Crenshaw/LAX Transit Project



CRENSHAW/LAX TRANSIT PROJECT

MONTHLY PROJECT STATUS REPORT

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

NOVEMBER 2014

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PROJECT SUMMARY

CRENSHAW/LAX TRANSIT PROJECT

As of November 2014

LOCATION: Crenshaw I DESIGN/CONSULTANT:			Green Line	CONSTRUCTION MANAGEMENT CONSULTANT: Stantec CONTRACTOR: Walsh-Shea Corridor Constructors (WSCC)				
PROJECT PHOTO: Con Crenshaw Blvd. full stre	-	g deck beam #	4 during	WORK COMPLETED PAST MONTH:				
		1/10/2014 08:08		o WSCC continued final design. o WSCC continued coordination with LAWA/FAA for upcoming construction next to end of airport runways. o WSCC continued cutter soil mixing (CSM) pile installar at Exposition Station. o WSCC initiated full street closure for decking operation at Crenshaw Blvd. o WSCC completed delivery of TBM major equipment. o Metro continued real estate acquisitions.				
EXPENDITURE STATUS (\$ In Millions)				SCHEDULE ASSESSMENT	Γ			
ACTIVITIES	CURRENT BUDGET	EXPENDED AMOUNT	PERCENT EXPENDED	MAJOR SCHEDULE ACTIVITIES	PRIOR PLAN	CURRENT PLAN	VARIANCE WEEKS	
DESIGN	\$ 136.7	\$ 91.7	67.1%	Environmental FEIS/FEIR Record of Decision	Sep-11 Dec-11		Complete Complete	
RIGHT-OF-WAY	\$ 127.4	\$ 102.6	80.5%	Design		<u> </u>		
CONSTRUCTION	\$ 1,353.1	\$ 250.5	18.5%	, , ,	Nov-11		Complete	
UIHEK	\$ 440.8	\$ 91.1	20.7%	Final Design	Sep-15	Sep-15	On Schedule	
TOTAL	\$ 2,058.0	\$ 535.9	26.0%	All full-take parcels available	Aug-14	Jan-14	4.5 months behind	
Note: cost expended as o	i November 29	1, 2014.		Construction				
AREAS OF CONCERN				D-B Notice to Proceed	Sep-13	Sep-13	Complete	
o Timely future reviews of City of Inglewood, Caltran				D-B Substantial Complete	Sep-18		1.5 months behind	
o Third party relocations pactivities				Revenue Service Date	Oct-19	Oct-19		
o Execution of Agreemen o Mitigation of design-buil schedule delay to substar	der's current fo	recast of 1.5 m	nonth	*Note: Current Revenue Service	Date includes	a reduction i	in contingency.	
ROW ACQUISITION	PLAN	ACQUIRED	REMAINING	CRITICAL ACTIVITIES / 3	MONTH LO	OK AHEAD		
FULL TAKES	35	35	0	o WSCC continue final design. o WSCC continue support of excavation work at Exposition Station.				
PARTIAL TAKES	27	6	21	o WSCC continue support of excavation work at MLK Station. o WSCC commence support of excavation work at Vernon Station.				
TEMPORARY EASEMENTS		2	10	o WSCC continue new Cen				
TOTAL PARCELS	74	43	31	o WSCC complete decking	operations a	t Exposition	n Station.	

PROJECT OVERVIEW

Major Contract Procurement

Metro advertised the Southwestern Yard (Division 16) design-build contract on August 29, 2014. Amendment 1 was issued on September 19, 2014, Amendment 2 on October 24, 2014 and final Amendment 3 on November 25, 2014. For this two-step procurement, both Step One Technical Bid and Step Two Price Bid have been rescheduled to be due from proposers on January 8, 2015. Proposers whose Step-One Technical Bids are determined to be acceptable by Metro will be notified that their Step-Two Price Bids will be publicly opened. Award and notice-to proceed are planned for second quarter of 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.

Design- Build Contract C0988 – The design-builder, Walsh-Shea Corridor Constructors (WSCC) continues final design with preparation of required contract submittals. Key design status this month:

- Continued to hold various task force and workshop meetings to resolve design issues. These meetings were for at-grade, aerial and underground stations, structures and systems disciplines.
- Utility design meetings held to discuss utility conflicts and resolution for protect-in-place and relocation.
- Weekly coordination meetings with City of Los Angeles for support of excavation and street restoration design.
- WSCC continues final design and submit design packages for Metro and City of Los Angeles review.

