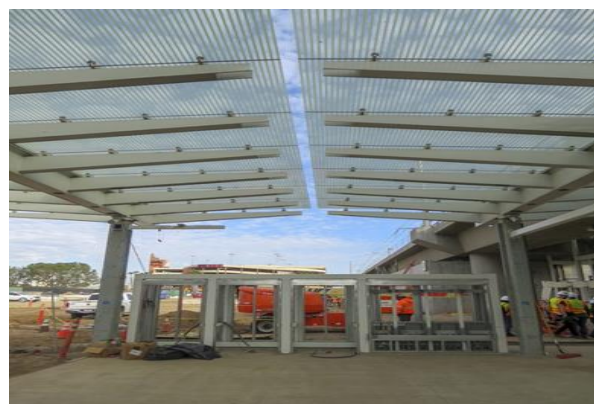
Park Mesa Heights light rail guideway fencing Crenshaw Bl.



Fine grade for asphalt at Fairview Heights Station parking lot



Aviation/Century Station elevator progress



Aviation/Century Station ground floor ticketing area, glass canopy installed

**PROJECT UPDATE**

**PROJECT SCHEDULE**

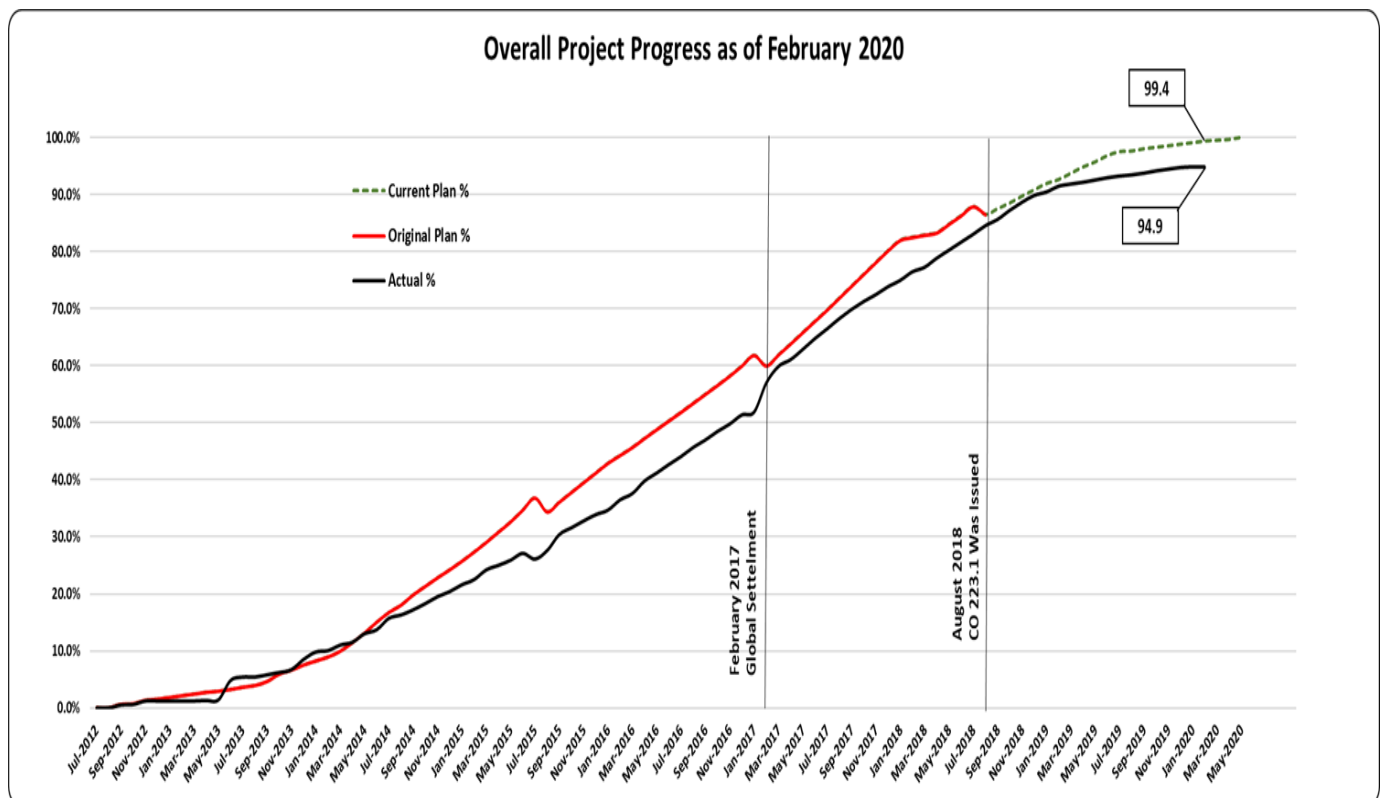
**Project Summary Schedule**

**Project Schedule Under Review**

### Progress Summary

	Status	Change from Last Period	Comment
Current Revenue Service:	10/30/2019	0	Under Review
Forecast Revenue Service:	-	0	Revenue Service Summer/Fall of 2020
TIFIA Revenue Service:	10/30/2019	0	Under Review by TIFIA Office
<b>Final Design Progress:</b>			
Contract C0988	99.8%	0.0%	Design Services During Construction Behind Schedule
Contract C0990	100%	None	Design Completed
Contract C0991	100%	None	Design Services During Construction Completed
Contract C0992	100%	None	Design Completed
Contract C0992A	100%	None	Design Completed
<b>Construction Contracts Progress:</b>			
Contract C0988	91.5%	0.1%	Behind Schedule
Contract C0990	100%	None	Completed
Contract C0991	100%	None	Completed
Contract C0992	100%	None	Completed
Contract C0992A	100%	None	Completed

