

# 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).

**APRIL 2015**

## TABLE OF CONTENTS

	Page No.
Project Summary.....	1
Project Overview & Status.....	2-4
Management Issues.....	5-6
Project Alignment.....	7
Project Scope.....	8-9
Project Status	
• Project Schedule	
○ Key Milestones Six-Month Look Ahead.....	10
○ Project Summary Schedule.....	11
○ Schedule Measurements.....	12
○ Overall Construction Progress Curve.....	13
○ Major Equipment Delivery .....	14
○ Design-Builder’s (C0988) Long Lead Item List.....	15
○ Critical Path Narrative.....	16
○ Project Schedule Contingency Drawdown.....	17
○ Project Schedule Contingency Drawdown Analysis.....	17
• Project Cost	
○ Project Cost .....	18
○ Project Cost Analysis.....	18-20
○ Project Contingency Drawdown.....	21
○ Project Contingency Drawdown Analysis.....	21-22
○ Disadvantaged Business Enterprise (DBE).....	23
○ Project Labor Agreements (PLA) Status.....	23
○ Summary of Contract Modifications.....	24-25
• Financial/Grant	
○ Financial/Grant .....	26
○ Status of Funds Anticipated.....	27
• Staffing	
○ Total Project Staffing.....	28
○ Metro Staffing.....	29
○ Construction Management Support Services Consultant.....	29

**TABLE OF CONTENTS (Continued)**

	Page No.
o Engineering Services Consultant.....	30
• Real Estate.....	31
• Quality Assurance.....	32
• Environmental.....	33
• Construction Relations.....	34
• Systemwide Design and Art Program.....	34
• Safety and Security.....	35
• Third Party Agreement and Advanced Utility Relocation.....	36
• Peak Hour and Nighttime Construction Variances.....	37
• California Public Utilities Commission (CPUC) Crossing Summary...	38
• Chronology of Events.....	39-41
• Construction Contracts	
o Contract C0988 .....	42
o Contract C0990. ....	43
o Contract C0991 .....	44
o Contract C0992.....	45
o Contract C0992A.....	46
• Construction Photographs.....	47-53
Appendices	
• Cost and Budget Terminology.....	54
• List of Acronyms.....	55-60

**PROJECT SUMMARY**

<b>LOCATION:</b> Crenshaw Blvd at Exposition to Green Line <b>DESIGN/CONSULTANT:</b> Hatch Mott MacDonald				<b>CONSTRUCTION MANAGEMENT CONSULTANT:</b> Stantec <b>CONTRACTOR:</b> Walsh-Shea Corridor Constructors (WSCC)			
<b>PROJECT PHOTO:</b> North of Century - overall view of abutments for new Aviation/Centruy Bridge.				<b>WORK COMPLETED PAST MONTH:</b>			
				<ul style="list-style-type: none"> <li>o WSCC continued final design.</li> <li>o WSCC continued pile installation for UG#1 near LAX airport runways.</li> <li>o WSCC continued abutment piles at Century Station Bridge.</li> <li>o WSCC continued pile installation at Vernon Station.</li> <li>o WSCC continues utility support in place under street decking at MLK Station.</li> <li>o WSCC continued utility support in place under street decking and installation of 66" Habas sewer at Expo Station.</li> <li>o Metro continued real estate acquisitions with focus on partial-takes and temporary construction easements.</li> </ul>			
<b>EXPENDITURE STATUS (\$ In Millions)</b>				<b>SCHEDULE ASSESSMENT</b>			
ACTIVITIES	CURRENT BUDGET	EXPENDED AMOUNT	PERCENT EXPENDED	MAJOR SCHEDULE ACTIVITIES	PRIOR PLAN	CURRENT PLAN	VARIANCE WEEKS
<b>DESIGN</b>	\$ 136.7	\$ 102.1	74.7%	<b>Environmental</b>			
				FEIS/FEIR	Sep-11	Sep-11	Complete
				Record of Decision	Dec-11	Dec-11	Complete
<b>RIGHT-OF-WAY</b>	\$ 127.4	\$ 108.7	85.3%	<b>Design</b>			
<b>CONSTRUCTION</b>	\$ 1,353.1	\$ 329.8	24.4%	Preliminary Engineering	Nov-11	Nov-11	Complete
				Final Design	Sep-15	Sep-15	On Schedule
<b>OTHER</b>	\$ 440.8	\$ 107.7	24.4%	<b>Right-of-Way</b>			
<b>TOTAL</b>	\$ 2,058.0	\$ 648.2	31.5%	Full-take parcels available	Jan-15	Jan-15	Complete
				Part-take and TCE parcels	Sep-15	Sep-15	On schedule
Note: cost expended as of May 2, 2015.				<b>Construction</b>			
<b>AREAS OF CONCERN</b>				D-B Notice to Proceed	Sep-13	Sep-13	Complete
<ul style="list-style-type: none"> <li>o Timely reviews of WSCC's design submittals by City of Los Angeles, City of Inglewood, Caltrans, FAA and LAWA.</li> <li>o Third party relocations prior to design-builder's construction .</li> <li>o Mitigation of design-builder's schedule delays.</li> <li>o Design-builder's schedule does not accurately forecast its work efforts.</li> <li>o LAWA's work windows for design-builder near LAX.</li> <li>o New proposed 96th street station cost/schedule impacts.</li> <li>o Hobas sewer pipe support from deck beams at Expo Station.</li> <li>o Execution of Agreement with City of Inglewood.</li> <li>o Design-builder's safety program.</li> </ul>				D-B Substantial Complete	Oct-18	Jan-19	3.2 months behind
				Revenue Service Date	Oct-19	Oct-19	On schedule
				The D-B Substantial Complete prior plan was modified by a 35 day concurrent delay contract modification in March 2015.			
				*Note: Current Revenue Service Date includes a reduction in contingency.			
<b>ROW ACQUISITION</b>	PLAN	ACQUIRED	REMAINING	<b>CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD</b>			
FULL TAKES	35	35	0	<ul style="list-style-type: none"> <li>o WSCC complete utility support in place and commence excavation beyond depth of 21 feet at Expo Station.</li> <li>o WSCC continue utility support and excavation at MLK Station</li> <li>o WSCC complete pile installation and commence decking operation at Vernon Station.</li> <li>o WSCC complete pile installation for UG#1 near airport runway.</li> <li>o WSCC commence falsework at Century Station Bridge.</li> <li>o Metro award Division 16: Southwestern Yard, IFB C0991.</li> </ul>			
PARTIAL TAKES	27	9	18				
TEMPORARY EASEMENTS	12	6	6				
<b>TOTAL PARCELS</b>	74	50	24				

## **PROJECT OVERVIEW**

### **Major Contract Procurement**

Metro advertised the Southwestern Yard (Division 16) design-build contract on August 29, 2014. For this two-step procurement, both Step One Technical Bid and Step Two Price Bid were received on January 22, 2015. The price bids were opened on March 25, 2015. *The recommendation for award is going to the May Board with a subsequent notice-to-proceed forecast for June 2015.*

### **Construction**

**Contract C0990** - The advanced utility relocations contractor, Metro Builders and Engineers Group, LTD was substantially completed on August 21, 2014. Contract is now in close-out phase. Metro continues to meet with the contractor to resolve outstanding issues including resolution of claims that have been submitted by contractor.

**Design- Build Contract C0988** – The design-builder, Walsh-Shea Corridor Constructors (WSCC) continues final design with preparation of required contract submittals. The designer is completing design for the most critical items that support the commencement of construction in the various areas of the project. Construction efforts by the design-builder continued along all major areas.

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

There are a total of 74 parcels; one more parcel was added in October 2013 which was originally an encroachment. There are 35 full takes, 27 partial takes and 12 temporary construction easements (TCE's). *There have been 50 parcels acquired through April 2015.* Thirty-five full takes and 15 part takes/ temporary construction easements have been provided to design-builder WSCC.

Metro has acquired all full takes required for the construction of the Project. Focus now is on completing the acquisition of part-takes and entering into agreements for temporary construction easements that are required for the Project. As the design-builder continues design, they have identified some additional TCE's and partial takes that may be required. Metro will work with the design-builder regarding any additional parcel acquisitions that may be required. These additional parcels may be required for street restoration or other non-critical scope of work.

### **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 interim course of action is to expand the existing functional operations at the ROC under a Phase 1 approach to support five new rail lines and extensions including the Crenshaw/LAX Project. The existing ROC will be expanded and will reconfigure the existing ROC service control and closed circuit television monitoring areas to increase overall space requirements by approximately 22 percent. A full build-out of a combined BOC/ROC is also being planned under a Phase 2 approach on land to be acquired by Metro as a separate Capital Improvement Project near

## **PROJECT OVERVIEW (Continued)**

Division 20.

Final design of the ROC Reconfiguration Plan was completed and issued for review on February 28, 2014. The initial ROC reconfiguration effort will be for Exposition Phase II and Foothill Gold Line Projects. Crenshaw/LAX Transit Project ROC reconfiguration will be initiated in June 2017 and completed by February 2019.

### **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 2014.

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 current budget includes the 49% cost allocation share that the Project is responsible for paying for the design and construction of the Southwestern Yard. This amount is \$139.4 million of the \$285.2 million forecast cost for the Southwestern Yard. The \$139.4 million is allocated in the various SCC categories.

The amount of funding available for the Crenshaw/LAX Transit Corridor Project, excluding the Southwestern Yard \$139.4 million allocation and Environmental/Planning budget of \$26.0 million is \$1,892.6 million.

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 funding 79.9%, state funding 8.8% and federal funding 11.3%.

*The project commitments thru April 2015 are \$1,675.9 million or 81.4% of the Current Budget. The project expenditures thru April 2015 are \$648.2 million or 31.5% of the Current Budget.* The current period expenditures are for design-builders monthly design and construction costs as well as right-of-way and professional services costs. The expenditures to date also include the Southwestern Yard expenditures that are part of the 49% cost allocation share (\$139.4 million) that the Project is responsible for paying for.

## **PROJECT OVERVIEW (Continued)**

The forecast of the available project schedule contingency was reduced this month. *This month the design-builder included in their April 2015 Schedule Update narrative a projected delay of an additional 20 calendar days; cumulative 129 calendar days.* Metro is reviewing the schedule update and does not concur with the design-builder's assessment of the potential slippage. *However, Metro this month is showing the potential delays as a reduction in the overall project schedule contingency which now has four months of contingency left.* Metro continues to meet with the design-builder to discuss the schedule and review any potential mitigation opportunities available to the design-builder to mitigate a projected schedule slippage.

A Risk Management Quarterly Progress Report with a status of December 2014 was issued on March 6, 2015. On a monthly basis, the project's risk manager will advise project management of the risk register items mitigation status. The next major risk workshop is planned for the fall 2015. The prerequisites for holding the workshop are: 1) Contract C0988 design-builder to have substantially complete final design, 2) Contract C0991 Southwestern Yard design-builder to have submitted and Metro approve their baseline schedule, and 3) substantial completion of real estate acquisition of part-takes and temporary construction easements.

## **MANAGEMENT ISSUES**

**Concern No. 1:** Execution of 3% Local Match funding agreement with the City of Inglewood.

**Status/Action** Metro and the City of Inglewood continue to work through various issues and may have solutions to outstanding issues so an agreement can be executed in the future.

**Concern No. 2:** Timely future reviews of WSCC final design submittals by City of Los Angeles, City of Inglewood, Caltrans, FAA and Los Angeles World Airports.

**Status/Action** Metro is coordinating with all third party agencies in advance of WSCC final design submittals to ensure that timely review requirements will be met to support WSCC's current schedule submittal dates. The final design submittals will be submitted for review by third parties according to the most critical submittals to ensure the third party agencies are reviewing the most important designs first. Also, along with the concern above is the potential for third party agencies review comments leading to potential change requests outside of the original design signed off by the agencies during the preliminary engineering phase of the project. Metro will take action and strictly monitor the review comments from the agencies.

**Concern No. 3:** Additional scope of work for the design-builder to accommodate the Los Angeles World Airports (LAWA) Specific Plan Amendment Study (SPAS).

**Status/Action** The scope of work is for Metro to undertake a parallel design effort and construct changes in the vicinity of the Aviation/Century Station to accommodate elements of the SPAS. The Crenshaw/LAX Transit Project obtained Metro Board authorization to Proceed in December 2013 with the required future design or construction effort. Four changes have been executed with WSCC, three for design and one for construction. Metro is also working with LAWA on additional changes that may be considered by the Metro Board of Directors in the near future. The existing and any potential new changes to WSCC are not funded by the Crenshaw/LAX Transit Project but are funded by other funding sources.

**Concern No. 4:** Relocations of utilities by outside third parties required to be performed in advance of the main Crenshaw/LAX Design Build Contractor's work.

**Status/Action** Metro continues to work closely with various third party agencies and have set up weekly meetings to address all known remaining utility relocation work. The emphasis is to have the relocations of utilities performed in advance of when WSCC will be performing work in the same location. LADWP at Vernon Station is anticipated to be completed earlier than projected and should not impact the design-builder's critical path. This was due to a

## **MANAGEMENT ISSUES (Continued)**

close working relationship between Metro, WSCC and LADWP to implement a work around to decrease schedule risk.

**Concern No. 5:** Design-builders design submittal schedule

**Status/Action** WSCC continues to submit design submittals later than planned. WSCC is submitting submittals in advance of the construction need date but may potentially be at risk of late design submittals impacting future start of various construction activities. Metro has been working closely with WSCC and the cities to address the submittal schedule changes so as not to impact the project schedule critical path. Metro and the cities have also accelerated submittals specified as critical by WSCC to not impact construction.