Construction efforts by the design-builder continued along the three major areas or segments:

Segment A – (South end, stationing 7+50 to 130+00)

- Started bridge foundations for Century/Aviation Bridge.
- Continued coordination with LAWA and FAA for upcoming construction activities near LAX runways.

Segment B – (Stationing 130+00 to 365+00)

No major work in this area during the month.

Segment C – (North end, Stationing 365+00 to 449+00)

- Crenshaw/Exposition Station area
 - o Full closure of Crenshaw Blvd. for Phase I decking operation which was completed in November. Phase II will be completed in December.

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PROJECT OVERVIEW (Continued)

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 43 parcels acquired through November 2014. Thirty-three full takes and eight part takes/ temporary construction easements have been provided to design-builder WSCC. One full take parcel has been acquired but will not be provided to WSCC until work is ready to commence in mid-January 2015. An order of possession has been issued for the last remaining full take and should be provided to WSCC also by mid-January 2015.

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 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.

PROJECT OVERVIEW (Continued)

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 79.8%, state funding 10.5% and federal funding 9.7%.

The project commitments thru November 2014 are \$1,654.7 million or 80.4% of the Current Budget. The project expenditures thru November 2014 are \$535.9 million or 26.1% 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.

There was no change to the project schedule contingency this month. A significant portion of the project schedule contingency was restored last month. The schedule contingency had been restored by 65 calendar days and is 7.1 months. This was a result of the design-builder incorporating a schedule recovery plan into their monthly schedule update and thus pulling back the forecast contract substantial completion milestone date. The cumulative to date reduction in schedule contingency is 50 calendar days.

On a monthly basis, the project's risk manager will advise project management of the risk register items mitigation status. A Risk Management Quarterly Progress Report will be issued on December 2, 2014.

MANAGEMENT ISSUES

Concern No. 1: Complete Construction Safety Phasing Plan (CSPP) for design-builder scope of work near LAX and receive FAA approval.

<u>Status/Action</u> WSCC continues working on updating the CSPP and will request activation of the permit required (FAA 7460) in order to start on underground guideway No. 1 trench in front of LAX runways in January 2015.

Concern No. 2: Execution of 3% Local Match funding agreement with the City of Inglewood.

<u>Status/Action</u> 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. 3: Right-of-way acquisition forecast dates are trending later than planned.

<u>Status/Action</u> Metro continues to turn over parcels to the design-builder as they are acquired. There have been 43 parcels acquired through November 2014.

Metro staff continues to collaborate with the design-builder to update priorities for the acquisition of smaller real estate parcels which include part takes, street easements, temporary construction easements and rights of entry required for construction.

Concern No. 4: Timely future reviews of WSCC final design submittals by City of Los Angeles, City of Inglewood, Caltrans, FAA and Los Angeles World Airports.

<u>Status/Action</u> 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.

MANAGEMENT ISSUES (Continued)

Concern No. 5: 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. 6: Relocations of utilities by outside third parties required to be performed in advance of the main Crenshaw/LAX Design Build Contractor's work.

<u>Status/Action</u> 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.

Concern No. 7: Design-builders design submittal schedule

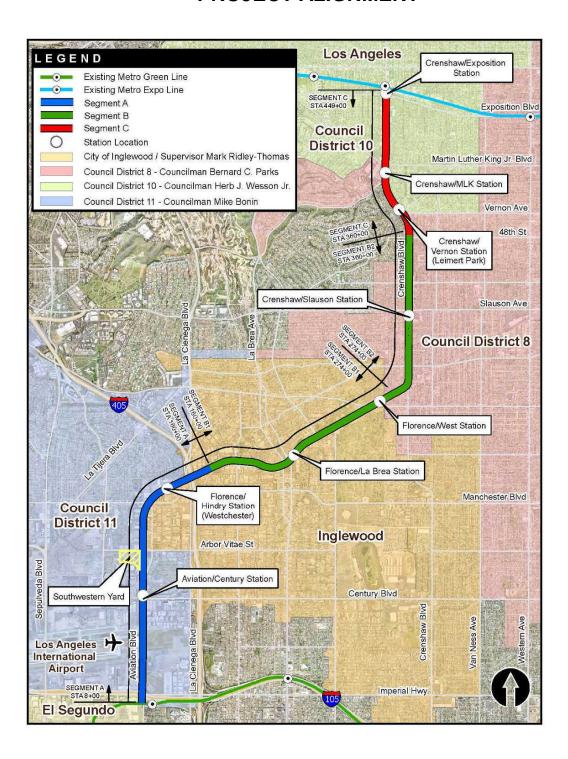
<u>Status/Action</u> WSCC is still behind in meeting key interim design milestones but is working to submit submittals that could impact the critical path if not submitted on time. Metro is working closely with WSCC to timely review critical submittals so as not to impact to the project schedule critical path.