### Planned vs. Actual Progress



**Key Milestones Six Months Look Ahead**

	Milestone Date	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
MCC Procure, Deliver and Set - Victoria Aux Power *	2/24/20A	⬡					
MCC Procure Deliver and Set - 60th Aux Power *	03/16/20		⬡				
MCC Procure, Deliver and Set - 104th Aux Power *	04/16/20			⬡			
TPSS-10, LFAT Commission Expo *	04/22/20			⬡			
Contractual Milestone 3, Start All System Integration Tests (SIT-1), Forecast *	04/30/20			⬡			
Ventilation Equipment - Leimert Station Installation and Testing*	05/08/20				⬡		
Aux Power at Victoria Ave - Permanent Power Drop - LADWP - Install Equipment, Cable, Energize & test *	05/09/20				▽		
Aux Power at 104th St - Permanent Power Drop - LADWP - Install Equipment, Cable, Energize & test *	05/21/20				▽		
Aux Power at 60th St - Permanent Power Drop - LADWP - Install Equipment, Cable, Energize & test *	06/01/20					▽	
TPSS-09, LFAT Commission MLK *	06/11/20					⬡	
OCS Live wire and Clearance SIT-1 Tests (Segment B)	06/15/20					⬡	
Radio Room Ready Ready - UG1	06/23/20					⬡	
Ventilation Equipment - MLK Station Installation and Testing *	07/01/20						⬡
Radio Antena - Expo	07/21/20						⬡
Radio Room Ready LFAT - UG3	09/29/20						

◆ MTA Staff

△ Other Agencies

Ⓜ MTA Board Action

□ C0991 D/B Contractor

⌵ FTA (Federal)

○ Design Consultant

▽ Utility Company

⬡ C0988 D/B Contractor

"A" following date is actual and completed      \* New

**Major Equipment Delivery**

*Metro Supplied Equipment*

<b>Equipment</b>	<b>Initial Procurement</b>	<b>Scheduled Delivery</b>	<b>Scheduled Installation</b>
LRT Vehicles	(NTP) 8/20/12 A	Option 1 9/1/17 A	N/A
Ticket Vending Machines and Equipment	1/30/18 A	2/28/19 A (Warehoused)	TBD (Prior to RSD)

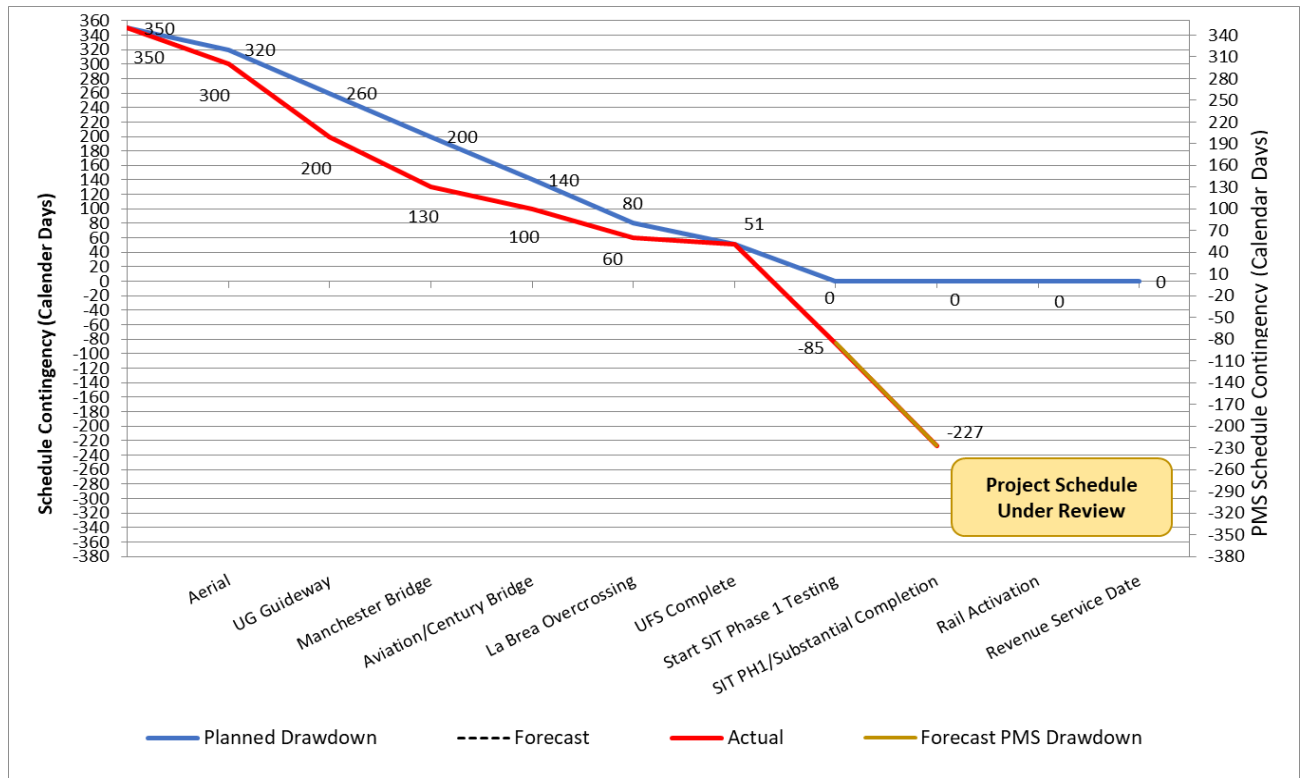
*Mainline Contractor Equipment Delivery Requirements*

<b>Activity Name</b>	<b>Early Finish</b>	<b>Need Date</b>
Fabricate, Edge Lights – Mockup (Rejected in December 2019)	March 2020	June 2019
Fabricate, Edge Lights – Leimert Station	June 2020	August 2019
Fabricate, Edge Lights – MLK Station	June 2020	August 2019
Fabricate, Edge Lights – Expo Station	May 2020	August 2019
Fabricate, Test & Deliver Aux-Power Equipment - 104 <sup>th</sup> St.	March 2020*	June 2019*
Fabricate, Test & Deliver Aux-Power Equipment - Victoria St.	March 2020*	June 2019*
Fabricate, Test & Deliver Aux-Power Equipment – 60 <sup>th</sup> St.	March 2020*	May 2019*
Fabricate, Test & Deliver MCC's - 104 <sup>th</sup> Street	March 2020*	August 2019*
Fabricate, Test & Deliver MCC's - Victoria/60 <sup>th</sup> Street	March 2020*	June 2019*
*Requires schedule mitigation by Mainline Contractor		

**Critical Path**

**Project Schedule Under Review**

**Project Schedule Contingency Drawdown**



Metro issued in August 2018 a non-compensable unilateral change order to WSCC to extend their substantial completion milestone to December 11, 2019. Thus, performance measurement is now tracked against this new date.