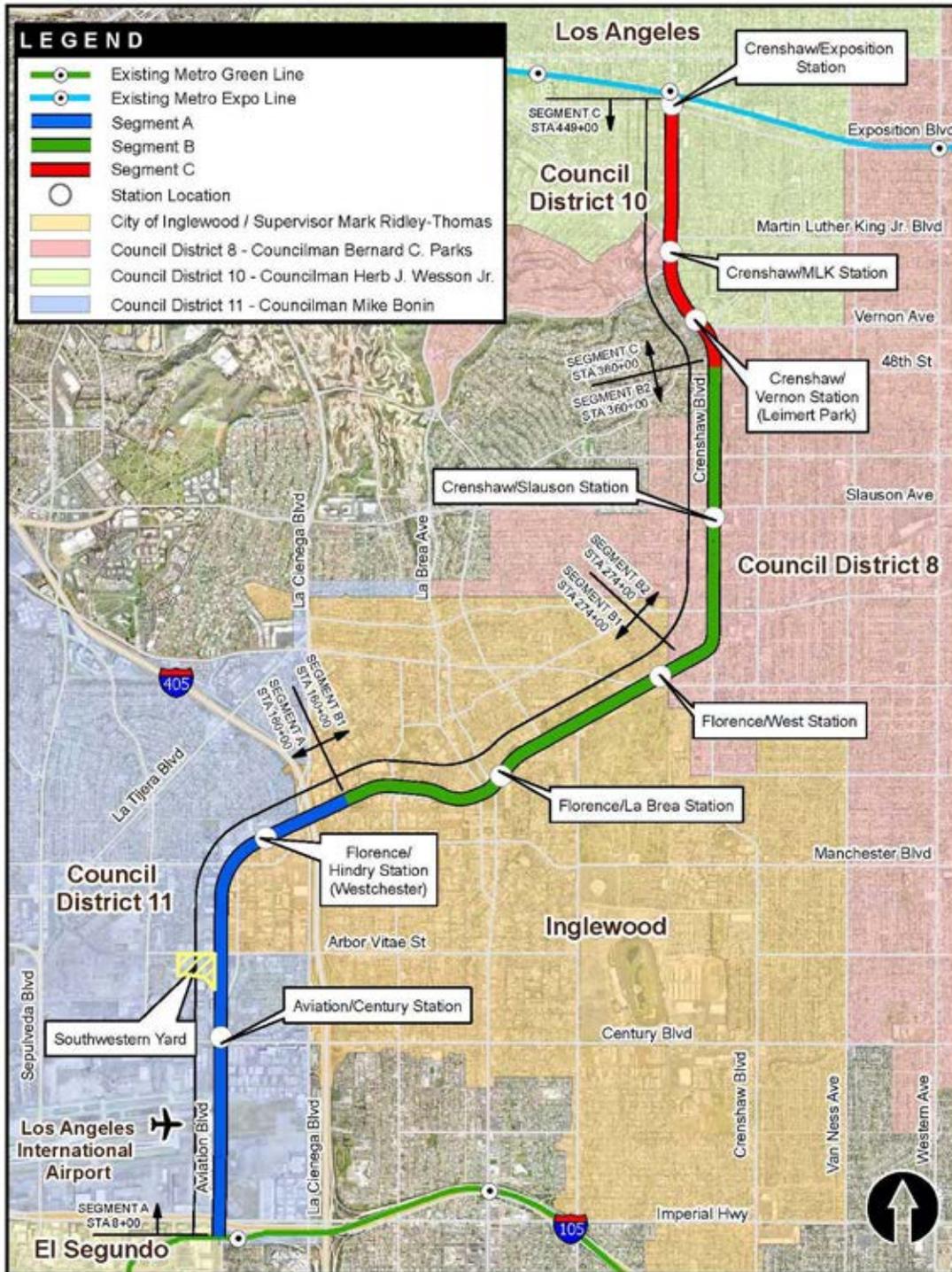
**Concern No. 6:** Design-builders construction schedule

**Status/Action** *The forecast of the project schedule contingency was again reduced this month. The design-builder included in their April 2015 Schedule Update Narrative a projected delay of an additional 20 calendar days. Metro is reviewing the schedule update and does not concur with the design-builder's assessment of the potential slippage. Metro continues to meet with the design-builder to discuss the schedule and review any potential mitigation opportunities available to the design-builder to mitigate impact of any schedule slippages addressed in their schedule update.*

**Concern No. 7:** Cost and schedule impacts on the Crenshaw/LAX Transit Project for a potential new station at 96<sup>th</sup> Street.

**Status/Action** As Metro explores the possibility of an additional new station at 96<sup>th</sup> Street staff is reviewing the potential impacts on the existing design-builder's scope of work and on the overall project cost and schedule. *Staff are seeking Board direction at the May 2015 Board Meeting on implementing changes required to the design-builder's design to accommodate the ultimate track configuration required for a future station.*

**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 is 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.

**KEY MILESTONES SIX- MONTH LOOK AHEAD**

	Milestone Date	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15
Contract C0988 Start La Brea Bridge	04/06/15A						
Contract C0988 Start Bracing/Struts - Expo	04/13/15A						
Contract C0988 Complete HOBAS Bypass - Expo	04/18/15A						
Contract C0988 Submit Final Design - COMM	05/05/15						
Contract C0988 Start Manchester Bridge	05/11/15						
Contract C0988 Start Soldier Piling - Cut & Cover #4	05/11/15						
Contract C0988 Start Excavation - UG#1	05/16/15						
Contract C0988 Submit Final Design - Seg B	05/18/15						
Contract C0988 Submit Final Design - TPSS Civil	05/19/15						
Contract C0988 Submit Final Design - OCS	05/19/15						
Contract C0988 Submit Final Design - TPSS	05/20/15						
Contract C0988 Submit Final Design - Seg C	05/21/15						
Contract C0988 Submit Final Design - Seg A	05/27/15						
Contract C0991 Notice of Award	05/28/15						
Contract C0988 Start Decking - Vernon	05/31/15						
Contract C0988 Submit Approved for Construction - Seg B	06/10/15						
Contract C0988 Start 111th Street Bridge	06/16/15						
Contract C0988 Start Shoring - Underground Structure #3	06/16/15						
Contract C0991 Notice to Proceed	06/29/15						
Contract C0988 Start Footing Invert - UG#1	07/06/15						
Contract C0988 Submit Approved for Construction - TPSS	07/07/15						
Contract C0988 Start Decking - Cut & Cover #4	07/18/15						
Contract C0988 Submit Approved for Construction - COMM	07/21/15						
Contract C0988 Start Fabricate Elevators & Escalators	07/22/15						
Contract C0988 Start Soldier Piling - U Section #4	07/27/15						
Contract C0988 Submit Approved for Construction - Seg C	07/28/15						
Contract C0988 Submit Approved for Construction - Segment A	08/04/15						
Contract C0988 Submit Approved for Construction - OCS	08/04/15						
Contract C0988 Start I-405 Bridge	08/10/15						
Contract C0988 Complete Soldier Piling - U Section #4	08/10/15						
Contract C0988 Start Excavation - UG#4	08/17/15						
Contract C0988 Complete Excavation & Mud Slab - Expo	09/16/15						
Contract C0988 Complete Excavation - MLK	09/23/15						

 MTA Staff

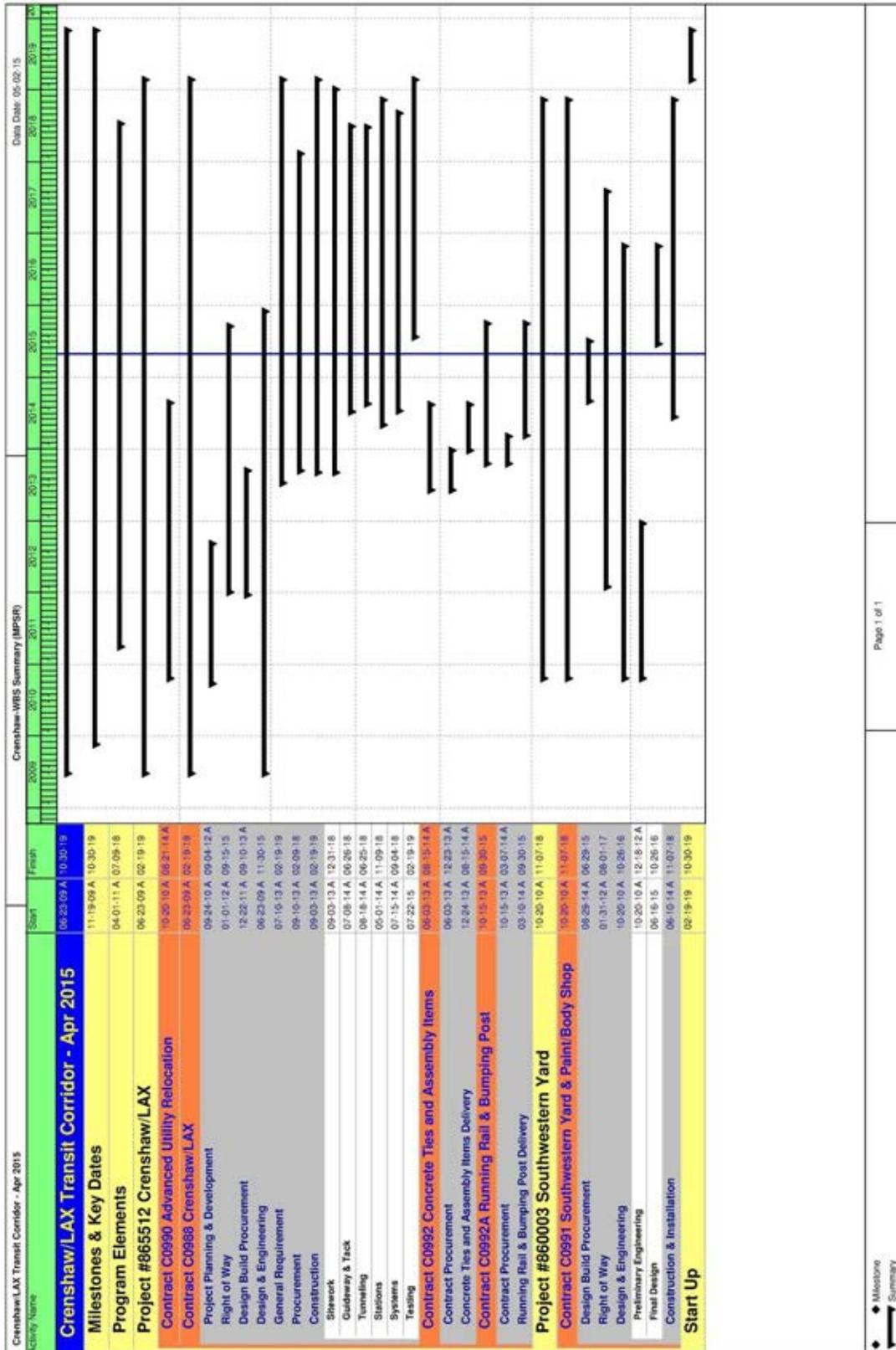
 MTA Board Action

 Walsh Shea

"A" following date is actual and completed

 Other Agencies

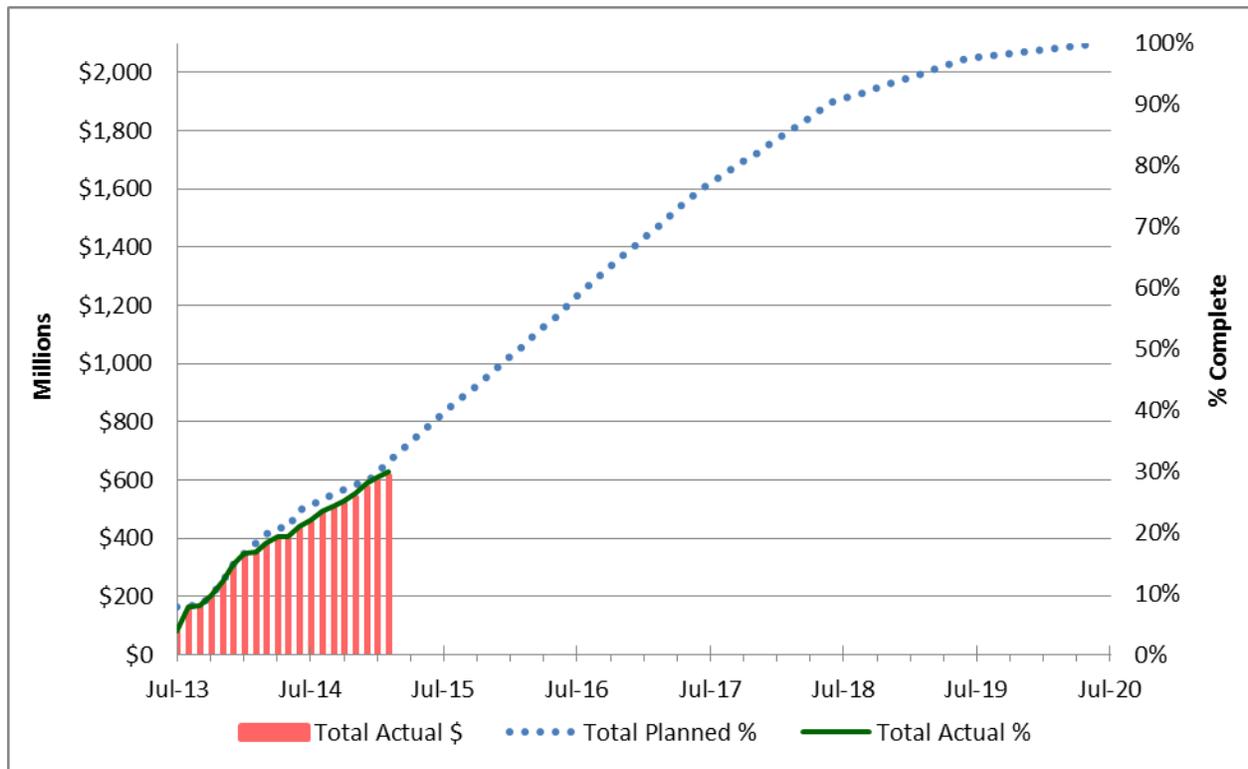
## PROJECT SUMMARY SCHEDULE



**SCHEDULE MEASUREMENTS**

	Status	Change from Last Period	Comment
Current Revenue Service:	10/30/2019	None	
Forecast Revenue Service:	10/30/2019	None	
TIFIA Revenue Service:	10/30/2019	None	
<b>Final Design Progress:</b>			
Contract C0988	89.2%	1.9%	Behind Schedule
Contract C0990	100%	None	Design Completed
Contract C0991	-	-	P.E Completed only
Contract C0992	100%	None	Design Completed
Contract C0992A	100%	None	Design Completed
<b>Construction Contracts Progress:</b>			
Contract C0988	15.2%	1.0%	Behind Schedule
Contract C0990	100%	0%	Substantially Completed
Contract C0991	0%	-	Bids Under Review
Contract C0992	100%	0%	Substantially Completed
Contract C0992A	93%	0%	On Schedule
<b>Cumulative To Date Progress:</b>			
	32.6%	1.5%	

**OVERALL CONSTRUCTION PROGRESS CURVE STATUS**



The above planned progress curve is based on planned expenditures by the design-build contractor in the C0988 baseline schedule and planned expenditures projected by all other Crenshaw/LAX contracts. The actual are overall project expenditures cumulative through May 1, 2015.

The cumulative overall project expenditures by April 2015 is \$648 million, which is 31.5% of the total project adopted budget of \$2,058 million, while the planned overall project progress by April 2015 is 33.1%.

**MAJOR EQUIPMENT DELIVERY STATUS**

**Tunnel Boring Machine**

WSSC, the design-builder for Contract C0988, will procure the tunnel boring machine (TBM) and equipment.

Following are the major milestone dates for TBM procurement:

	Baseline	Mar-15	Apr-15	Monthly Variance
Submit Final Design Details for TBM	01/03/14	03/31/15	05/05/15	-35
Fabricate & Deliver TBM	09/22/14	11/21/14A	11/21/14A	
Procure & Deliver TBM Rolling Stock & Accessories	06/23/14	03/02/15A	03/02/15A	
TBM SB Tunnel Launch at Expo	04/28/15	01/05/16	01/15/16	-10
TBM SB Break through at Vernon	09/17/15	05/17/16	06/06/16	-20
TBM NB Tunnel Launch at Expo	10/29/15	07/07/16	07/20/16	-13
TBM NB Break through at Vernon	03/21/16	11/17/16	12/07/16	-20

**Light Rail Vehicles**

The Board approved exercising Option 1 of Contract P3010 with Kinkisharyo International to provide light rail vehicles (LRV) for the Crenshaw/LAX project. By exercising this option prior to August 20, 2013, the Project avoided price escalation costs. 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 six pilot cars for the initial order of cars (non-option) are planned to be delivered on July 2015; then four cars will be delivered every month starting from Aug 2015 with the last group of cars to be delivered on Jan 2017.

Mobilization of Option 1 will commence after completion of the initial order. First delivery of Option 1 cars will be February 2017 and the last of the cars in September 2017.