Concern No. 8: Design-builders construction schedule

<u>Status/Action</u> WSCC incorporated a schedule recovery plan into their monthly schedule update and thus pulled back the forecast contract substantial completion milestone. The contractor now reflects a 50 calendar day delay.

Metro and WSCC continue to explore other possible mitigation measures to further reduce the negative float to the substantial completion milestone.

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, prequalification of qualified proposers followed by release of a RFP soliciting technical and price proposals with an option at Metro's discretion for best and final offers (BAFO).

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.

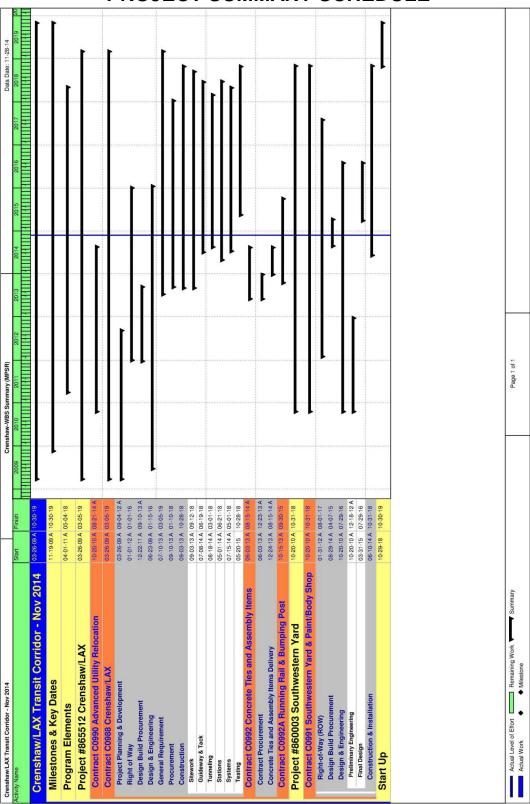
KEY MILESTONES SIX- MONTH LOOK AHEAD

	Milestone Date	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15
Contract C0988 Readiness For Construction Design - OCS	11/04/2014A						·
Contract C0988 Start Decking - Expo	11/07/2014A						
Contract C0988 Deliver TBM	11/21/2014A	Carrie Char					
Contract C0988 Complete Shoring CSM Construction - Expo	12/07/14						
Contract C0988 Start Soldier Piling at Vernon	12/10/14						
Contract C0988 Readiness For Construction Design - Seg B	12/11/14						
Contract C0988 Start La Brea Bridge	12/16/14						
Contract C0988 Readiness For Construction Design - Seg A	12/26/14						
Contract C0988 Readiness For Construction Design - COMM	12/29/14						
Contract C0991 Southwestern Yard Bids Due	01/08/15						
Contract C0988 Readiness For Construction Design - Seg C	01/16/15						
Contract C0988 Start Aerial Structure #1	01/26/15						
Contract C0988 Start Shoring - Underground Structure #3	01/26/15						
Contract C0988 Complete Shoring CSM West Side - MLK	01/27/15						
Contract C0988 Readiness For Construction Design - TPSS	01/29/15						
Contract C0988 Start Manchester Bridge	02/02/15						
Contract C0988 Start Soldier Piling Underground Structure #1	02/24/15						
Contract C0988 Start Soldier Piling - U Section #4	02/26/15						
Contract C0988 Start Decking - MLK	02/27/15						
Contract C0988 Start Decking - Vernon	03/07/15						
Contract C0988 Complete Shoring CSM West Side - Vernon	03/13/15						
Contract C0988 Start Soldier Piling - Cut & Cover #4	03/13/15						
Contract C0988 Submit Final Design - Seg B	03/26/15						
Contract C0988 Submit Final Design - COMM	03/27/15						
Contract C0988 Submit Final Design - Seg C	04/03/15						
Contract C0988 Start Fabricate Elevators & Escalators	04/06/15						an Phas
Contract C0988 Submit Final Design - Seg A	04/16/15						
Contract C0988 Start 111th Street Bridge	04/20/15						on Phas
Contract C0988 Complete Soldier Piling - U Section #4	04/22/15						
Contract C0988 Submit Final Design - TPSS	04/28/15						