The contractor last schedule update submitted was for period as of October 2019. They reported they are behind schedule, adding additional alleged delays reported for this period. Metro assessment is that WSCC is behind schedule by at least 227 calendar days. Metro is meeting with WSCC to discuss detail schedule issues and possible path forward schedule reflecting a more realistic and validated schedule update. Draft schedule update for November/December 2019 was provided by WSCC, which is under review and analysis by Metro.

A potential Revenue Service is under review by project management.

**Risk Management Narrative**

**Summary of Risks**

Within this reporting period two risks were closed. No new risk was added. There is a total of twenty (20) risks remaining to be managed in the next reporting period.

Of the twenty (20) risks, eleven (11) are scored as high (10 to 20 risk rating), four (4) as medium (4 to 9 risk rating), and five (5) as low (Less than 4 risk rating).

**Top Risks:** The table below shows the top project risks:

<b>Risk ID</b>	<b>SCC</b>	<b>Risk Description</b>	<b>Risk Rating</b>
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 December 11, 2019 - Substantial Completion.	18
359	80	Extended Overhead or productivity loss claims exposure not covered by cost impacts in individual risks.	18
362	50	Schedule activities that are critical to completion (Trackwork, OCR/OCS, TPSS and Auxiliary Power Energization, Emergency Fans, Train Control wiring/testing and Communications equipment installation/wiring/testing, Fire Alarm including Damaged Tunnel Conduits).	16
369	20	Delay of fire rated conduit/cable installation.	15
372	20	WSCC Design/Engineering Support during Construction, Installation and Testing	15
354	50	Issues with energization of Traction Power. Auxiliary Power equipment procurement, installation, testing and coordination with DWP and Edison.	14
373	20	WSCC Damaged, Repair, Rework and Incomplete work including tunnel conduits, Track plinths, Communication (Fire Alarm System).	13
355	50	Issues with long lead delivery or improper planning for integration, testing and startup of Communication systems.	12
374	50	3rd Party coordination of civil work and street improvement additional scope work requirements and Auxiliary Power sites.	10
376	20	WSCC Damaged, Repair, & Rework - MSE Wall 202 movement and settlement	10
201	50	DB unable to obtain critical skilled specialty workers needed for complex systems, elevator testing, etc.	10

**Newly Identified Risks:** there is one new item added to the risk register.

**Closed Risks:** No risks were closed in this period.

**Risk Score Changes:** Six (6) risk scores were changed this period.

**Actions in Next Reporting Cycle**

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

- Update the project risk register.

**PROJECT COST**

**Project Cost Analysis**

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	-	417,293,686	1,659,056	410,016,944	-	417,293,686	(33,060,689)
20	STATIONS, STOPS, TERMINALS, INTERMODAL	153,906,000	-	315,050,000	-	308,067,041	(2,325,021)	283,083,501	-	308,067,041	(6,982,959)
30	SUPPORT FACILITIES (SOUTHWEST YARD)	66,673,000	-	71,164,000	-	67,318,266	-	66,072,328	-	67,338,361	(3,825,639)
40	SITWORK/SPECIAL CONDITIONS	235,576,000	-	395,798,361	207,860	403,351,085	2,100,328	349,888,929	207,860	403,578,110	7,779,748
50	SYSTEMS	125,132,000	-	169,436,000	-	175,016,183	2,962,102	143,021,621	-	175,019,936	5,583,936
	<b>CONSTRUCTION SUBTOTAL (10-50)</b>	<b>1,052,622,000</b>	<b>-</b>	<b>1,401,802,736</b>	<b>207,860</b>	<b>1,371,046,261</b>	<b>4,396,466</b>	<b>1,252,083,325</b>	<b>207,860</b>	<b>1,371,297,134</b>	<b>(30,505,602)</b>
60	RIGHT-OF-WAY	132,294,000	-	127,490,000	12,871	133,860,084	13,052	133,609,678	12,871	133,860,084	6,370,084
70	VEHICLES / BUSES	87,780,000	-	83,571,544	-	83,571,544	-	81,362,870	-	83,571,544	(0)
80	PROFESSIONAL SERVICES	276,040,400	-	368,734,466	3,692,907	421,979,994	1,823,885	389,802,658	3,643,544	425,509,255	56,774,789
	<b>SUBTOTAL (10-80)</b>	<b>1,548,736,400</b>	<b>-</b>	<b>1,981,598,746</b>	<b>3,913,638</b>	<b>2,010,457,883</b>	<b>6,233,403</b>	<b>1,856,858,531</b>	<b>3,864,275</b>	<b>2,014,238,017</b>	<b>32,639,271</b>
90	UNALLOCATED CONTINGENCY	177,157,000	-	50,401,254	-	-	-	-	(3,864,275)	17,761,983	(32,639,271)
	<b>TOTAL PROJECT 865512 (10-100)</b>	<b>1,725,893,400</b>	<b>-</b>	<b>2,032,000,000</b>	<b>3,913,638</b>	<b>2,010,457,883</b>	<b>6,233,403</b>	<b>1,856,858,531</b>	<b>-</b>	<b>2,032,000,000</b>	<b>0</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>1,751,893,400</b>	<b>-</b>	<b>2,058,000,000</b>	<b>3,913,638</b>	<b>2,036,006,914</b>	<b>6,233,403</b>	<b>1,882,407,562</b>	<b>-</b>	<b>2,058,000,000</b>	<b>0</b>

1. Expenditures are Cumulative through February 28, 2020

2. Expenditures exclude \$6.6 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.

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) Original Budget of \$1,749 million for the Crenshaw/LAX Transit Project.

**Current Budget:**

There have been two increases in the total LOP Current Budget to date:

- The Board in December 2012 approved an increase of \$13.9 million for a new LOP Current Budget 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.

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 LOP Current Budget for the Southwestern Yard Project is included in the appendix section of this report. The Current Budget allocation for Crenshaw/LAX Transit Project only, 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.

**Commitments:**

Commitments increased by \$3.9 million this period to \$2,036.0 million which represents 98.9% of the current budget. The total increase is related to design-build Contract C0988 Crenshaw/LAX Transit Corridor, third party utility relocation, real estate acquisition and professional services. The total commitments include \$149.5 million for the Southwestern Yard 49% allocation.