**Ticket Vending Machines**

Procurement of the ticket vending machines will commence after the design-builder completes final design and the total requirements for the project are known.

**Concrete Ties and Assembly Items**

All required concrete ties have been delivered to the job site.

**Running Rail & Bumping Post**

The delivery of the equipment is as follows:

- SDI 115RE SS Rail Delivery – 7/16/2014 (Completed)
- Evraz 115RE HH Rail Delivery – 8/11/2014 (Completed)
- Bumping Post Delivery – 9/30/2015

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

Item	Initiate Procurement	Submittal Needed By	Delivery	Installation Date
Tunnel Boring Machine	Executed	Complete	Completed	9/1/2015
Stations- Elevators	Executed	3/25/2015	Pits 10/5/15	Pits 10/5/15
Stations- Escalators	Selected	5/22/2015	7/1/2016	10/5/2016
Track- Special Trackwork	Selected	3/21/2015	10/26/2015	11/12/2015
Track- Restraining Rail and Grade Crossing Ties	4/13/2015	5/1/2015	2/10/2016	4/1/2016
TPSS- Substation 1	4/8/2015	5/23/2015	4/2/2016	6/1/2016
TPSS- Substation 2	6/8/2015	7/23/2015	6/2/2016	8/1/2016
TPSS- Substation 3	8/10/2015	9/24/2015	8/4/2016	10/3/2016
TPSS- Substation 5	10/8/2015	11/22/2015	10/2/2016	12/1/2016
TPSS- Substation 6	1/7/2016	2/21/2016	1/1/2017	3/2/2017
TPSS-Substation 7	3/7/2016	4/21/2016	3/2/2017	5/1/2017
TPSS- Substation 8	1/7/2016	2/21/2016	1/1/2017	3/2/2017
TPSS- Substation 9	12/9/2016	1/23/2016	12/3/2016	2/1/2017
Train Houses	3/1/2015	5/30/2015	3/27/2017	5/1/2017
OCS Poles	3/1/2015	5/30/2015	6/27/2016	8/1/2016
Traffic Signal Poles	3/15/2015	4/15/2015	8/1/2015	6/1/2015
LED Lighting Figures	3/15/2015	4/15/2015	8/1/2015	3/1/2016
Jet Fan- UG3	5/5/2016	4/7/2016	12/31/2016	3/1/2017
Jet Fan- UG4	11/5/2016	1/4/2017	7/3/2017	9/1/2017
Artwork- Century	1/6/2016	3/6/2016	9/2/2016	11/1/2016
Artwork- Hindry	1/6/2016	3/6/2016	9/2/2016	11/1/2016
Artwork- La Brea	11/6/2015	1/5/2016	7/3/2016	9/1/2016
Artwork- West	4/7/2016	6/6/2016	12/3/2016	2/1/2017
Artwork- Slauson	10/5/2016	12/4/2016	6/2/2017	8/1/2017
Artwork-Vernon Concourse	2/4/2017	4/5/2017	10/2/2017	12/1/2017
Artwork- Vernon Plaza	10/5/2016	12/4/2016	6/2/2017	8/1/2017
Artwork- MLK Concourse	2/4/2017	4/5/2017	10/2/2017	12/1/2017
Artwork- MLK Plaza	4/7/2017	6/6/2017	12/3/2017	2/1/2018
Artwork- Expo Concourse	7/5/2017	9/3/2017	3/2/2018	5/1/2018
Artwork- Expo Plaza	7/5/2017	9/3/2017	3/2/2018	5/1/2018
TVM- Century	N/A	7/5/2015	1/1/2016	3/1/2016
TVM- Hindry	N/A	4/5/2016	10/2/2016	12/1/2016
TVM- La Brea	N/A	9/3/2016	3/2/2017	5/1/2017
TVM- West	N/A	7/4/2016	12/31/2016	3/1/2017
TVM-Slauson	N/A	11/3/2016	5/2/2017	7/1/2017
TVM- Vernon	N/A	2/3/2017	8/2/2017	10/1/2017
TVM- MLK	N/A	3/6/2017	9/2/2017	11/1/2017
TVM- Expo	N/A	5/6/2017	11/2/2017	1/1/2018
Trees and Landscaping- La Brea	8/6/2015	10/5/2015	4/2/2016	6/1/2016
Irrigation and Landscape Planting- MLK	2/4/2017	4/5/2017	10/2/2017	12/1/2017
Landscape- West Park and Ride	8/6/2015	10/5/2015	4/2/2016	6/1/2016
Traffic Signal Controllers- Market and Florence	9/3/2014	11/2/2014	5/1/2015	6/30/2015
Traffic Signal Controllers- Locust Bus Bay and Florence	9/10/2014	11/9/2014	5/8/2015	7/7/2015
Traffic Signal Controllers- 111th and Aviation	3/11/2015	5/10/2015	11/6/2015	1/5/2016
Traffic Signal Controllers- Imperial and Aviation	11/26/2015	1/25/2015	7/23/2016	9/21/2016
Traffic Signal Controllers- Florence and High	4/17/2015	6/16/2015	12/13/2015	2/11/2016
Traffic Signal Controllers- Centinela and Florence	5/8/2015	7/7/2015	1/3/2016	3/3/2016
Traffic Signal Controllers- West and 71st	5/8/2015	7/7/2015	1/3/2016	3/3/2016
Traffic Signal Controllers- Hindry and Florence	1/1/2016	3/1/2016	8/28/2016	10/27/2016
Traffic Signal Controllers- La Brea and Florence	2/6/2016	4/6/2016	10/3/2016	12/2/2016
Traffic Signal Controllers- 104th and Aviation	9/30/2015	11/29/2015	5/27/2016	7/26/2016
Traffic Signal Controllers- Oak and Florence	3/5/2015	5/4/2015	10/31/2015	12/30/2015
Traffic Signal Controllers- Cedar and Florence	3/5/2015	5/4/2015	10/31/2015	12/30/2015
Traffic Signal Controllers- Eucalyptus and Florence	3/5/2015	5/4/2015	10/31/2015	12/30/2015
Traffic Signal Controllers- Ivy Florence and Cable	3/5/2015	5/4/2015	10/31/2015	12/30/2015
Traffic Signal Controllers-Century and Aviation	3/5/2015	5/4/2015	10/31/2015	12/30/2015
Traffic Signal Controllers- La Cienega and Florence	8/1/2016	5/4/2015	10/31/2015	12/30/2015
SF6 Gas Insulated Switches * Metro top/bottom	3/13/2015	6/1/2015	8/2/2016	10/1/2016

## **CRITICAL PATH NARRATIVE**

**Critical Path:**

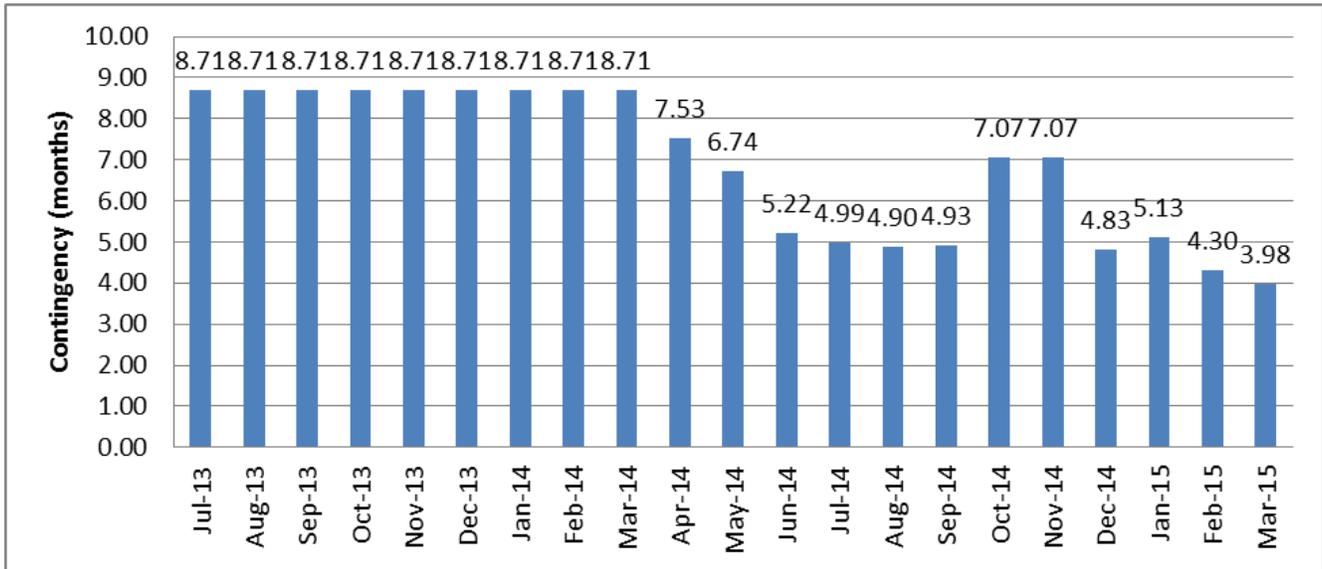
The longest path to project substantial completion begins with final design of the Design/Build Contract #C0988 Crenshaw/LAX Transit Corridor.

The most critical and longest path starts with the Expo Station support of excavation (SOE) and decking, excavation & invert construction; TBM mining operation; cross passage excavation, tunnel invert and walkway construction; track and system installation, while the MLK station SOE and decking, excavation & invert construction, OCS/Traction power and Train Control/Communication System installation follow closely as the secondary critical path.

Critical work concludes with phase I systems integration testing by the C0988 contractor, phase 2 systems integration testing by MTA and then pre-revenue operations.

The current critical path indicates Milestone 1 - Contract Substantial Completion date is Feb 19, 2019, which is 164 calendar days behind the original contract. A 35 calendar day contract extension for a concurrent delay was executed in Apr 2015, which reduces the days behind to 129 calendar days for the current contract.

**PROJECT SCHEDULE CONTINGENCY DRAWDOWN**



**PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS**

The project schedule contingency drawdown is based on the revenue service date of October 30, 2019. The change of LOP Contingency is due to design-builder reforecast of their substantial completion milestone.

**PROJECT COST STATUS**

**CRENSHAW/LAX TRANSIT CORRIDOR (LOP \$2,058 million)**  
**LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY**

COST REPORT BY ELEMENT  
PERIOD: APRIL 2015  
UNITS IN DOLLARS

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	471,335,000	-	452,500,001	-	442,904,895	7,609,256	58,101,341	-	450,354,375	(2,145,626)
20	STATIONS	153,906,000	-	316,050,000	22,192	301,464,099	9,372,403	72,544,222	-	315,050,000	(1,000,000)
30	SOUTHWESTERN YARD	66,673,000	-	66,673,000	-	6,549,923	-	-	-	66,673,000	-
40	SITWORK/SPECIAL CONDITIONS	235,576,000	-	348,565,999	267,716	344,312,037	5,686,331	198,927,485	-	361,476,912	12,910,913
50	SYSTEMS	125,132,000	-	169,311,000	-	150,342,667	4,000	191,055	-	169,436,000	125,000
10-50	CONSTRUCTION	1,052,622,000	-	1,353,100,000	289,908	1,245,573,621	22,671,990	329,764,103	-	1,362,990,287	9,890,287
60	RIGHT-OF-WAY	132,294,000	-	127,400,000	34,066	113,848,751	643,751	108,671,191	-	127,400,000	-
70	LRT VEHICLES	87,780,000	-	82,100,000	-	82,060,901	-	11,452,422	-	82,100,000	-
80	PROFESSIONAL SERVICES	273,147,000	-	295,900,000	662,032	208,834,501	8,889,157	172,768,112	-	311,806,096	15,906,096
90	UNALLOCATED CONTINGENCY	177,157,000	-	173,500,000	-	-	-	-	-	147,703,617	(25,796,383)
865512 & 860003 - SUBTOTAL		1,723,000,000	-	2,032,000,000	986,006	1,650,307,773	32,204,897	622,655,828	-	2,032,000,000	(0)
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	-	20,023,237	-	20,023,237	-	20,473,850	-
405512 & 465512 - SUBTOTAL		26,000,000	-	26,000,000	-	25,549,388	-	25,549,388	-	26,000,000	-
405512, 465512, 865512 & 860003 - TOTAL		1,749,000,000	-	2,058,000,000	986,006	1,675,857,161	32,204,897	648,205,216	-	2,058,000,000	-

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 02-MAY-2015.

SCC-30 budget of \$66,673,000 for the Southwestern Yard includes fundings for SCC-30, SCC-40, SCC-50, and SCC-80 Final Design scope of work.

**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 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 \$139.4 million of the \$285.2 million total project forecast cost for the Southwestern Yard. The \$139.4 million is spread among the SCC categories 30, 40, 60, 80 and 90 in the Cost Report by Element table above.

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

The amount of funding available for the Crenshaw/LAX Transit Project, excluding the Southwestern Yard \$139.4 million allocation and Environmental/Planning budget of \$26.0 million, is \$1,892.6 million.

### **Current Forecast:**

The total project current forecast is \$2,058 million. There is no current forecast variance with the current budget.

### **Commitments:**

The commitments are cumulative through May 2, 2015. The total commitments increased by \$1.0 million this period primarily due to the following:

- SCC-40 (Sitework and Special Conditions) has increased by \$0.3 million due to executed modifications associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor and third party scope of work with Cable Engineering Services. The total commitment of \$344.3 includes \$6.5 million for the Southwestern Yard.
- SCC-80 (Professional Services) has increased of \$0.7 due to executed modifications associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor, Engineering and Design Contract E0117, IPMO field office lease and utilities, non-federal community relations, legal services, miscellaneous specialty services and environmental consultant services. The total commitment of \$208.8 million includes \$6.3 million for the Southwestern Yard.

The \$1,675.9 million in commitments to date represents 81.4% of the current budget.

### **Expenditures:**

The expenditures are cumulative through May 2, 2015. The total expenditures increased by \$32.2 million this period due to the following:

- SCC-10 (Guideways) has increased by \$7.6 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$9.4 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-40 (Sitework and Special Conditions) has increased by \$5.7 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor and third party scope of work with Los Angeles Department of Water & Power.
- SCC-60 (Right-of-Way) has increased by \$0.6 million for costs associated with real estate appraisal and acquisition. The total expenditure of \$108.0 million includes \$53.3 million for the Southwestern Yard.
- SCC-80 (Professional Services) has increased by \$8.9 million for costs associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, Engineering and Design Contract E0117, Metro project administration, IPMO field office lease and utilities, non-federal community relations, construction management support services, legal services, permit fees, tunnel advisory panel services, third party coordination services by City of Los Angeles, project management support, community relations, labor compliance and environmental consultant services. The total expenditure of \$172.8 million includes \$3.1 million for the Southwestern Yard.