"A" following date is actual and completed

★ New Date

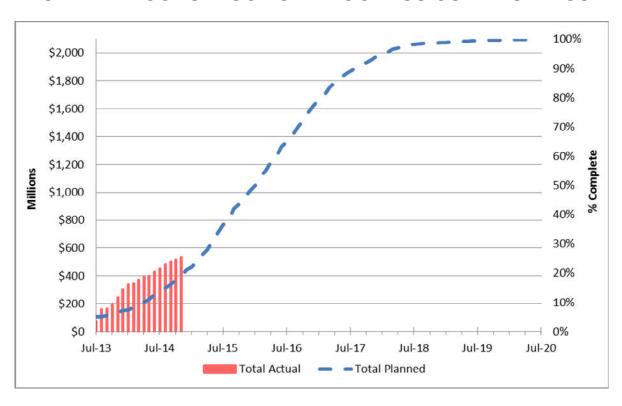
PROJECT SUMMARY SCHEDULE



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	
Final Design Progress:			
Contract C0988	79%	3%	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
Construction Contracts Progress:			
Contract C0988	9%	1.4%	Behind Schedule
Contract C0990	100%	0%	Substantially
		0%	Completed
Contract C0991	0%	-	Advertised Substantially
Contract C0992	100%	0%	Completed
Contract C0992A	93%	0%	On Schedule
	2370	2.70	
Cumulative To Date Progress:	23.6%	1.5%	

OVERALL CONSTRUCTION PROGRESS CURVE STATUS



The above progress curve is based on planned expenditures by the design-build contractor in the C0988 baseline schedule and actual program expenditures which incorporated progress projected by the design-build contractor in their November 2014 schedule update.

The cumulative overall final design and construction progress is 23.6%.

Contract C0990 was Substantially Completed on Aug 21, 2014, which is 297 calendar days behind Contract Milestone #1.

Final Design for C0988 commenced upon MTA issuing NTP on September 10, 2013. Cumulative final design progress to date is 79%, while the construction progress is 9% to date.

MAJOR EQUIPMENT DELIVERY STATUS

Tunnel Boring Machine

WSCC, 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	Oct-14	Nov-14	Monthly Variance
Submit Final Design Details for TBM	01/03/14	12/01/14	12/29/14	28
Fabricate & Deliver TBM	09/22/14	11/07/14	11/21/14A	14
Procure & Deliver TBM Rolling Stock & Accessories	06/23/14	05/01/15	05/01/15	0
TBM SB Tunnel Launch at Expo	04/28/15	09/17/15	09/17/15	0
TBM SB Break through at Vernon	09/17/15	02/10/16	02/10/16	0
TBM NB Tunnel Launch at Expo	10/29/15	03/23/16	03/23/16	0
TBM NB Break through at Vernon	03/21/16	08/11/16	08/11/16	0