**Expenditures:**

Expenditures increased by \$6.2 million this period to \$1,882.4 million which represents 91.4% of the current budget. The total increase is for costs associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, third party utility relocation, real estate acquisition and professional services. The cumulative expenditures to date include \$143.4 million for the Southwestern Yard 49% allocation

**Current Forecast:**

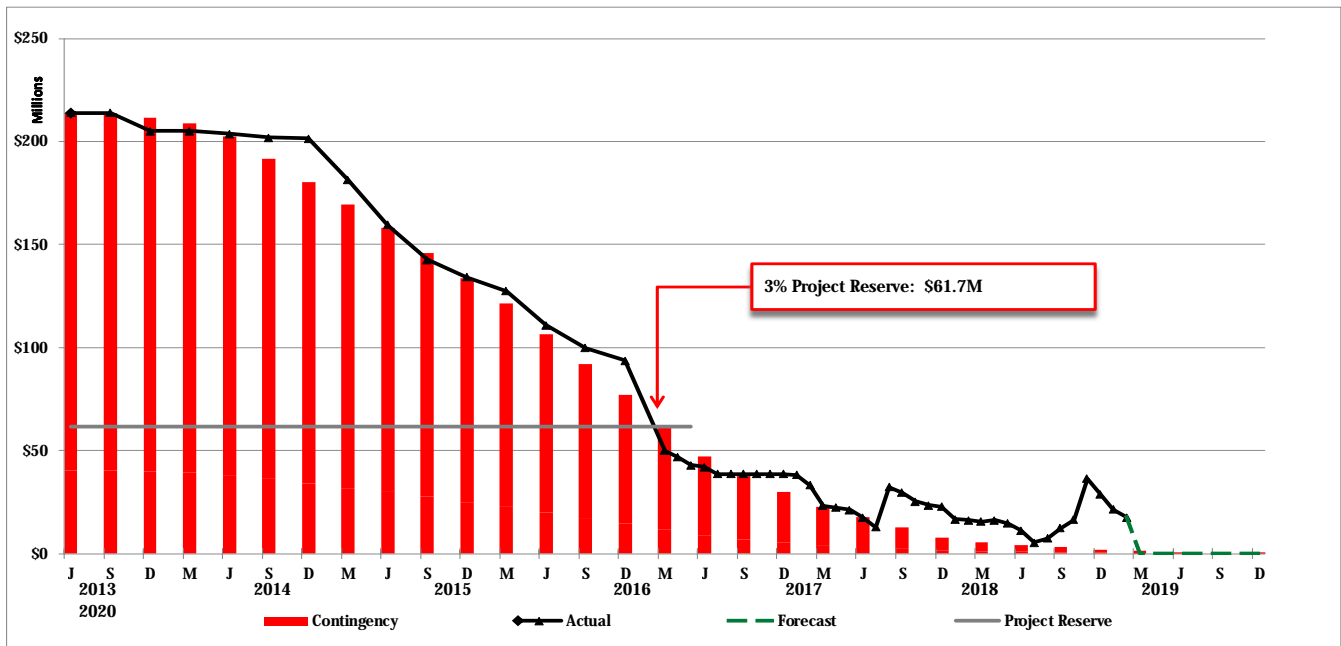
The total current forecast remains the same as the total current budget.

**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
	PREVIOUS	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
405556 SYSTEMWIDE TRANSIT PLANNING	320,035	-	320,035	-	320,035	-	320,035	-	320,035	-
210090/93 FARE GATE PROJECT	3,066,226	-	3,066,226	-	3,066,226	50,000	2,404,226	-	3,066,226	-
210152 CRENSHAW/LAX BUS TRANSFER FACILITY	2,200,000	-	2,200,000	-	2,200,000	89,831	852,494	-	2,200,000	-
460303 AIRPORT METRO CONNECTOR	37,914,465	-	37,914,465	-	37,072,922	-	37,047,674	-	37,914,465	-
500013 C/LAX LAWA SCOPE OF WORK	1,575,362	-	1,575,362	-	581,918	-	545,439	-	1,575,362	-
405522 HIGHWAY PLANNING	4,479,724	-	4,479,724	-	4,479,724	175,580	2,801,826	-	4,479,724	-
TOTAL	49,555,812	-	49,555,812	-	47,720,825	315,411	43,971,694	-	49,555,812	-

**Cost Contingency Drawdown**



**Cost Contingency Drawdown Analysis**

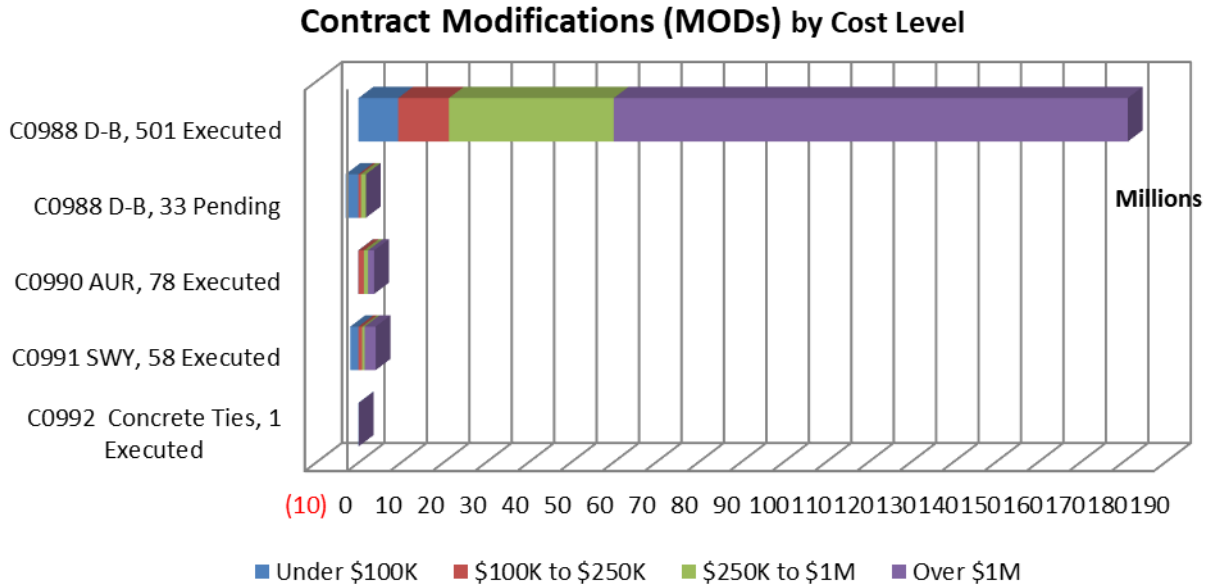
The project current budget of \$2,058,000,000 includes a contingency amount of \$213,866,792. The drawdown plan is correlated to anticipate risk trends and measures drawdowns moving forward.