**PROJECT COST ANALYSIS (Continued)**

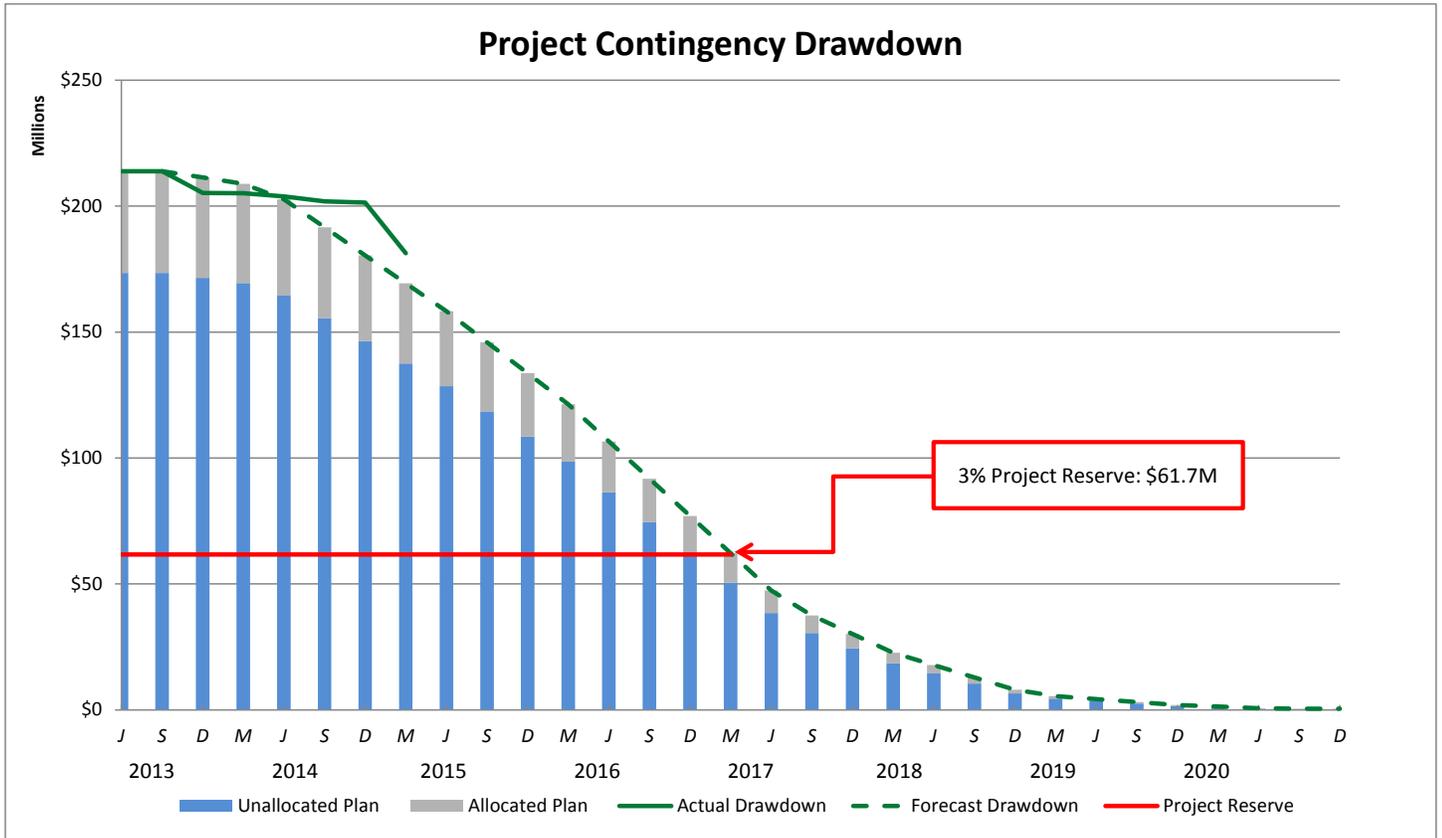
The \$648.2 million in expenditures to date represents 31.5% of the current budget.

**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 design-builder (Contract C0988).

C0988 NON-CRENSHAW/LAX TRANSIT PROJECT FUNDED SCOPE OF WORK										
DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST VARIANCE
		PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
210090 FARE GATE PROJECT	2,310,000	-	2,549,000	-	2,482,746	-	236,013	-	2,549,000	239,000
460303 AIRPORT METRO CONNECTOR	366,400	-	366,400	641,378	1,007,778	320,689	687,089	641,378	1,007,778	641,378
500013 C/LAX LAWA SCOPE OF WORK	1,575,362	-	1,575,362	-	531,125	-	228,387	-	1,575,362	-
<b>TOTAL</b>	<b>4,251,762</b>	<b>-</b>	<b>4,490,762</b>	<b>641,378</b>	<b>4,021,649</b>	<b>320,689</b>	<b>1,151,488</b>	<b>641,378</b>	<b>5,132,140</b>	<b>880,378</b>

## PROJECT CONTINGENCY DRAWDOWN



Through 02-May-2015

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

The project contingency drawdown curve is based on an October 2019 revenue service date.

**PROJECT CONTINGENCY DRAWDOWN ANALYSIS (Continued)**

There has been a cumulative drawdown of \$32,566,703 or 15.3% of the contingency included in the Current Budget through March 2015. The cumulative to date contingency drawdown is reported quarterly with the next drawdown to be reported through June 2015. The drawdown of allocated contingency for additional costs associated with the design-builder's (Contract C0988) executed modifications is tracked monthly but is reported quarterly in this report. The cumulative drawdown of contingency is shown in the table below:

<b>PROJECT CONTINGENCY DRAWDOWN (through 28-Mar-2015)</b>					
	Original Contingency	Drawdown previous quarter	Drawdown this quarter	Drawdown To-Date	Remaining Contingency
Unallocated Contingency	173,500,000	(8,655,000)	(17,141,383)	(25,796,383)	147,703,617
Allocated Contingency	40,366,792	(3,794,039)	(2,976,282)	(6,770,321)	33,596,471
<b>Total Contingency</b>	<b>213,866,792</b>	<b>(12,449,039)</b>	<b>(20,117,665)</b>	<b>(32,566,704)</b>	<b>181,300,088</b>

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

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

- DBE Goal – Design 23.82%
- Current DBE Commitment \$20,232,929 (22.34%)
- Current DBE Participation \$16,682,944 (21.05%)
- Twenty (20) Design subcontractors have been identified to-date
  
- DBE Goal – Construction 20%
- Current DBE Commitment \$236,116,671 (20%)
- Current DBE Participation \$36,151,337 (15.06%)
- Forty Seven (47) Construction subcontractors have been identified to-date.

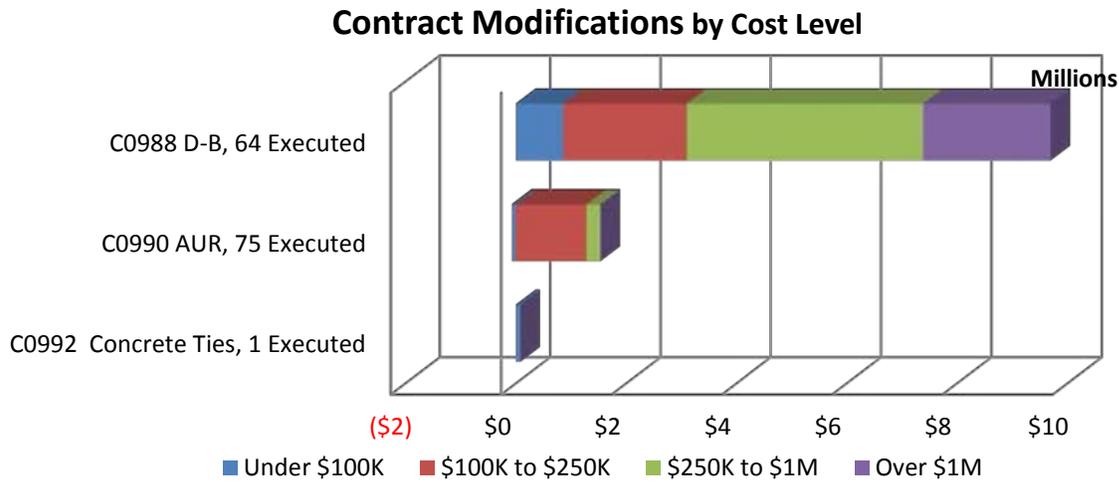
## **PROJECT LABOR AGREEMENTS (PLA) STATUS**

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

(Reporting Data as of March 14, 2015)

- Targeted Worker Goal – 40.00%
- Targeted Worker Current Participation - 58.99%
  
- Apprentice Worker Goal - 20.00%
- Apprentice Worker Current Participation - 17.92%
  
- Disadvantaged Worker Goal - 10.00%
- Disadvantaged Worker Current Participation 10.96%

## SUMMARY OF CONTRACT MODIFICATIONS



	C0988	C0990	C0992
	64 Executed	75 Executed	1 Executed
Under \$100K	\$ 864,105	\$ (70,251)	\$ 81,738
\$100k to \$250K	\$ 2,232,864	\$ 1,280,184	\$ -
\$250K to \$1M	\$ 4,286,894	\$ 251,864	\$ -
Over \$1M	\$ 2,310,000	\$ -	\$ -
<b>Total</b>	<b>\$ 9,693,863</b>	<b>\$ 1,461,797</b>	<b>\$ 81,738</b>
<b>% of Contract</b>	<b>0.76%</b>	<b>18.68%</b>	<b>3.78%</b>

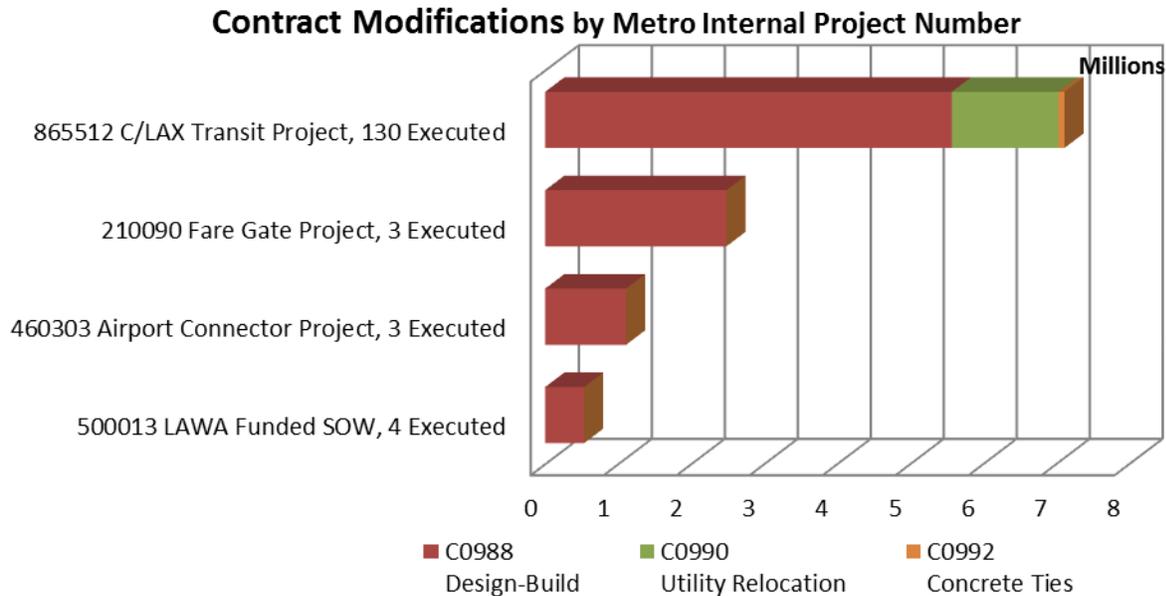
Percent of Contract equals the total Change value divided by the Contract Award amount

Sixty-four (64) changes with a total value of 9.69 million have been executed since execution of Contract C0988. There are additional six (6) changes with a total value of 0.15 million are pending the administrative approval process.

Seventy-five (75) changes with a total value of 1.46 million have been executed since execution of Contract C0990.

One change with a value of \$81,738 has also been executed since execution of Contract C0992.

**SUMMARY OF CONTRACT MODIFICATIONS**



	<b>865512</b>	<b>210090</b>	<b>460303</b>	<b>500013</b>
	<b>Executed</b>	<b>Executed</b>	<b>Executed</b>	<b>Executed</b>
<b>C0988</b>	54	3	3	4
<b>C0998 \$</b>	\$ 5,572,123	\$ 2,482,746	\$ 1,107,778	\$ 531,216
<b>C0990</b>	75	0	0	0
<b>C0990 \$</b>	\$ 1,461,797	\$ -	\$ -	\$ -
<b>C0992</b>	1	0	0	0
<b>C0992 \$</b>	\$ 81,738	\$ -	\$ -	\$ -
<b>Total</b>	130	3	3	4
<b>Total \$</b>	\$ 7,115,658	\$ 2,482,746	\$ 1,107,778	\$ 531,216

One hundred and thirty (130) changes with a total value of \$7.12 million have been executed for Project 865512 Crenshaw/LAX Transit Project. There are additional six (6) changes with a total value of 0.15 million pending the administrative approval process.

Three (3) changes with a value of 2.48 million have been executed for Project 210090 Fare Gate Project.

Three (3) changes with a value of 1.10 million have been executed for Project 460303 Airport Connector Project.

Four (4) changes with a total value of 0.53 million have been executed for Project 500013 Crenshaw/LAX LAWA Statement of Work.

**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	30.0	54.0	100%	30.0	56%	30.0	56%
FEDERAL - SECTION 5309 BUS CAPT	8.6	8.6	8.6	8.6	100%	8.0	93%	8.0	93%
FEDERAL - REGIONAL STP	20.0	120.9	73.7	73.7	61%	38.4	32%	38.4	32%
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%
FEDERAL REGIONAL IMPROV PROG	34.3	34.4	0.0	34.4	100%	0.0	0%	0.0	0%
STATE REGIONAL IMPROVEMENT PROG	2.2	2.2	2.2	2.2	100%	2.2	100%	2.2	100%
STATE PPM	0.178	0.178	0.178	0.178	100%	0.178	100%	0.178	100%
STATE PROP 1B PTMISEA	201.2	128.6	128.6	128.6	100%	128.6	100%	128.6	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%	0.0	0%	0.0	0%
MEASURE R	661.1	661.1	377.5	661.1	100%	367.8	56%	324.0	49%
OTHER FUNDS*	52.4	187.5	0.0	0.0	0%	0.0	0%	0.0	0%
PROP C 25% HIGHWAY	148.9	189.5	3.6	52.2	28%	3.6	2%	3.6	2%
PROP C 40% DISCRETIONARY	0.0	10.2	0.0	0.0	0%	0.0	0%	0.0	0%
PROP A 35% RAIL CAPITAL	4.8	50.4	4.9	50.4	0%	4.9	0%	4.9	10%
<b>TOTAL</b>	<b>1,749.0</b>	<b>2,058.0</b>	<b>1,239.7</b>	<b>1,675.9</b>	<b>81.4%</b>	<b>648.2</b>	<b>31.5%</b>	<b>604.4</b>	<b>29.4%</b>

NOTE: Expenditures are cumulative through April 2015.

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

Total Funds Anticipated based on Board approved June 2013 Revised Funding

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

## **STATUS OF FUNDS ANTICIPATED**

**FEDERAL – CMAQ:** Metro submitted to FTA in October 2013 a draft grant application of \$30M for review. FTA has reviewed the application and allowed Metro to formally submit the grant application in July 2014. Grant was approved in December 2014. Funds are available for drawdown. Metro submitted to FTA in January 2015 a grant application of \$24M for approval. *Grant approval is on hold until the California Public Employees' Pension Reform Act (PEPRA) issue with the department of labor is resolved.*

**FEDERAL – RSTP:** FTA approved a grant of \$45M in May 2014 to fund the project rail cars. Funds are available for drawdown. Metro submitted to FTA in October 2013 a draft grant application of \$28.2M for review. FTA has reviewed the application and allowed Metro to formally submit the grant application in July 2014. Grant was approved in December 2014. Funds are available for drawdown.