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	Delivery	Needed by
Traffic Signal Poles	5/27/2015	6/22/2015
Street Light Poles	5/27/2015	6/22/2015
Tunnel Ventilation Fans	2/24/2016	4/13/2017
Jet Fans (Cut & Cover)	8/10/2016	5/3/2017
Structural Steel - Canopies	10/22/2015	5/11/2017
Laminated Tempered Canopy	7/22/2015	5/9/2017
Station - Elevators	4/4/2016	4/18/2017
Station - Escalators	4/4/2016	7/7/2016
Track - Special Trackwork	6/16/2016	6/17/2016
Unit Substations - Expo	2/1/2015	12/6/2017
Unit Substations - MLK	2/1/2015	5/23/2017
Unit Substations - Vernon	2/1/2015	5/9/2017
TPSS - Substation 1	12/28/2015	9/8/2016
TPSS - Substation 2	3/8/2016	11/14/2016
TPSS - Substation 3	5/17/2016	8/31/2016
TPSS - Substation 5	7/28/2016	8/31/2016
TPSS - Substation 6	10/7/2016	11/1/2016
TPSS - Substation 8	12/19/2016	2/28/2017
TPSS - Substation 9	3/1/2017	7/6/2017
TPSS - Substation 10	5/10/2017	8/21/2017
OCS Poles	12/29/2015	11/21/2016
Communication Equipment for TC&C #1 / Aviation Yard	9/16/2015	10/3/2016
Communication Equipment for TC&C #2 / Aviation/Century	1/18/2016	11/8/2016
Communication Equipment for TC&C #4 / Hindry	3/14/2016	2/6/2017
Communication Equipment for TC&C #5 / Florence/West	10/20/2016	5/15/2017
Communication Equipment for TC&C #6 / Crenshaw/Slauson	2/28/2017	9/11/2017
Communication Equipment for TC&C #7 / Crenshaw/MLK	10/6/2017	10/9/2017
Communication Equipment for TC&C #8 / Crenshaw/Expo	1/10/2018	1/11/2018
Communication Equipment for COM #1 / UG-1	10/21/2015	8/4/2016
Communication Equipment for COM #2 / UG-2	4/25/2016	12/22/2016
Communication Equipment for COM #2 / Florence/La Brea	7/20/2016	12/22/2016
Communication Equipment for COM #3 / UG-3	12/2/2016	7/10/2017
Communication Equipment for COM #4 / UG-4	4/11/2017	1/2/2018
Communication Equipment for COM #4 / Vernon	7/6/2017	8/29/2017

CRITICAL PATH NARRATIVE

Critical Path:

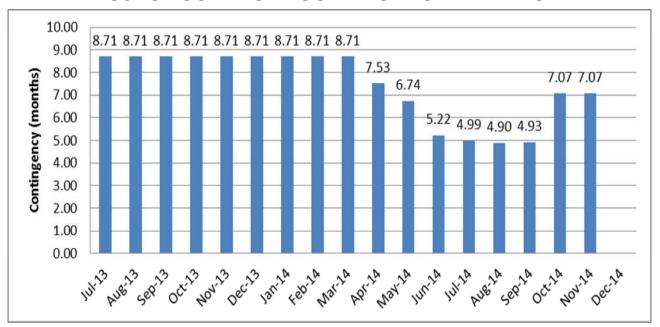
The longest path to project substantial completion begins with final design of the Design/Build Contract #C0988 Crenshaw/LAX Transit Corridor.

The most critical and longest path starts with the Expo & MLK Station support of excavation (SOE) and decking, excavation & invert construction; TBM mining in south bound tunnel; cross passage excavation, tunnel invert and walkway construction; track and system installation, while the Vernon station SOE, decking & excavation, underground structure #3 shoring and excavation and underground structure #4 cut and cover 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 Oct 28, 2018, which is 50 calendar days behind. Of the 50 days, LADWP waterline delay is total 35 days that is concurrent with WSCC CSM submittal delays.

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. There is no change in contingency this month.