Included in the project contingency drawdown is a 3% project reserve threshold. 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.

This month, \$3,864,275 was a drawn down from contingency. The remaining total project contingency (allocated and unallocated) is \$17,761,983.

<b>PROJECT COST CONTINGENCY (through 28-Feb-2020)</b>					
<b>UNITS IN DOLLARS</b>					
	<b>Original Contingency</b>	<b>Previous Period</b>	<b>Current Period</b>	<b>To-Date</b>	<b>Remaining Contingency (Forecast)</b>
<b>Unallocated Contingency</b>	173,500,000	(151,873,744)	(3,864,275)	(155,738,018)	17,761,982
<b>Allocated Contingency</b>	40,366,792	(40,366,792)	-	(40,366,792)	-
<b>Total Contingency</b>	<b>213,866,792</b>	<b>(192,240,535)</b>	<b>(3,864,275)</b>	<b>(196,104,810)</b>	<b>17,761,983</b>

## SUMMARY OF CONTRACT MODIFICATIONS



	C0988	C0990	C0991	C0992	Total
	<b>493 Executed</b>	<b>78 Executed</b>	<b>58 Executed</b>	<b>1 Executed</b>	
<b>Under \$100K</b>	\$ 9,353,723	\$ (70,251)	\$ (1,918,854)	\$ 81,738	\$ 7,446,355
<b>\$100k to \$250K</b>	\$ 11,963,464	\$ 1,280,184	\$ 875,202	\$ -	\$ 14,118,849
<b>\$250K to \$1M</b>	\$ 38,838,085	\$ 984,662	\$ 590,334	\$ -	\$ 40,413,082
<b>Over \$1M</b>	\$ 121,116,340	\$ 1,417,202	\$ 2,590,000	\$ -	\$ 125,123,542
<b>Total Contract MODs</b>	\$ 181,271,612	\$ 3,611,797	\$ 2,136,682	\$ 81,738	\$ 187,101,829
<b>Contract Award Amount</b>	\$ 1,272,632,356	\$ 7,827,500	\$ 172,312,695	\$ 2,161,297	\$ 1,454,933,848
<b>% of Contract MODs</b>	<b>14.24%</b>	<b>46.14%</b>	<b>1.24%</b>	<b>3.78%</b>	<b>12.86%</b>

Five hundred and one (501) changes with a total value of \$181.3 million have been executed since award of Contract C0988. There are an additional thirty-five (13) changes with a total credit value of \$1.26 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-eight (58) changes with a total value of \$2.14 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

## DISADVANTAGED BUSINESS ENTERPRISE (DBE)

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

(Reported Data as of February 2020)

- |   |               |  |
|---|---------------|--|
| <b>DBE Goal (Design)</b> – 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. | <b>20.00%</b> |  |
|---|---------------|--|
  
- |   |                     |                 |
|---|---------------------|-----------------|
| • <b>Current DBE Commitment</b> – Total DBE Committed Dollars divided by Total Contract Value for Design or Construction. | <b>\$25,799,791</b> | <b>(20.00%)</b> |
|---|---------------------|-----------------|
  
- |   |                     |                 |
|---|---------------------|-----------------|
| • <b>Current DBE Participation</b> – Total amount paid to date to DBEs divided by the amount paid to date to Prime. | <b>\$29,679,984</b> | <b>(21.98%)</b> |
|---|---------------------|-----------------|

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

- |   |               |  |
|---|---------------|--|
| • <b>DBE Goal (Construction)</b> - 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. | <b>20.00%</b> |  |
|---|---------------|--|
  
- |  |                      |                 |
|--|----------------------|-----------------|
| • <b>DBE Commitment</b> - Contract commitment divided by current contract value for Construction | <b>\$259,965,769</b> | <b>(20.00%)</b> |
|--|----------------------|-----------------|
  
- |  |                      |                 |
|--|----------------------|-----------------|
| • <b>Current DBE Commitment</b> - Actual commitments as Construction work is awarded | <b>\$288,851,326</b> | <b>(22.23%)</b> |
|--|----------------------|-----------------|
  
- |  |                      |                 |
|--|----------------------|-----------------|
| • <b>Current DBE Participation</b> - Total amount paid to date to DBEs divided by the amount paid to date to Prime | <b>\$317,698,554</b> | <b>(27.06%)</b> |
|--|----------------------|-----------------|

345 Construction subcontractors have been identified to-date.

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

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

(Reported Data as of February 2020)

- |  |               |
|--|---------------|
| ● <b>Targeted Worker Goal</b> – Construction work to be performed by residents from Economically Disadvantaged Area of LA County                     | <b>40.00%</b> |
| ● <b>Targeted Worker Current Attainment</b>  | <b>59.53%</b> |
| ● <b>Apprentice Worker Goal</b> – Construction work to be performed by Apprentices   | <b>20.00%</b> |
| ● <b>Apprentice Worker Current Attainment</b>  | <b>23.77%</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>11.37%</b> |