**STATE PROP 1B – PTMISEA:** An allocation request for \$12M was approved in May 2012 and funds are available for drawdown. In March 2013, allocation requests of \$11.4M and \$98.9M were submitted to Caltrans. The \$11.4M allocation request was approved in June 2013. Funds are available for drawdown. The \$98.9M allocation request was approved on February 6, 2014. Funds are available for drawdown. A new allocation request of \$6.170M was submitted in June 2014 to Caltrans for approval. The allocation request was approved on February 4, 2015. Funds are available for drawdown.

**STATE PROP 1B LP:** An allocation request of \$49.5M was submitted in April 2013 and approved in July 2013. The allocation request was executed by Caltrans in December 2013. Funds are available for drawdown.

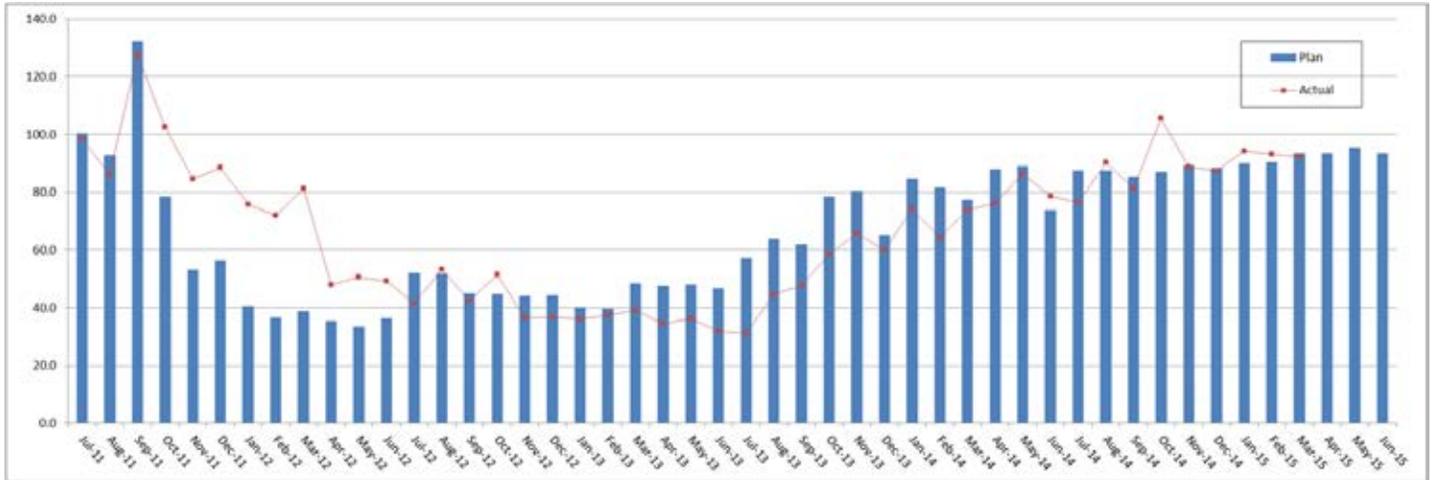
**MEASURE R – TIFIA LOAN (Transportation Infrastructure Finance & Innovation Act):** Application for a loan of \$545.9 M was submitted to the US Department of Transportation (DOT) in November 2011. Loan agreement was executed on September 12, 2012. The first disbursement of \$337.4M is planned for June 1, 2015.

**MEASURE R:** \$377.4M has been allocated to the project through FY2015. Funds are available for drawdown.

**PROP C 25% HIGHWAY:** \$3.8M has been allocated to the project based on the June 2014 TIFIA Financial Model Funding Plan. Funds are available for drawdown.

**PROP A 35% RAIL CAPITAL:** \$4.8M has been allocated to the project based on the June 2014 TIFIA Financial Model.

**STAFFING STATUS**  
Total Project Staffing – FTES



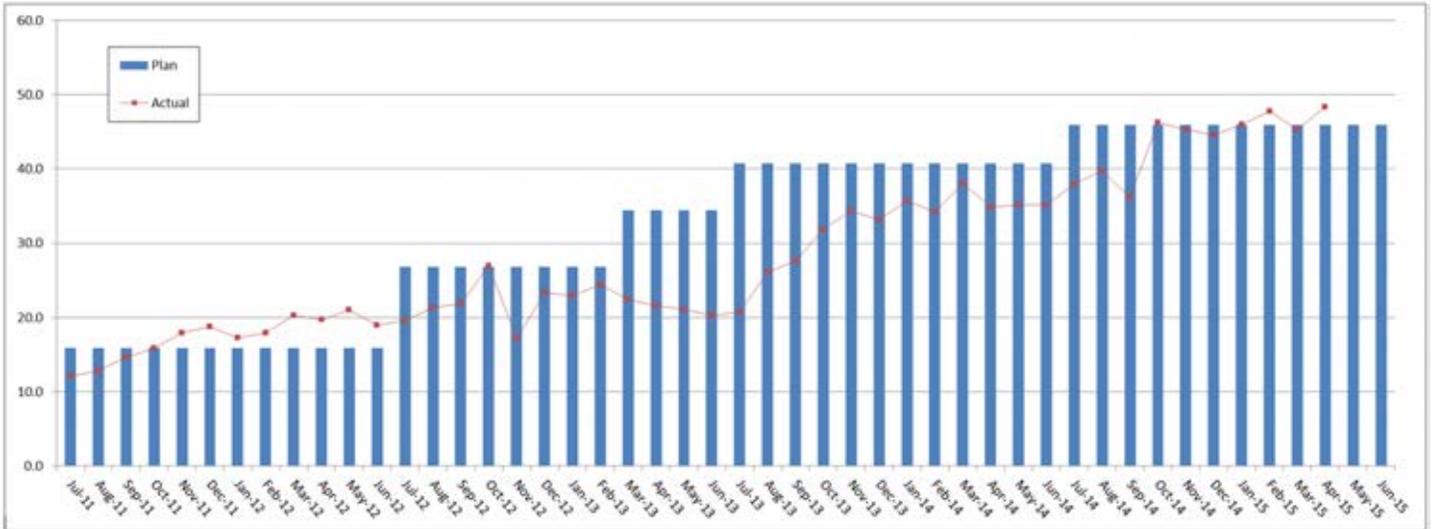
**Notes:**

1. FTE = Full Time Equivalent
2. Staffing levels are for project 865512 only.
3. Actual staffing levels are cumulative through April 2015.

**TOTAL PROJECT STAFFING**

For April 2015, there were a total of 48.28 FTE's for MTA's Project Administration staff and 45.72 FTE's for consulting staff. The total project staffing was 94 FTE's for April 2015. The overall FY15 Total Project Staffing plan averages 90.1 FTE's per month.

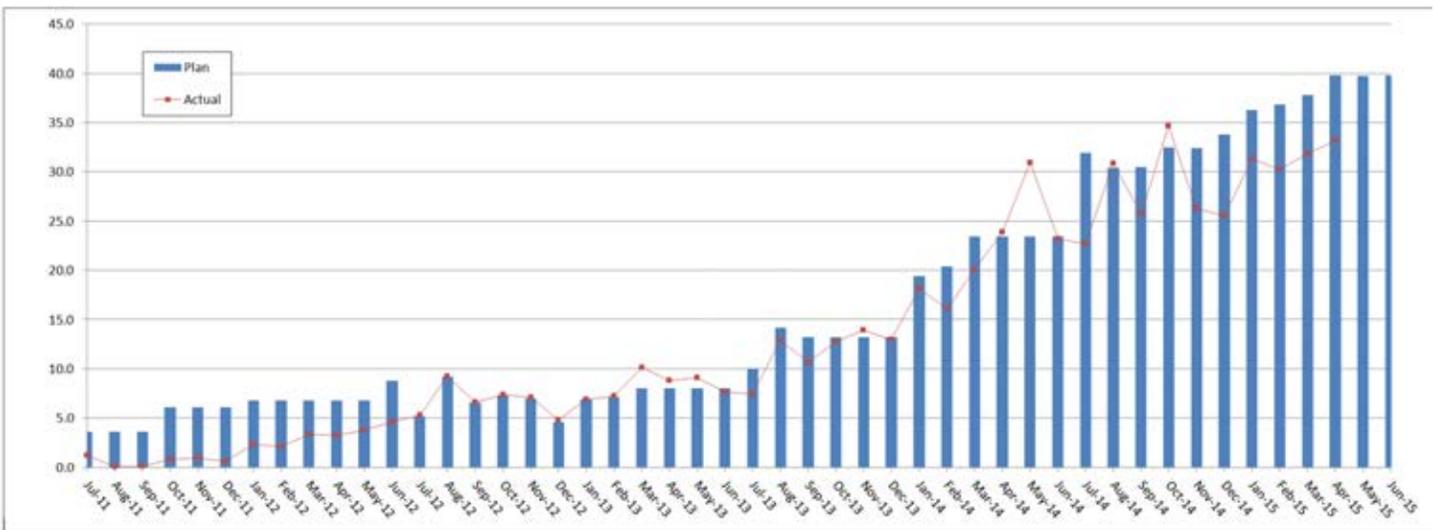
**STAFFING STATUS (Continued)  
METRO STAFFING – FTES**



**Notes:**

1. FTE = Full Time Equivalent
2. Staffing levels are for project 865512 only.
3. Actual staffing levels are cumulative through April 2015.

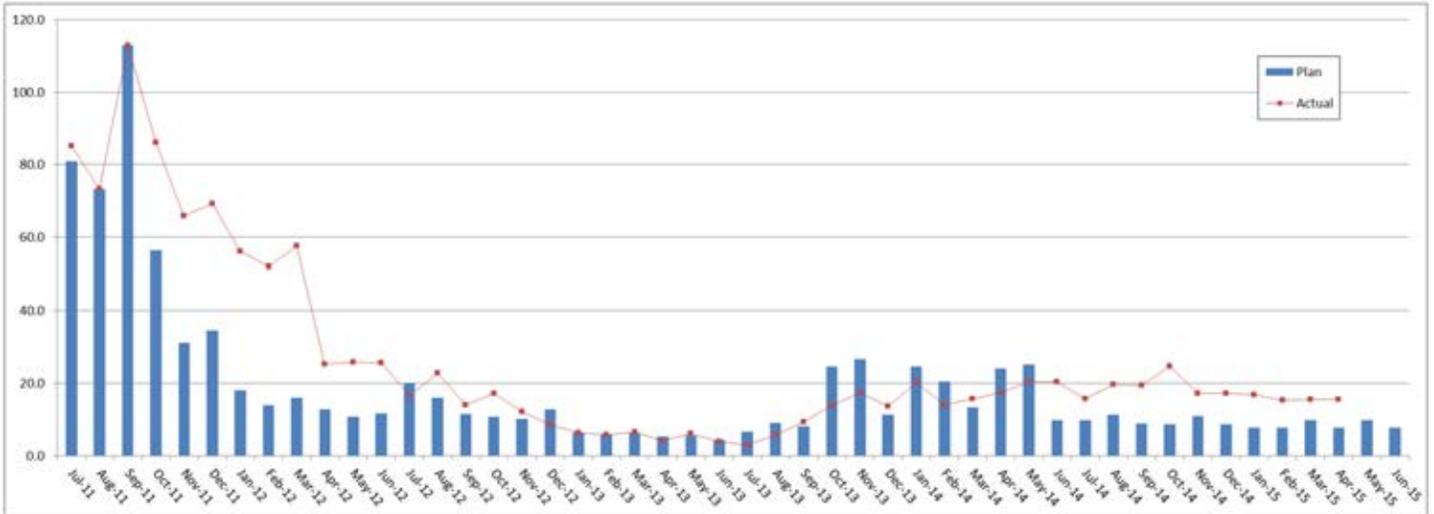
**CONSTRUCTION MANAGEMENT  
SUPPORT SERVICES CONSULTANT – FTES**



**Notes:**

1. FTE = Full Time Equivalent
2. Staffing levels are for project 865512 only.
3. Actual staffing levels are cumulative through April 2015.

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



**Notes:**

1. FTE = Full Time Equivalent
2. Staffing levels are for project 865512 only.
3. Actual staffing levels are cumulative through April 2015.

**REAL ESTATE STATUS**

Contract No.	Number of Parcels	Certified	Decertified	Appraisals Complete	Offers Made	Agreements Signed	Condemnations Filed	Relocations Complete	Parcels Available to WSCC
<b>C0988 C/LAX Transit Corridor (D-B):</b>									
<i>Crenshaw Subdivision</i>									
Full Takes	12	12		12	12	12	0	12	12
Part Takes (PT or SE)	10	9	1	9	9	3	5		3
TCE	10	10		10	10	4	5		5
<b>Subtotal Parcels</b>	<b>32</b>	<b>31</b>	<b>1</b>	<b>31</b>	<b>31</b>	<b>19</b>	<b>10</b>	<b>12</b>	<b>20</b>
<i>Harbor Subdivision</i>									
Full Takes	15	14		15	15	15	2	13	15
Part Takes (PT or SE)	19	18	1	18	17	7	7		6
TCE	3	2	1	2	2		2		1
<b>Subtotal Parcels</b>	<b>36</b>	<b>34</b>	<b>2</b>	<b>34</b>	<b>33</b>	<b>22</b>	<b>11</b>	<b>13</b>	<b>22</b>
<b>Total CR/HS Parcels:</b>	<b>69</b>	<b>65</b>	<b>3</b>	<b>65</b>	<b>64</b>	<b>41</b>	<b>21</b>	<b>25</b>	<b>42</b>
<i>Southwestern Yard</i>									
Full Takes	8	8		8	8	6	2	4	8
Part Takes	0								
TCE	0								
<b>Subtotal Parcels:</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>8</b>		<b>2</b>	<b>4</b>	<b>8</b>
<b>Total SW Parcels:</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>4</b>	<b>8</b>
<i>C0990 C/LAX Advance Utility Relocations:</i>									
Total Parcels:	0								
<b>Total Project Parcels</b>	<b>77</b>	<b>*73</b>	<b>3</b>	<b>74</b>	<b>74</b>	<b>48</b>	<b>23</b>	<b>29</b>	<b>50</b>

- **74 acquisitions: \*73 planned for in the environmental report +1 full take for the Harbor Subdivision that was not certified (HS-2706).**
- **50 parcels acquired: 35 full takes (including HS-2706) and 15 part takes/Temporary Construction Easement (TCE) provided to WSCC.**
- *HS-1904-1 and 1907-1 (TCEs for the underground pedestrian easement) have been obtained and turned over to the contractor. The remaining TCE and part takes in these two parcels are anticipated to be turned over in May pending City of Inglewood acceptance of street easement.*
- *Parcels HS-2001, 2001-1 are no longer required by the project and are in the process of being de-certified.*
- *Order of Possession was granted 5/1/15 for parcels CR-3201 and CR-3206 and will become effective after 35 days. At that time, the contractor will be notified of the OIP and advised to provide 30 days' notice to Metro prior to commencement of work.*
- *Order of Possession will be granted 6/1/15 for parcel CR-3704. At that time, the contractor will be notified of the OIP and advised to provide 30 days' notice to Metro prior to commencement of work.*
- **1 Parcel in Escrow (HS-1602).**