PROJECT COST STATUS

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

COST REPORT BY ELEMENT PERIOD: NOVEMBER 2014 UNITS IN DOLLARS

	III DOLL IIIO										
SCC	DESCRIPTION	ORIGINAL	CURREN	IT BUDGET	COMMI	TMENTS	EXPEND	DITURES	CURRENT	FORECAST	FORECAST
CODE	DESCRIPTION	BUDGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
10	GUIDEWAYS	471,335,000		452,500,001	-	442,927,082	5,172,202	33,886,431		452,500,001	-
20	STATIONS	153,906,000		316,050,000		300,744,412	4,981,477	37,918,000		315,050,000	(1,000,000)
30	SOUTHWESTERN YARD	66,673,000	-	66,673,000	-	150,000	-			66,673,000	-
40	SITEWORK\SPECIAL CONDITIONS	235,576,000	-	348,565,999	314,679	341,074,678	3,562,296	178,420,304		354,970,999	6,405,000
50	SYSTEMS	125,132,000	•	169,311,000		150,228,242	4,000	171,055	•	169,436,000	125,000
10-50	CONSTRUCTION	1,052,622,000		1,353,100,000	314,679	1,235,124,414	13,719,975	250,395,790	-	1,358,630,000	5,530,000
60	RIGHT-OF-WAY	132,294,000	-	127,400,000	-	113,795,439	33,234	102,594,156		127,400,000	-
70	LRT VEHICLES	87,780,000	•	82,100,000		82,050,901	-	11,452,422	•	82,100,000	-
80	PROFESSIONAL SERVICES	273,147,000	•	295,900,000	(751,787)	198,155,459	4,587,378	145,863,661	•	299,025,000	3,125,000
90	UNALLOCATED CONTINGENCY	177,157,000	-	173,500,000	-	ı	-			164,845,000	(8,655,000)
	865512 & 860003 - SUBTOTAL	1,723,000,000	•	2,032,000,000	(437,109)	1,629,126,213	18,340,587	510,306,029		2,032,000,000	-
	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	-	25,549,387	-	25,549,387	-	26,000,000	-
	405512, 465512, 865512 & 860003 - TOTAL	1,749,000,000	-	2,058,000,000	(437,109)	1,654,675,600	18,340,587	535,855,416	-	2,058,000,000	-

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH 29-NOV-2014.

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:
 - o Increase LOP base project scope in the amount of \$160.1 million, and
 - o 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, 50, 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 November 29, 2014. The total commitments decreased by \$0.4 million this period primarily due to the following:

- SCC-40 (Sitework and Special Conditions) has increased by \$0.3 million for executed modifications associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-80 (Professional Services) has decreased by \$0.7 million due to de-commitments and purchase orders close out. The total commitment of \$198.2 million includes \$2.2 million for the Southwestern Yard.

The \$1,654.7 million in commitments to date represents 80.4% of the current budget.

Expenditures:

The expenditures are cumulative through November 29, 2014. The total expenditures increased by \$18.3 million this period due to the following:

- SCC-10 (Guideways and Track) has increased by \$5.2 million for cost associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations) has increased by \$4.9 million for cost associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-40 (Sitework and Special Conditions) has increased by \$3.6 million for costs associated with the design-build Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-80 (Professional Services) has increased by \$4.6 million for costs associated with design-build Contract C0988 Crenshaw/LAX Transit Corridor, Metro project administration, legal services, project management support and environmental consultant services. The total expenditure of \$145.9 million includes \$1.7 million for the Southwestern Yard.

The \$535.9 million in expenditures to date represents 26.1% of the current budget.

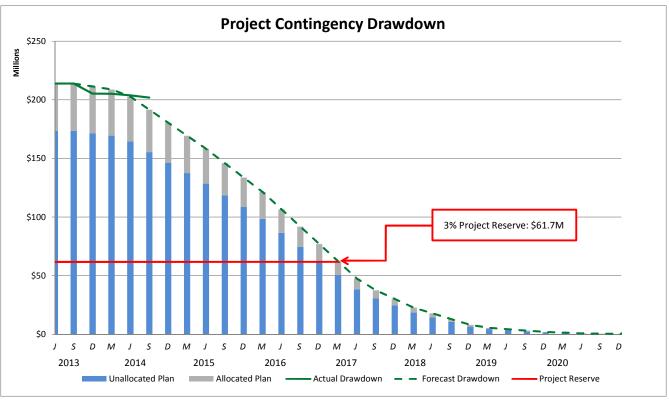
PROJECT COST ANALYSIS (Continued)

Non-Crenshaw/LAX Transit Project Funded Scope of Work

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

C0988 NON-CRENSHAW/LAX TRA	20988 NON-CRENSHAW/LAX TRANSIT PROJECT FUNDED SCOPE OF WORK										
DESCRIPTION	ORIGINAL	CURREN	IT BUDGET	COMM	TMENTS	EXPEN	DITURES	CURRENT	FORECAST	FORECAST	
DESCRIPTION	BUDGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE	
210090 FARE GATE PROJECT	2,310,000	٠	2,549,000	-	2,482,746	11,950	227,050	-	2,549,000	239,000	
460303 AIRPORT METRO CONNECTOR	366,400	٠	366,400	-	366,400	36,640	366,400		366,400	-	
500013 C/LAX LAWA SCOPE OF WORK	1,575,362	٠	1,575,362	-	168,278		168,278	-	1,575,362	-	
TOTAL	4,251,762	-	4,490,762	-	3,017,424	48,590	761,728	-	4,490,762	239,000	