**FINANCIAL/GRANT**

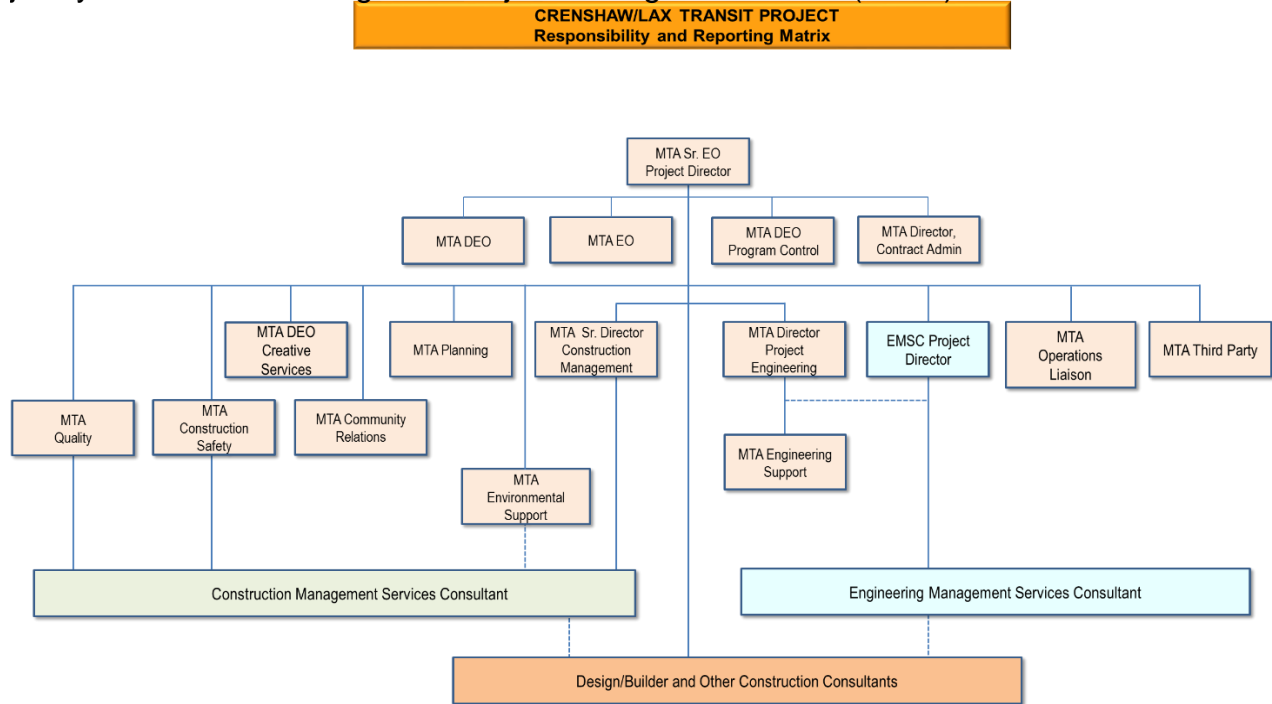
\$ in millions

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 SOURCE \$	FUNDING SOURCE %
FEDERAL - CMAQ	68.2	104.0	104.0	104.0	100%	65.9	63%	65.9	63%
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%	91.2	91%	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	36.6	36.6	100%	36.6	100%	36.6	100%
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	529.3	529.3	515.1	97%	461.8	87%	415.9	79%
CITY CONTRIBUTION	52.4	101.7	101.7	95.3	85%	43.6	43%	40.7	40%
GENERAL FUNDS	0.0	54.3	54.3	54.3	100%	54.3	100%	52.2	96%
PROP C 25% HIGHWAY	148.9	379.1	379.1	377.7	100%	375.9	99%	368.4	97%
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	4.9	4.9	4.9	100%	4.9	100%	4.9	100%
<b>TOTAL</b>	<b>1,749.0</b>	<b>2,058.0</b>	<b>2,058.0</b>	<b>2,036.0</b>	<b>99.0%</b>	<b>1,882.4</b>	<b>91.0%</b>	<b>1,823.9</b>	<b>89.0%</b>

NOTE: Expenditures are cumulative through November 30, 2019  
 Original Budget based on Board approved October 2011 Funding/Expenditure Plan  
 Expenditures exclude \$6.6 Million for State Board of Equalization decision to tax LRT vehicle deliveries since August 2016.  
 Metro is appealing decision but paid taxes to not include late fees.

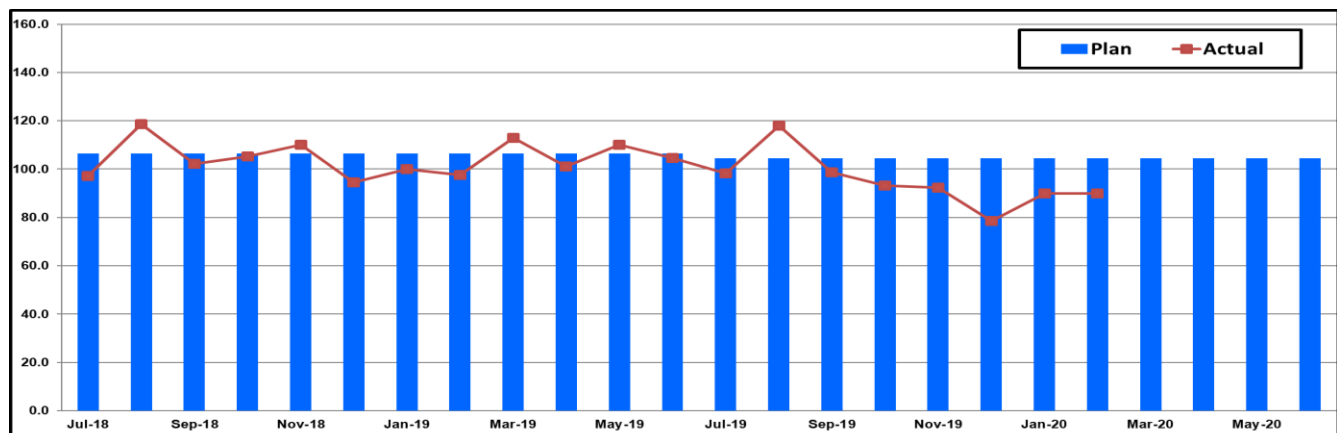
## PROJECT ORGANIZATION AND STAFFING

The design-build contract is being managed by joint team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO).