**Reported as of April 30, 2015**

## **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, HNTB, and WSCC Lead Quality personnel.
- *Started an independent review of the revision 3 updates to the WSCC Project Quality Program Manual and HNTB Design Quality Manual.*
- *WSCC Quality Assurance started four surveillances including review of NCR-type processes, HOBUS Pipe installation, review of Certified Welding Inspector (CWI) Reports and WSCC Procurement Control practices.*
- *Continue to use Testing Verifications by Independent Testing Laboratories for pile welding, jet grout sampling, rebar coupler testing, concrete testing, crushed miscellaneous base (CMB), welding procedure reviews and welder certification verification.*
- *WSCC issued opened one Nonconformance Report (NCR) for modified an auger dimension.*
- *MTA Quality issued three Nonconformance Reports (NCR's) for utility rod hanger issues, duct bank support issues and Crenshaw excavation procedure issues.*
- *All ConAd Notice of Noncompliance (NNC) Reports have been closed/resolved.*
- *No activities on the Concrete Rail Ties.*
- *Rail welding will start in late May in two locations.*
- *Seven painted Bumping Posts were completed in Indiana with delivery to occur on May 11, 2015.*

## **ENVIRONMENTAL STATUS**

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

- Reviewed and commented on the following Contractor Submittals:
  - Weekly Noise Monitoring Data for Expo Station, MLK Station, Vernon Station, La Brea Station and Century Station
  - *Noise and Vibration Control Plan Update for Exposition Site*
  - *Noise and Vibration Control Plan for Underground No. 3*
  - Green Construction Plan Monthly Reports
  - Sustainability Plan Monthly Reports
  - Weekly Storm Water Pollution Prevent Plan (SWPPP) inspection reports
  - Weekly Fugitive Dust Inspection Reports
  - Various Construction Work Plans
- Continue to document compliance with the Project Mitigation Monitoring and Reporting Plan (MMRP). *Compliance for April Mitigation Measures will be documented in the Quarterly Mitigation Monitoring and Reporting Report (April – June 2015).*
- *Submitted Quarterly Mitigation Monitoring and Reporting Report (January – March 2015) to FTA.*
- Completed hazardous waste abatement (lead-based paint and asbestos) at parcels SW-0103 Dollar Rental Car.
- *Coordinated hazardous waste abatement of lead-based paint and at parcels SW-0101 Avis Rental Car and CR-3304 Hi-Tech Cleaners.*
- Reviewed soil sampling plan to determine the extent of soil contamination associated with the Underground Storage Tanks (USTs) at Parcel CR-3701.
- *Coordinated the removal of two Underground Storage Tanks (USTs) with the County of Los Angeles for tanks in the city of Inglewood.*
- Coordinated with property owner's environmental consultant for parcel SW-0104 for installation of soil remediation system.
- Coordinated Archaeological, Paleontological and Native American Monitoring. State Historic Preservation Officer (SHPO) has approved the Cultural Resources Monitoring and Mitigation Plan (CRMMP) and Paleontological Monitoring and Mitigation Plan (PMMP). *Conducted additional Contractor Cultural Awareness Training.*
- *Coordinated Tree Removal Permit applications for the City of Los Angeles for Phase II on Crenshaw Boulevard sidewalk trees from 48<sup>th</sup> Street to 67<sup>th</sup> Street. A total of 124 sidewalk trees will be removed.*
- Attended Contractor Weekly Progress meetings, Environmental Task-Force Meetings and various over-the-shoulder submittal meetings with Contractor.

## **CONSTRUCTION RELATIONS STATUS**

- *No status provided for the current reporting period.*

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

- Responded to RFIs and submittal drawings.
- Continued to refine project artwork opportunities.
- Facilitated artist procurement process.
- Participated in Systemwide Design integration reviews and presentations.
- Continued to support visual mitigation efforts.

### **SIGNAGE**

- Responded to RFIs and submittals.

## **SAFETY & SECURITY STATUS**

- Participated in weekly progress meetings with WSCC's Management and Construction Management Team to discuss safety/security related issues and construction schedules.
- Monitored construction activities on a daily basis including nights and weekends to ensure compliance with contract specifications.
- Conducted bi-weekly Safety Sweeps to enhance overall safety/security. Several hazards were observed and corrected immediately.
- *Issued Stop Work Notice to WSCC on April 4, 2015 for inadequate third shift safety coverage per Contract Specifications Worksite Safety Requirements C0988 section (01 35 23) (3.01) Safety Personnel. WSCC complied and returned to work on April 7, 2015.*
- *Issued Stop Work Notice to WSCC on April 9, 2015 due to several incidents including utility strikes, improper rigging, gasoline usage underground and workers exposed to fall hazards.*
- *Metro Executive Management, Metro Board Representatives and LA City met with WSCC Executive management on April 10, 2015 to discuss a path forward. WSCC committed to reset their Safety program to address their safety staff shortfall and to implement discipline and zero tolerance procedures.*
- *Reviewed WSCC's safety submittals and construction work plans to ensure compliance with their safety staffing, Emergency Action Utility Plans and the Metro Green Line counter weight removal at the Y intersection.*
- *Met with WSCC's Management Team to review Access/Egress proposal for the Underground 9 Expo/Crenshaw, Crenshaw/MLK and Crenshaw/Vernon Stations and tunnels.*
- *Walsh/Shea reported 79,859 work hours and one recordable incident for the month of April 2015. Total Project-to-Date work hours are 1,226,778 and nine recordable incidents. The Project Incident Rate is 1.0. The Bureau of Labor Statistics (BLS) average recordable rate per 200,000 work-hours is 3.8.*

**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	8/15	N/A	Executed Letter of Agreement April 2012. Metro working on outstanding issues.
Los Angeles Department of Water and Power	Amendment to Memorandum of Understanding	N/A	N/A	Metro and LADWP will work under 2002 Utility Cooperative Agreement which remains in effect.
Los Angeles County Public Works	Letter of Agreement	4/11	3/12	Executed
Caltrans	Amendment	8/11	3/12	Executed
Private Utilities	LOA, MOU or UCA	5/11 to 5/13	N/A	Metro is working with affected third party utilities under work orders unless license agreements dictate relocation by utility company. No additional agreements required.

**ADVANCED UTILITY RELOCATION STATUS**

- Design completed by DWP-Water for advance relocation of water lines along Crenshaw Boulevard. Start of construction was rescheduled due to impact of Buy America requirements. Relocations of water lines status:
  - *Crenshaw @ 63<sup>rd</sup> St. relocation in progress, is complete.*
  - *Crenshaw @ 67<sup>th</sup> St. relocation in progress, is complete.*
  - *Crenshaw/Vernon Ave, is complete.*
  - *Crenshaw @ Hyde Park St. commenced in January 2015 and is scheduled for completion by May 2015.*
- SCE Power – new services and relocations scheduled for completion. The work includes the relocation of underground power line to accommodate new pedestrian undercrossing at Faithful Central Bible Church property. Design is in progress.
- *Tesoro Oil – design in progress for 8” gas line. Construction should commence in June 2015 and complete in November 2015.*

## Crenshaw/LAX Transit Project Peak Hour & Nighttime Construction Variances for the City of LA

- Metro has permit variances for nighttime and early morning construction for Segments A thru E.
- All permits have to be renewed every six months from date of issuance by the Los Angeles Police Commission.



**CPUC CROSSING SUMMARY**

- *The CPUC has approved all packages.*

Application	Location	Type	City
A1211018	Eucalyptus Avenue	Grade Crossing	Inglewood
A1211018	Centinela Avenue	Grade Crossing	Inglewood
A1211018	Pedestrian Crossing	Grade Separated (Underpass)	Inglewood
A1212030	Oak Street	Grade Crossing	Inglewood
A1212030	Cedar Avenue	Grade Crossing	Inglewood
A1212030	Ivy Avenue	Grade Crossing	Inglewood
A1212030	High Street	Grade Crossing	Inglewood
A1212029	Arbor Vitae Street	Grade Crossing	Inglewood
A1212029	Hindry Avenue	Grade Crossing	Inglewood
A1212029	Pedestrian Crossing at Florence/West station	Grade Crossing	Inglewood
A1212029	West Boulevard	Grade Crossing	Los Angeles/Inglewood
A1212029	Brynhurst Avenue	Grade Crossing	Los Angeles
A1301012	West 59th Street	Grade Crossing	Los Angeles
A1301012	Slauson Avenue	Grade Crossing	Los Angeles
A1301012	West 57th Street	Grade Crossing	Los Angeles
A1301012	West 54th Street	Grade Crossing	Los Angeles
A1301012	West 52nd Street	Grade Crossing	Los Angeles
A1301012	West 50th Street	Grade Crossing	Los Angeles
A1301012	West 48th Street	Grade Crossing	Los Angeles
A1302025	Hornet Way	Grade Separation	El Segundo
A1302025	Aviation Boulevard	Grade Separation	Los Angeles
A1302025	I-105 Freeway	Grade Separation	Los Angeles
A1302025	Imperial Highway	Grade Separation	Los Angeles
A1302025	111th Street	Grade Separation	Los Angeles
A1302025	104th Street	Grade Separation	Los Angeles
A1302025	Century Boulevard	Grade Separation	Los Angeles
A1302025	Manchester Avenue	Grade Separation	Inglewood
A1302025	La Cienega Boulevard	Grade Separation	Inglewood
A1302025	I-405 Freeway	Grade Separation	Inglewood
A1302025	Hyde Park Boulevard	Grade Separation	Inglewood
A1302025	La Brea Avenue	Grade Separation	Inglewood
A1302025	Pedestrian Crossing at La Brea-Florence Station (East)	Grade Crossing	Inglewood
A1302025	Pedestrian Crossing at La Brea-Florence Station (West)	Grade Crossing	Inglewood
	= Highlighted grade crossing/grade separations have been approved.		

## **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.

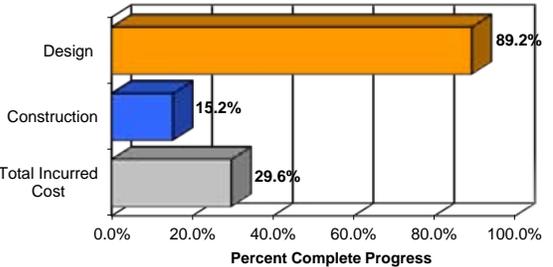
### **CHRONOLOGY OF EVENTS (Continued)**

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.

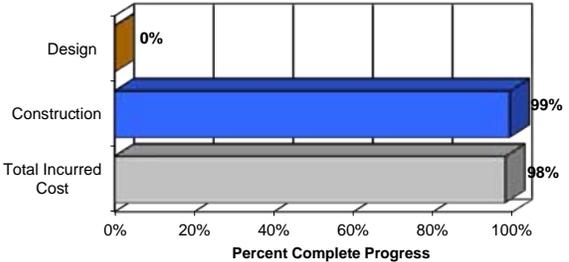
### **CHRONOLOGY OF EVENTS (Continued)**

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.

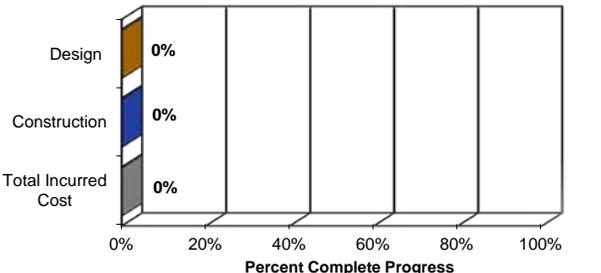
**CONTRACT C0988 STATUS**  
*Crenshaw/LAX Transit Corridor*

<p><b>PE Design Contractor: Hatch Mott MacDonald (HMM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: - Walsh Shea Corridor Constructors (WSCC)</b></p>	<p><b>Contract No.: C0988</b></p>  <p><b>Status as of May 1, 2015</b></p>																																			
<p><b>Progress/Work Completed:</b> <b>Design</b></p> <ul style="list-style-type: none"> <li>- Submitted Segment A Final Design on UG1 with the raised walkway. Continued revised Segment A Final Design on Local Streets.</li> <li>- Submitted Segment B Final Design on Guideway revision and Local Streets Harbor North. Continued Segment B Approved for Construction Design on Aerial Guideway Structures.</li> <li>- Submitted Segment C Final Design on Guideway and UG Waterproofing. Continued Segment C Approved for Construction on UG Station Invert Slabs.</li> <li>- Continued Final Design - Traction Power.</li> <li>- Continued Final Design - Communication Systems.</li> <li>- Continued Final Design - OCS.</li> <li>- Submitted Readiness for Construction on ATC Specifications.</li> </ul> <p><b>Construction</b></p> <ul style="list-style-type: none"> <li>- Continued potholing in the Vernon, MLK, La Brea, UG #1 &amp; UG #3.</li> <li>- Continued geotechnical monitoring at Vernon, MLK, Expo &amp; UG#1.</li> <li>- Continued with SWPPP Implementation – Segments A, B &amp; C.</li> <li>- Continued installation of soldier piles at Vernon Station.</li> <li>- Continued utility protection work at MLK and Vernon Station.</li> <li>- Continued utility relocation/ support work at Expo Station Area.</li> <li>- Completed the HOBAS bypass at Expo Station Area.</li> <li>- Continued soil excavation at Expo &amp; MLK Station.</li> <li>- Commenced subgrade of Segment B-1 Guideway.</li> <li>- Commenced Pile driving for the La Brea Bridge.</li> <li>- Continued column work at Century Blvd. Bridge.</li> <li>- Completed Pile driving for the Century Bridge Abutments.</li> <li>- Continued installation of SOE Piles at UG #1.</li> <li>- Continued CIDH work at Green Line Bridge.</li> </ul>	<p><b>Areas of Concern:</b></p> <ul style="list-style-type: none"> <li>- BOE approval process for SOE design</li> <li>- Possible cobbles and boulders found during excavation at Expo and MLK station.</li> <li>- Relocation of 24' LADWP water line may impact the decking operation at Vernon Station</li> <li>- Contaminated materials (weathered gasoline with high levels of TPH) discovered at Expo site.</li> <li>- Contractor's schedule does not accurately forecast its work efforts.</li> </ul>																																			
<p><b>Schedule Assessment:</b> Metro's assessment of the contractor's schedule update is that they are behind on meeting interim design milestones.</p> <p>Contractor's Apr 2015 schedule update indicates Milestone 1 - Contract Substantial Completion is 164 calendar days behind the original contract. A 35 calendar day contract extension for a concurrent delay was executed which reduces the days behind to 129 calendar days for the current contract.</p>	<p><b>Cost Assessment:</b></p> <p>The current construction contract cost forecast is \$1,282.17 million and is within the Board authorized budget.</p> <p>The Contractor submitted their 20th payment application in the approved amount of \$ 12,784,991.17</p> <p>*Please note that not all executed modifications may have been included in the Contractor current payment application.</p>																																			
<p><b>Schedule Summary:</b></p> <table border="1"> <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>1988</td> </tr> <tr> <td>5. Elapsed Time from NTP:</td> <td>598</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:	1988	5. Elapsed Time from NTP:	598	<p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <table border="1"> <tr> <td>1. Award Value:</td> <td>1,272.63</td> </tr> <tr> <td>2. Executed Modifications:</td> <td>9.54</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td></td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td>1,282.17</td> </tr> <tr> <td>5. Incurred Cost:</td> <td>380.09</td> </tr> </table>	1. Award Value:	1,272.63	2. Executed Modifications:	9.54	3. Approved Change Orders:		4. Current Contract Value (1 + 2 + 3):	1,282.17	5. Incurred Cost:	380.09															
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:	1988																																			
5. Elapsed Time from NTP:	598																																			
1. Award Value:	1,272.63																																			
2. Executed Modifications:	9.54																																			
3. Approved Change Orders:																																				
4. Current Contract Value (1 + 2 + 3):	1,282.17																																			
5. Incurred Cost:	380.09																																			
<table border="1"> <thead> <tr> <th>Milestones</th> <th>Original Contract</th> <th>Current Contract</th> <th>Forecast</th> <th>Calendar Day Variance</th> </tr> </thead> <tbody> <tr> <td>Milestone 1 - Contract Substantial Completion</td> <td>09/08/18</td> <td>10/13/18</td> <td>02/19/19</td> <td>-129</td> </tr> <tr> <td>Milestone 2 - UFS Completion</td> <td>03/09/18</td> <td>04/13/18</td> <td>08/13/18</td> <td>-122</td> </tr> <tr> <td>Milestone 3 - Commence SIT Phase I</td> <td>06/09/18</td> <td>07/14/18</td> <td>11/22/18</td> <td>-131</td> </tr> <tr> <td>Milestone 4 - Const./Turnover Parcels SW-0101, 0102, 0103</td> <td>12/04/15</td> <td>12/04/15</td> <td>11/03/15</td> <td>31</td> </tr> <tr> <td>Milestone 5 - Const./Turnover Parcels SW-0002, 0003, 0004, 0104</td> <td>06/05/17</td> <td>06/05/17</td> <td>04/10/17</td> <td>56</td> </tr> <tr> <td>Milestone 6 - Const./Turnover Parcels SW-0001</td> <td>08/01/17</td> <td>08/01/17</td> <td>06/28/17</td> <td>34</td> </tr> </tbody> </table>	Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	Milestone 1 - Contract Substantial Completion	09/08/18	10/13/18	02/19/19	-129	Milestone 2 - UFS Completion	03/09/18	04/13/18	08/13/18	-122	Milestone 3 - Commence SIT Phase I	06/09/18	07/14/18	11/22/18	-131	Milestone 4 - Const./Turnover Parcels SW-0101, 0102, 0103	12/04/15	12/04/15	11/03/15	31	Milestone 5 - Const./Turnover Parcels SW-0002, 0003, 0004, 0104	06/05/17	06/05/17	04/10/17	56	Milestone 6 - Const./Turnover Parcels SW-0001	08/01/17	08/01/17	06/28/17	34	<p><b>PERCENT COMPLETE</b> <i>from 9/10/13 to 05/01/15</i></p>  <p>Construction physical percent complete excludes mobilization and general requirements</p>
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																																
Milestone 1 - Contract Substantial Completion	09/08/18	10/13/18	02/19/19	-129																																
Milestone 2 - UFS Completion	03/09/18	04/13/18	08/13/18	-122																																
Milestone 3 - Commence SIT Phase I	06/09/18	07/14/18	11/22/18	-131																																
Milestone 4 - Const./Turnover Parcels SW-0101, 0102, 0103	12/04/15	12/04/15	11/03/15	31																																
Milestone 5 - Const./Turnover Parcels SW-0002, 0003, 0004, 0104	06/05/17	06/05/17	04/10/17	56																																
Milestone 6 - Const./Turnover Parcels SW-0001	08/01/17	08/01/17	06/28/17	34																																