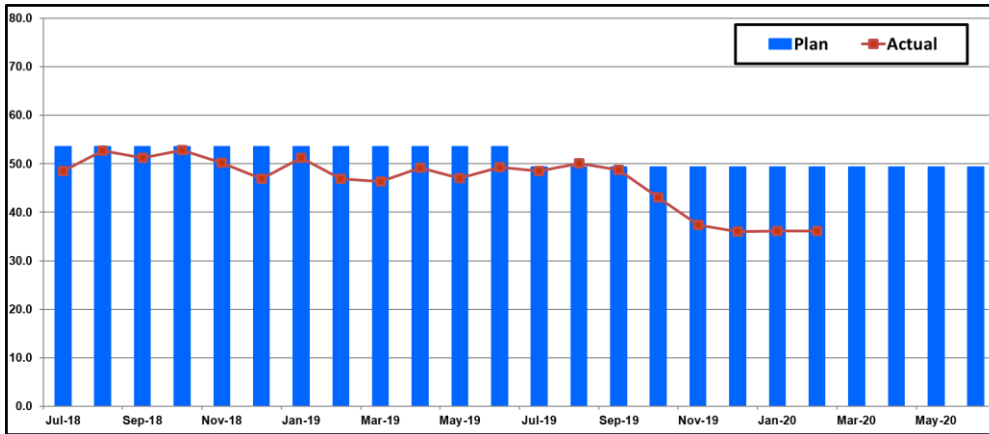


The overall FY19 Total Project Staffing Plan averages 104.5 Full Time Equivalent (FTEs) per month consisting of 49.4 for Metro Agency staff, 46.1 for Construction Management Support Services Consultant and 9.0 for Design and Engineering Support Services Consulting staff.

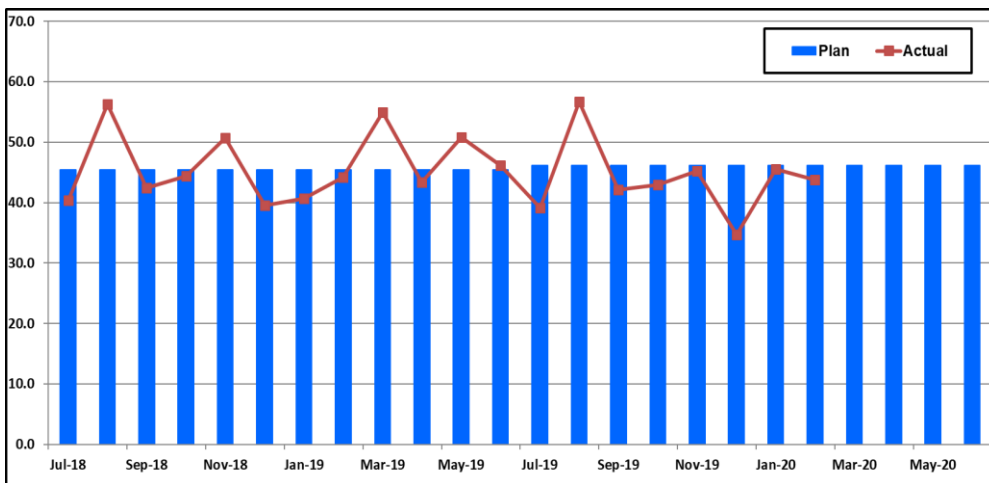
For February 2020, total project staffing were 89.9 FTEs for the month consisting of 36.2 FTEs for Metro’s project administration staff, 43.8 FTEs for Construction Management Support Services Consultant and 9.9 FTEs for Design and Engineering Support Services Consulting staff.



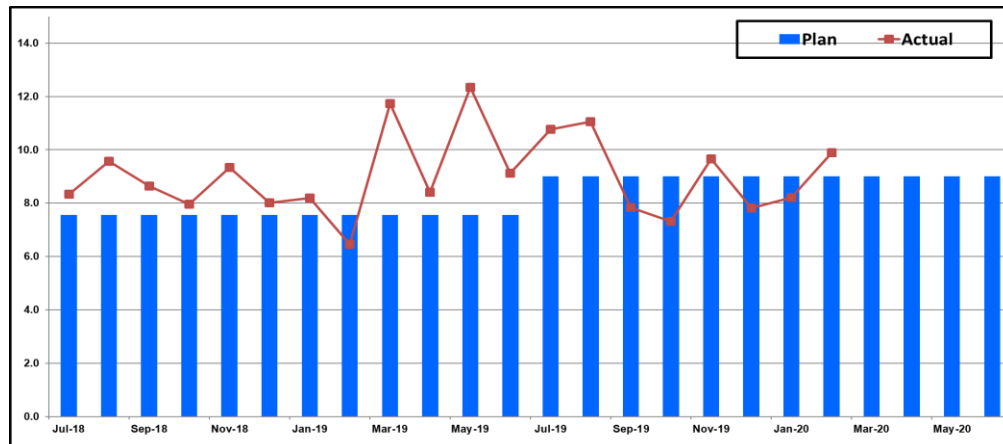
**Metro Staff**



**CM Support Services Staff (Consultant)**



**Engineering Services Staff (Consultant)**



**Staffing by Group**

The opposing graphs represent planned vs. actual staffing levels by group.

Metro staffing includes full time staff located in the IPMO as well as part-time support located at Gateway Headquarters.

Staffing plans are developed for each fiscal year based on project needs.

## REALESTATE

- Metro is working on extending some temporary construction easements due to revised construction schedule.

## QUALITY ASSURANCE

- Attended weekly Quality Team Meetings with WSCC Lead Quality personnel and City of Los Angeles Bureau of Contract Administration (ConAd) in attendance.
- WSCC Quality issued twelve (12) Nonconformance Reports (NCRs) during this period.
- Metro Quality provided WSCC with the final 2019 Annual Quality Audit report during this period.
- Metro Quality participated in Readiness Review meeting for Excelsior Elevator.
- Metro Quality participated in Internal Project Review Weekly Meetings.
- Metro's Independent Testing Lab (ITL) performed verification inspections and NDT tests for structural steel and completed Geotechnical Engineering (GE) observation during this period.

## ENVIRONMENTAL

- Noise and vibration spot checks continue to be conducted weekly at multiple sensitive locations, and at locations of new activities along the project alignment.
- SWPPP inspections of all project areas are conducted weekly by WSCC and spot checks by Metro to observe site conditions and report on performance of stormwater protection Best Management Practices and overall housekeeping.
- No Fugitive dust violations were reported or witnessed during the reporting period.
- EMS and Environmental Compliance Progress meetings were held during this reporting period on 02/12/20 and 02/26/20.
- There were no qualifying rain events during the reporting period. A REAP was prepared on 02/21/2020, however a qualifying rain event did not follow.
- Spot check nighttime noise monitoring was performed by Metro on 2/07, 2/10, and 2/27. Metro observed two nighttime noise exceedances on 2/10 due to nighttime paving/compaction near 60<sup>th</sup>/Crenshaw work area.
- Asbestos containing material (ACM) was encountered in January 2020 (at 60<sup>th</sup>/Crenshaw work area) and was removed on February 7, 2020. A Procedure 3 Workplan was prepared and followed by WSCC for this removal. The ACM pipe was hauled off on February 10, 2020.

## **CONSTRUCTION/COMMUNITY RELATIONS**

- Continued working with WSCC to minimize the impacts of lane and street closures along the Crenshaw/LAX alignment.
- Circulated public notice for project construction activities. The notices are distributed via-email, social media networks, and hand delivered to key stakeholders.
- Continued coordinating with WSCC to mitigate impacts to business and residents along the Crenshaw/LAX alignment.
- Ongoing coordination with WCSS and Metro Bus Operations to plan for bus detour routes to accommodate lane reductions and closures.
- Continued outreach to area stakeholders including the LAX area regarding ongoing construction activities.
- Continued face to face outreach to key stakeholders and community organizations along the alignment.
- Ongoing planning for community construction update meetings and presentations to key stakeholder groups.

## **CREATIVE SERVICES**

- Mosaic Glass Tile Installation Contractor Work Plan Review
- Vernon Station Art Glass Shop Drawings Review
- RFI response for Aviation/Century Station signage attachment to art fence.
- Signage shop drawing review for Downtown Inglewood Station-Bus Layover Area.
- Confirmed locations for Grand Pylon station identifiers.

## SAFETY AND SECURITY

- Conducted Monthly All Hands Safety & Security meeting with WSCC and the following topics were discussed- Elevator and escalator status access & egress, ROW protection/ track allocation, new CAL OSHA regulations, security issues, Fire Department FDC/ FHV.
- Participated in WSCC's daily briefings regarding lessons learned, weekly Safety huddles/Safety briefings at EXPO, MLK and Vernon stations, weekly progress/scheduled meetings where we discussed safety related issues.
- Participated in the Wednesday weekly corporate safety conference call to update the safety team.
- Conducted All Hands Safety Meeting on 2-20-2020 and discussed incident review, man hours and weekend schedule work.
- Monitored construction activities daily including weekends to ensure compliance with contract specifications.
- Contract C0991 Hensel Phelps Project to date completed 518,946 work hours with 3 recordable injuries. Hensel Phelps and their subcontractors completed 14,113 work hours and zero (0) recordable injuries for the month of January 2019 Note: HPH has submitted to Metro a notice of Substantial Completion as of January 30<sup>th</sup>, 2019. HPH continuing to work on punch list items.
- Total Days Away (DART) Injury Rate: Six (6) Days Away from Work (DART) Injuries is 0.1. The National Ave is 1.7.
- Project to Date – Total Days Away Rate (561 Days Away from Work) is 12.2. (No National Published Rate.
- Contract C0988 (WSCC) completed 118,228.44 work hours with (0) recordable/Days Away from Work injury for the month of February 2020. Total Project to Date work hours is 9,414,699.33 with a total of ninety nine (99) recordable incidents. The Project Recordable Rate is 2.10
- The Bureau of Labor Statistics (BLS) average recordable rate per 200,000 work hours is 2.5

## CHRONOLOGY OF EVENTS

October 2011	Board approved the Life-of-Project Budget of \$1.749 billion.
December 30, 2011	Received Record of Decision from FTA.
March 12, 2012	Received Statement of Qualifications 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.
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.
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.
August 21, 2014	Substantial Completion issued for Advanced Utility Relocations Contract C0990.

### 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.
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).
April 6, 2017	The northbound tunnel boring machine completed mining with the hole thru at Leimert Park Station.
June 15, 2018	Restoration of the road over the three underground stations along Crenshaw Blvd. commenced at Leimert Park Station area and the at-grade transition section.
January 30, 2019	Substantial completion was achieved by the Southwestern Yard (Division 16) Contract C0991 Contractor, Hensel/Phelps/Herzog JV.

**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	21,997	0	21,997	0	21,997	21,997
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	85,694,629	26,577,325	111,941,898	26,577,325	112,271,954	27,081,955
40	SITWORK/SPECIAL CONDITIONS	35,932,000	0	38,273,000	0	40,041,398	(26,098,675)	12,065,904	(26,577,325)	13,464,073	(24,808,927)
50	SYSTEMS	25,784,616	0	32,991,000	0	34,372,709	6,949	33,403,904	0	34,392,804	1,401,804
	(10-50) CONSTRUCTION	147,263,451	0	156,453,999	0	160,130,732	485,599	157,433,703	0	160,150,828	3,696,829
60	RIGHT-OF-WAY	99,910,000	0	100,000,000	0	102,420,623	0	102,417,651	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)	43,268,502	123,255	36,755,801	0	43,916,606	10,276,975
90	PROJECT CONTINGENCY	13,659,732	0	17,106,370	0	0	0	0	0	711,943	(16,394,427)
<b>TOTAL</b>		<b>296,434,278</b>	<b>0</b>	<b>307,200,000</b>	<b>(0)</b>	<b>305,819,857</b>	<b>608,854</b>	<b>296,607,155</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	11,000,000	0	10,321,826	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>316,819,857</b>	<b>608,854</b>	<b>306,928,981</b>	<b>0</b>	<b>318,200,000</b>	<b>0</b>
--------------------	--------------------	----------	--------------------	------------	--------------------	----------------	--------------------	----------	--------------------	----------

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH FEBRUARY 28, 2020.

**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 and remain the same as total current budget.

**Commitments:**

The commitments are cumulative through February 28, 2020. The total commitments to date remain the same at \$316.82 million which represents 99.6% of the current budget.

**Expenditures:**

The expenditures are cumulative through February 28, 2020. The total expenditures increased by \$0.6 million to \$306.9 million which represents 96.5% of the current budget. The total increase is for cost associated with Contract C0991 Division 16: Southwestern Yard and professional services.