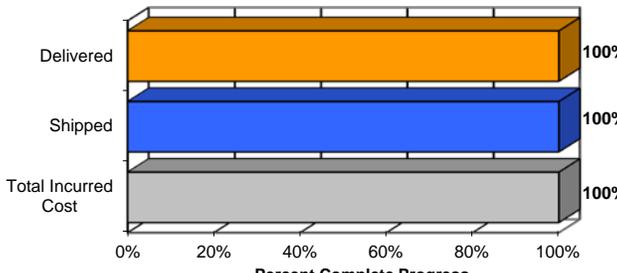
**CONTRACT C0990 STATUS**  
*Crenshaw/LAX Advanced Utility Relocations*

<p><b>PE Design Contractor: Hatch Mott MacDonald (HMM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: - Metro Builders and Engineers Group LTD</b></p>	<p><b>Contract No.: C0990</b> <b>Status as of May 1, 2015</b></p> 																																			
<p><b>Progress/Work Completed:</b> - The construction was substantially completed on Aug 21, 2014</p>	<p><b>Areas of Concern:</b></p>																																			
<p><b>Schedule Assessment:</b> Metro has agreed to grant a total of 124 calendar day time extension as a result of lost production due to sandy soil conditions and revised installation methodology for sewer line work at 59th &amp; Crenshaw, and traffic control and work hour restriction to 67th &amp; Crenshaw. .  Metro granted substantial completion to Metro Builders, the Advanced Utility Contractor on August 21, 2014, which is 276 calendar days behind.</p>	<p><b>Cost Assessment:</b> The current construction contract cost is \$9.29 million and within the Board authorized budget.  The unpaid amount is the scope deletion from the base contract and remaining balance of provisional sums .</p>																																			
<p><b>Schedule Summary:</b></p> <table border="0"> <tr> <td>1. Date of Award:</td> <td align="right">05/30/12</td> </tr> <tr> <td>2. Notice to Proceed:</td> <td align="right">07/17/12</td> </tr> <tr> <td>3. Original Substantial Completion Duration:</td> <td align="right">365</td> </tr> <tr> <td>4. Current Substantial Completion Duration:</td> <td align="right">468</td> </tr> <tr> <td>5. Elapsed Time from NTP:</td> <td align="right">753</td> </tr> </table>	1. Date of Award:	05/30/12	2. Notice to Proceed:	07/17/12	3. Original Substantial Completion Duration:	365	4. Current Substantial Completion Duration:	468	5. Elapsed Time from NTP:	753	<p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <table border="0"> <tr> <td>1. Award Value:</td> <td align="right">7.83</td> </tr> <tr> <td>2. Executed Modifications:</td> <td align="right">0.97</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td align="right">0.49</td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td align="right">9.29</td> </tr> <tr> <td>5. Incurred Cost:</td> <td align="right">9.12</td> </tr> </table>	1. Award Value:	7.83	2. Executed Modifications:	0.97	3. Approved Change Orders:	0.49	4. Current Contract Value (1 + 2 + 3):	9.29	5. Incurred Cost:	9.12															
1. Date of Award:	05/30/12																																			
2. Notice to Proceed:	07/17/12																																			
3. Original Substantial Completion Duration:	365																																			
4. Current Substantial Completion Duration:	468																																			
5. Elapsed Time from NTP:	753																																			
1. Award Value:	7.83																																			
2. Executed Modifications:	0.97																																			
3. Approved Change Orders:	0.49																																			
4. Current Contract Value (1 + 2 + 3):	9.29																																			
5. Incurred Cost:	9.12																																			
<table border="1"> <thead> <tr> <th>Milestones</th> <th>Original Contract</th> <th>Current Contract</th> <th>Forecast</th> <th>Calendar Day Variance</th> </tr> </thead> <tbody> <tr> <td>Milestone 1 - Contract Substantial Completion</td> <td align="center">07/17/13</td> <td align="center">11/18/13</td> <td align="center">08/21/14</td> <td align="center">-276</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	Milestone 1 - Contract Substantial Completion	07/17/13	11/18/13	08/21/14	-276																										<p align="center"><b>PERCENT COMPLETE</b> <i>from 7/17/12 to 8/21/14</i></p>  <p align="center"><i>Construction physical percent complete excludes mobilization and general requirements</i></p>
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																																
Milestone 1 - Contract Substantial Completion	07/17/13	11/18/13	08/21/14	-276																																

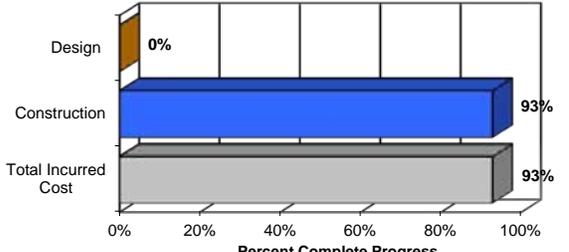
**CONTRACT C0991 STATUS**  
*Southwestern Yard*

<p><b>PE Design Contractor: Hatch Mott MacDonald (HMM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: - TBD</b></p>	<p><b>Contract No.: C0991</b> <b>Status as of May 1, 2015</b></p> 																																								
<p><b>Progress/Work Completed:</b>                  - Metro advertised the Southwestern Yard (Division 16) design build contract on August 29, 2014.                  - There were five Amendments issued:                    #1 September 19, 2014                    #2 October 24, 2014                    #3 November 25, 2014                    #4 December 18, 2014                    #5 January 12, 2015                  - Step One Technical Bid and Step Two Price Bid submitted on January 22, 2015.                  - Metro continues bid evaluation period.</p>	<p><b>Areas of Concern:</b>                  - None.</p>																																								
<p><b>Schedule Assessment:</b>                  - Plan is to issue notice to proceed on June 29, 2015.</p>	<p><b>Cost Assessment:</b></p>																																								
<p><b>Schedule Summary:</b></p> <ol style="list-style-type: none"> <li>Date of Award:</li> <li>Notice to Proceed:</li> <li>Original Substantial Completion Duration:</li> <li>Current Substantial Completion Duration:</li> <li>Elapsed Time from NTP:</li> </ol>	<p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <ol style="list-style-type: none"> <li>Award Value:</li> <li>Executed Modifications:</li> <li>Approved Change Orders:</li> <li>Current Contract Value (1 + 2 + 3): -</li> <li>Incurred Cost:</li> </ol>																																								
<table border="1"> <thead> <tr> <th>Milestones</th> <th>Original Contract</th> <th>Current Contract</th> <th>Forecast</th> <th>Calendar Day Variance</th> </tr> </thead> <tbody> <tr> <td>MS#1 Yard and Main Shop Design Completion</td> <td></td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>MS#2 Main Shop Communication Room Completion</td> <td></td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>MS#3 Main Shop Substantial Completion</td> <td></td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>MS#4 Southwestern Yard Substantial Completion</td> <td></td> <td></td> <td></td> <td>0</td> </tr> <tr> <td> </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> </td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	MS#1 Yard and Main Shop Design Completion				0	MS#2 Main Shop Communication Room Completion				0	MS#3 Main Shop Substantial Completion				0	MS#4 Southwestern Yard Substantial Completion				0																<p align="center"><b>PERCENT COMPLETE</b> from _____ to _____</p>  <p align="center"><i>Construction physical percent complete excludes mobilization and general requirements</i></p>
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																																					
MS#1 Yard and Main Shop Design Completion				0																																					
MS#2 Main Shop Communication Room Completion				0																																					
MS#3 Main Shop Substantial Completion				0																																					
MS#4 Southwestern Yard Substantial Completion				0																																					

**CONTRACT C0992 STATUS**  
*Concrete Ties*

<p><b>PE Design Contractor: Hatch Mott MacDonald (HMM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: Rocla Concrete Tie Inc.</b></p>	<p><b>Contract No.: C0992</b></p> <p><b>Status as of May 1, 2015</b></p>																																									
<p><b>Progress/Work Completed:</b> - All 19,936 concrete ties have been received onsite by the design-builder (Contract C0988). - Contract is in close-out pending resolution of any Buy America issues.</p>	<p><b>Areas of Concern:</b> - Compliance with Buy America requirement under review by FTA.</p>																																									
<p><b>Schedule Assessment:</b></p> <p>Metro has agreed to grant a 15 calendar day time extension as a result of limited access to the yard due to the operation of Burlington Northern Santa Fe (BNSF), which was beyond the reasonable control of RCTI.</p> <p>All concrete ties have been delivered to job site by August 15, 2014.</p>	<p><b>Cost Assessment:</b></p> <p>The current construction contract cost is \$2.25 million and has been completely paid to contractor.</p>																																									
<p><b>Schedule Summary:</b></p> <table border="0"> <tr> <td>1. Date of Award:</td> <td align="right">12/10/13</td> </tr> <tr> <td>2. Notice to Proceed:</td> <td align="right">12/23/13</td> </tr> <tr> <td>3. Original Substantial Completion Duration:</td> <td align="right">220</td> </tr> <tr> <td>4. Current Substantial Completion Duration:</td> <td align="right">235</td> </tr> <tr> <td>5. Elapsed Time from NTP:</td> <td align="right">235</td> </tr> </table>	1. Date of Award:	12/10/13	2. Notice to Proceed:	12/23/13	3. Original Substantial Completion Duration:	220	4. Current Substantial Completion Duration:	235	5. Elapsed Time from NTP:	235	<p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <table border="0"> <tr> <td>1. Award Value:</td> <td align="right">2.16</td> </tr> <tr> <td>2. Executed Modifications:</td> <td align="right">0.09</td> </tr> <tr> <td>3. Approved Change Orders:</td> <td></td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td align="right">2.25</td> </tr> <tr> <td>5. Incurred Cost:</td> <td align="right">2.25</td> </tr> </table>		1. Award Value:	2.16	2. Executed Modifications:	0.09	3. Approved Change Orders:		4. Current Contract Value (1 + 2 + 3):	2.25	5. Incurred Cost:	2.25																				
1. Date of Award:	12/10/13																																									
2. Notice to Proceed:	12/23/13																																									
3. Original Substantial Completion Duration:	220																																									
4. Current Substantial Completion Duration:	235																																									
5. Elapsed Time from NTP:	235																																									
1. Award Value:	2.16																																									
2. Executed Modifications:	0.09																																									
3. Approved Change Orders:																																										
4. Current Contract Value (1 + 2 + 3):	2.25																																									
5. Incurred Cost:	2.25																																									
<table border="1"> <thead> <tr> <th>Milestones</th> <th>Original Contract</th> <th>Current Contract</th> <th>Forecast</th> <th>Calendar Day Variance</th> </tr> </thead> <tbody> <tr> <td>Milestone 1 - Contract Substantial Completion</td> <td align="center">07/31/14</td> <td align="center">08/15/14</td> <td align="center">08/15/14</td> <td align="center">0</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	Milestone 1 - Contract Substantial Completion	07/31/14	08/15/14	08/15/14	0					0					0					0					0					0						<p align="center"><b>PERCENT COMPLETE</b> <i>from 12/23/2013 to 8/15/14</i></p>  <p align="center">Construction physical percent complete excludes mobilization and general requirements</p>	
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																																						
Milestone 1 - Contract Substantial Completion	07/31/14	08/15/14	08/15/14	0																																						
				0																																						
				0																																						
				0																																						
				0																																						
				0																																						

**CONTRACT C0992A STATUS**  
*Running Rail and Bumping Posts*

<p><b>PE Design Contractor: Hatch Mott MacDonald (HMM)</b> <b>CM Consultant: Stantec</b> <b>Contractor: LB Foster Rail Technology Corp</b></p>	<p><b>Contract No.: C0992A</b> <b>Status as of May 1, 2015</b></p>																																									
<p><b>Progress/Work Completed:</b> - All 115RE SS Blank Stick Rails have been delivered to the job site. - All 115RE HH rail have been delivered to job site.</p>	<p><b>Areas of Concern:</b> .</p>																																									
<p><b>Schedule Assessment:</b> All running rails have been delivered.  Both Metro and LB Foster agreed to a time extension change for the delivery of the bumping post. The new delivery contract date has been changed from 12/31/2014 to 9/30/2015.</p>	<p><b>Cost Assessment:</b> The current contract cost forecast is \$5,184,044.79.  No invoice was received in March 2015.</p>																																									
<p><b>Schedule Summary:</b></p> <table border="0"> <tr> <td>1. Date of Award:</td> <td align="right">01/23/14</td> </tr> <tr> <td>2. Notice to Proceed:</td> <td align="right">03/07/14</td> </tr> <tr> <td>3. Original Substantial Completion Duration:</td> <td align="right">300</td> </tr> <tr> <td>4. Current Substantial Completion Duration:</td> <td align="right">558</td> </tr> <tr> <td>5. Elapsed Time from NTP:</td> <td align="right">385</td> </tr> </table>	1. Date of Award:	01/23/14	2. Notice to Proceed:	03/07/14	3. Original Substantial Completion Duration:	300	4. Current Substantial Completion Duration:	558	5. Elapsed Time from NTP:	385	<p><b>Cost Summary:</b> <span style="float: right;"><b>\$ In millions</b></span></p> <table border="0"> <tr> <td>1. Award Value:</td> <td align="right">5.2</td> </tr> <tr> <td>2. Executed Modifications:</td> <td></td> </tr> <tr> <td>3. Approved Change Orders:</td> <td></td> </tr> <tr> <td>4. Current Contract Value (1 + 2 + 3):</td> <td align="right">- 5.2</td> </tr> <tr> <td>5. Incurred Cost:</td> <td align="right">4.8</td> </tr> </table>		1. Award Value:	5.2	2. Executed Modifications:		3. Approved Change Orders:		4. Current Contract Value (1 + 2 + 3):	- 5.2	5. Incurred Cost:	4.8																				
1. Date of Award:	01/23/14																																									
2. Notice to Proceed:	03/07/14																																									
3. Original Substantial Completion Duration:	300																																									
4. Current Substantial Completion Duration:	558																																									
5. Elapsed Time from NTP:	385																																									
1. Award Value:	5.2																																									
2. Executed Modifications:																																										
3. Approved Change Orders:																																										
4. Current Contract Value (1 + 2 + 3):	- 5.2																																									
5. Incurred Cost:	4.8																																									
<table border="1"> <thead> <tr> <th>Milestones</th> <th>Original Contract</th> <th>Current Contract</th> <th>Forecast</th> <th>Calendar Day Variance</th> </tr> </thead> <tbody> <tr> <td>Milestone 1 - Contract Substantial Completion</td> <td align="center">12/31/14</td> <td align="center">09/30/15</td> <td align="center">09/30/15</td> <td align="center">0</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td align="center">0</td> </tr> </tbody> </table>	Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	Milestone 1 - Contract Substantial Completion	12/31/14	09/30/15	09/30/15	0					0					0					0					0					0					0	<p align="center"><b>PERCENT COMPLETE</b> <i>from 3/7/2014 to 05/01/15</i></p>  <p align="center"><i>Construction physical percent complete excludes mobilization and general requirements</i></p>	
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance																																						
Milestone 1 - Contract Substantial Completion	12/31/14	09/30/15	09/30/15	0																																						
				0																																						
				0																																						
				0																																						
				0																																						
				0																																						
				0																																						

## CONSTRUCTION PHOTOGRAPHS



Green Line Bent 2 Isolation Casing.



Green Line Tie-In Bridge Area Archeological/Paleontological Field Investigation.

## CONSTRUCTION PHOTOGRAPHS (Continued)



Green Line Tie-In Bridge-Installation of Rebar Cage  
for Bent 3E CIDH (3<sup>rd</sup> Section with 4<sup>th</sup> Splice).



North of Century - Overall View Aviation/Century Bridge (Abutment 10 on the Left).

**CONSTRUCTION PHOTOGRAPHS (Continued)**



Pile Driving at La Brea Bridge Abutment 2 (East).

## CONSTRUCTION PHOTOGRAPHS (Continued)



Pile Driving at La Brea Bridge Abutment 2 (East).

### CONSTRUCTION PHOTOGRAPHS (Continued)



33 inch Storm Drain Replacement and Utility Hanging at MLK.

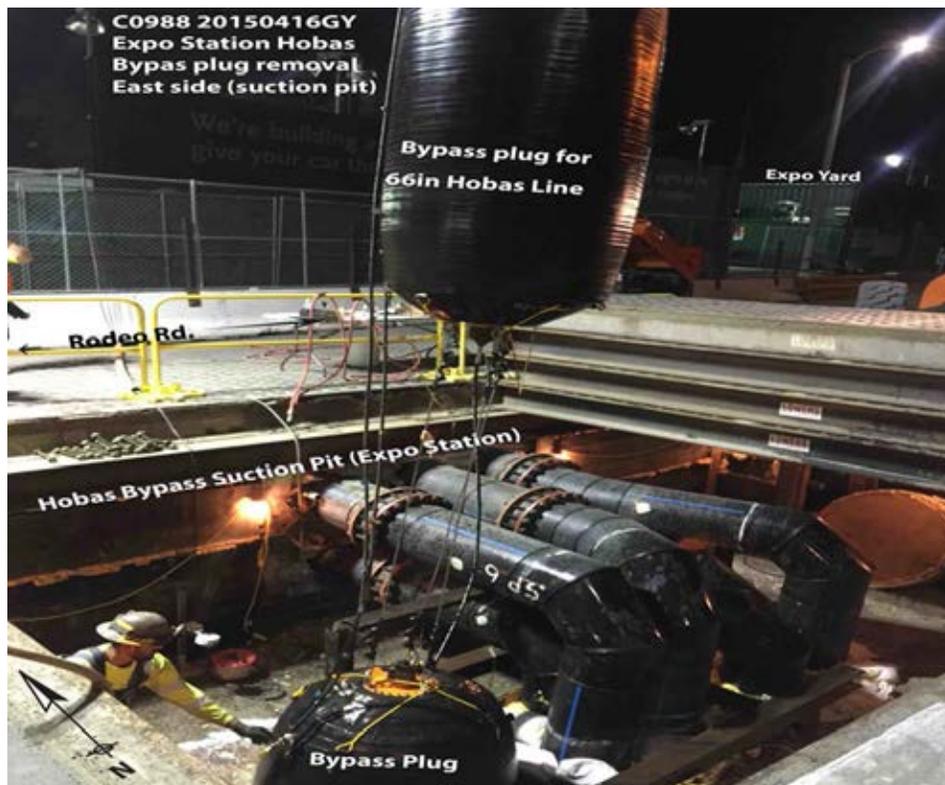


Completed Gas Line Relocation at Vernon.

### CONSTRUCTION PHOTOGRAPHS (Continued)



Pile Installation and Drilling at Vernon Station.



Dual Plug Removal Allowing Flow to Start in.  
New 66" Hobas Sanitary Sewer at Expo Station.

**CONSTRUCTION PHOTOGRAPHS (Continued)**



66" Sanitary Sewer Hobas Pipe Installed at Expo Station.



Jet Grouting SOE North Headwall, Expo Station.

**APPENDIX  
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.

**APPENDIX**  
**LIST OF ACRONYMS**

ACE	Advanced Conceptual Engineering
ADA	Americans with Disabilities Act
ADR	Alternative Dispute Resolution
AFC	Approved for Construction
ALJ	Administrative Law Judge
AMC	Airport Metro Connector
APM	Automated People Mover
ATC	Alternative Technical Concept
ATC	Automatic Train Control
ATSAC	Automated Traffic Surveillance and Control
BAFO	Best and Final Offer
BID	Business Improvement Development
BIM	Building Information Modeling
BLS	Bureau of Labor Statistics
BNSF	Burlington Northern Santa Fe Railway Company
BOC	Bus Operations Control
CADD	Computer Aided Drafting and Design
CALTRANS	California Department of Transportation
CARB	California Air Resources Control Board
CCTV	Closed Circuit Television
CD	Calendar Day
CD	Council District
CDRL	Contract Data Requirement List
CE	Categorical Exemption
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CIDH	Cast in Drilled Hole
CIP	Cast in Place
CLC	Community Leadership Council
CM	Construction Manager
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMU	Concrete Masonry Unit
CN	Change Notice
CO	Change Order
COI	City of Inglewood
COLA	City of Los Angeles
CPM	Critical Path Method
CPUC	California Public Utilities Commission
CR	Camera Ready
CRMMP	Cultural Resources Monitoring and Mitigation Plan
CSM	Cutter Soil Mixing
CSP	Cost and Schedule Proposal
CSPP	Construction Safety Phasing Plan

**APPENDIX  
LIST OF ACRONYMS (Continued)**

CTB	Cement Treated Base
CTC	California Transportation Commission
CUD	Contract Unit Description
CWP	Construction Work Plan
DB	Design Build
DBB	Design Bid Build
DBE	Disadvantaged Business Enterprise
DDR	Design Deviation Report
DOT	Department of Transportation
DRB	Dispute Review Board
DWP	Department of Water and Power
E&O	Error and Omission
EEO	Equal Employment Opportunity
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ENC	Equipment Noise Certification
EPA	Environmental Protection Agency
EPBM	Earth Pressure Balance Machine
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulation
FAT	Factory Acceptance Testing
FCBC	Faith Central Bible Church
FD	Final Design
FEIR	Final Environmental Impact Report
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FFGA	Full Funding Grant Agreement
FIS	Financial Information System
FLSR	Fire Life Safety Report
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FSEIR	Final Supplemental Environmental Impact Report
FSEIS	Final Supplemental Environmental Impact Statement
FTA	Federal Transit Administration
FTE	Full Time Equivalent
GBR	Geotechnical Baseline Report
GDR	Geotechnical Data Report
GDSR	Geotechnical Design Summary Report
GFE	Good Faith Effort
HDPE	High Density Polyethylene
HMM	Hatch Mott MacDonald
HNTB	Howard, Needles, Tammen and Bergendoff

**APPENDIX**  
**LIST OF ACRONYMS (Continued)**

IFB	Invitation for Bid
IFC	Issued for Construction
IPMO	Integrated Project Management Office
ITF	Intermodal Transportation Facility
JHA	Job Hazard Analysis
JV	Joint Venture
LA	Los Angeles
LABOE	Los Angeles Bureau of Engineering
LABOS	Los Angeles Bureau of Sanitation
LABSL	Los Angeles Bureau of Street Lighting
LACO	Los Angeles County
LACFCD	Los Angeles County Flood Control District
LACMTA	Los Angeles County Metropolitan Transportation Authority
LACSD	Los Angeles Sanitation Department
LADOT	Los Angeles Department of Transportation
LADPW	Los Angeles Department of Public Works
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAUSD	Los Angeles Unified School District
LAWA	Los Angeles World Airports
LAX	Los Angeles International Airport
LNTP	Limited Notice To Proceed
LOA	Letter of Agreement
LONP	Letter Of No Prejudice
LOP	Life-of-Project
LPA	Locally Preferred Alternative
LRT	Light Rail Transit
L RTP	Long Range Transportation Plan
LRV	Light Rail Vehicle
MBE	Metro Builders and Engineers Group, Ltd
MCA	Master Cooperative Agreement
MGL	Metro Green Line
MIC	Microbiologically Influenced Corrosion Control System
MIS	Major Investment Study
MMRP	Mitigation Monitoring Reporting Plan
MOA	Memorandum of Agreement
MOS	Minimum Operating Segment
MOU	Memorandum of Understanding
MPS	Master Program Schedule
MPSR	Monthly Project Status Report
MSDS	Material Safety Data Sheet
MSF	Maintenance & Storage Facility

**APPENDIX  
LIST OF ACRONYMS (Continued)**

N/A	Not Applicable
NAVAIDS	National Aid Systems
NEPA	National Environmental Protection Act
NFPA	National Fire Protection Association
NNC	Notice of Noncompliance
NOD	Notice of Determination
NPDES	National Pollution Discharge Elimination System
NTE	Not to Exceed
NTP	Notice To Proceed
OCC	Operations Control Center
OCS	Overhead Catenary System
OSHA	Occupational Health and Safety Administration
OTS	Over the Shoulder
PA/VMS	Public Address/Visual Messaging Sign
PDQM	Project Design Quality Manual
PE	Preliminary Engineering
PEER	Permit Engineering Evaluation Report
PID	Photo Ionization Detector
PIP	Project Implementation Plan
PLA	Project Labor Agreement
PM	Project Manager
PMIP	Project Management Implementation Plan
PM	Project Manager
PMIP	Project Management Implementation Plan
PMMP	Paleontological Monitoring and Mitigation Plan
PMOC	Project Management Oversight Consultant
PMP	Project Management Plan
P&P	Policies & Procedures
POD	Project Oriented Discussions
PQPM	Project Quality Program Manual
PR	Project Report
PSR	Project Study Report
QA	Quality Assurance
QAR	Quality Assurance Report
QC	Quality Control
QPSR	Quarterly Project Status Report
QTIB	Qualified Transit Improvement Bonds
RAMP	Real Estate Acquisition Management Plan
RCHAR	Rail Crossing Hazards Analysis Report
RCMP	Risk Assessment Management Plan
REAP	Rain Event Action Plans
RFC	Request For Change
RFI	Request for Information
RFMP	Rail Fleet Management Plan

**APPENDIX**  
**LIST OF ACRONYMS (Continued)**

RFP	Request For Proposals
RFQ	Request For Qualifications
RHA	Risk Hazard Analysis
RLPE	Red Light Photo Enforcement
ROC	Rail Operations Center
ROD	Record Of Decision
ROE	Right of Entry
ROM	Rough Order of Magnitude
ROW	Right-Of-Way
RPZ	Runway Protection Zone
RSD	Revenue Service Date
RTIP	Regional Transportation Improvement Program
SAV	Stand Alone Validator
SCADA	Supervisory Control and Data Acquisition
SCAQMD	Southern California Air Quality Management District
SCC	Standard Cost Category
SCE	Southern California Edison
SCG	Southern California Gas Company
SCRRA	Southern California Regional Rail Authority
SHA	State Highway Account
SHPO	State Historic Preservation Office
SIT	System Integration Testing
SOE	Support of Excavation
SOP	Standard Operating Procedure
SOQ	Statement of Qualification
SOV	Schedule Of Value
SOW	Statement Of Work
SP	Special Provision
SPAS	Specific Plan Amendment Study
SPP	Special Permitting Process
SSMP	Safety and Security Management Plan
STB	Surface Transportation Board
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
STV	STV Group
SWPP	Storm Water Prevention Plan
SWY	Southwestern Yard (Division 16)
TBD	To Be Determined
TBM	Tunnel Boring Machine
TCC	Train Control/Communications
TCE	Temporary Construction Easement

## **APPENDIX**

### **LIST OF ACRONYMS (Continued)**

TCRP	Traffic Congestion Relief Program
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery
TOD	Transit Oriented Development
TPSS	Traction Power Substation
TRACS	Transit Automatic Control System
TSC	Traffic Signal Conduit
TSL	Temporary Street Lighting
TSM	Transportation System Management
TVA	Threat Vulnerability Analysis
TVM	Ticket Vending Machine
UBC	Uniform Building Code
UFS	Universal Fare System
UG	Underground
UOM	Unit of Measure
USDOT	United States Department Of Transportation
UST	Underground Storage Tank
VE	Value Engineering
WBS	Work Breakdown Structure
WP	Work Package
WSCC	Walsh/Shea Corridor Constructor
WTCP	Work Traffic Control Plan
YOE	Year of Expenditure