PROJECT CONTINGENCY DRAWDOWN



Through 01-Nov-2014

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 \$11,949,887 or 5.6% of the original contingency through September 2014. The cumulative to date contingency drawdown is reported quarterly. Next drawdown will be reported in December 2014. The cumulative drawdown of contingency is shown in the table below:

PROJECT CONTINGENCY DRAWDOWN											
	Original	Drawdown	Drawdown	Drawdown	Remaining						
	Contingency	previous quarter	this quarter	To-Date	Contingency						
Unallocated Contingency	173,500,000	(8,655,000)	-	(8,655,000)	164,845,000						
Allocated Contingency	40,366,792	(3,294,887)	-	(3,294,887)	37,071,905						
Total Contingency	213,866,792	(11,949,887)	-	(11,949,887)	201,916,905						

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

• DBE Goal – Design 20.40%

• Current DBE Commitment \$19,127,241 (21.12%)

Current DBE Participation \$10,025,118 (16.74%)

Twenty (20) Design subcontractors have been identified to-date

• DBE Goal – Construction 20%

• Current DBE Commitment \$92,537,935 (7.89%)

Current DBE Participation \$21,139,919 (10.97%)

• Forty Six (46) Construction subcontractors have been identified to-date.

PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C0988 Crenshaw/LAX Transit Corridor Design-Build

(Reporting Data as of October 18, 2014)

Targeted Worker Goal –
 40.00%

Targeted Worker Current Participation - 58.57%

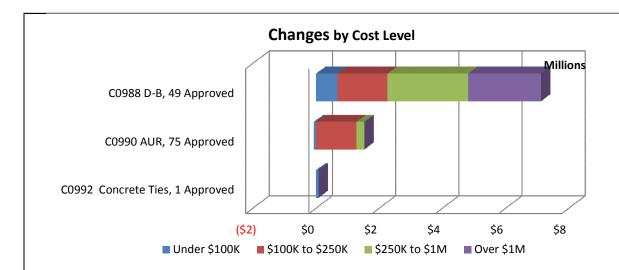
• Apprentice Worker Goal - 20.00%

Apprentice Worker Current Participation - 13.06%

Disadvantaged Worker Goal - 10.00%

Disadvantaged Worker Current Participation 10.65%

SUMMARY OF CHANGES



	C0988		C0990		C	0992
	49	Approved	7:	5 Approved	1 A	pproved
Under \$100K	\$	679,585	\$	(70,179)	\$	81,738
\$100k to \$250K	\$	1,580,123	\$	1,280,184	\$	-
\$250K to \$1M	\$	2,554,105	\$	251,864	\$	-
Over \$1M	\$	2,310,000	\$	-	\$	-
Total	\$	7,123,813	\$	1,461,869	\$	81,738
% of Contract		0.56%		18.68%		3.78%

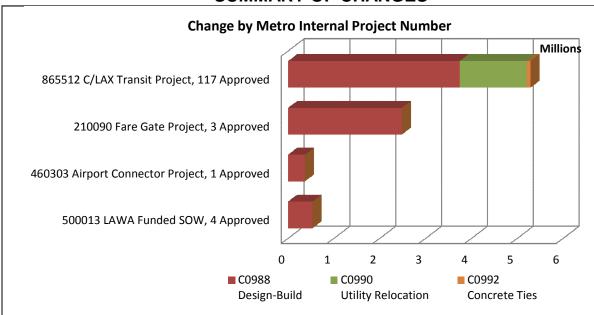
Percent of Contract equals the total Change value divided by the Contract Award amount

Forty-nine (49) changes with a total value of 7.12 million have been approved since execution of Contract C0988.

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

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

SUMMARY OF CHANGES



	865512	210090	460303	500013
	Approved	Approved	Approved	Approved
C0988	41	3	1	4
C0998 \$	\$ 3,743,451	\$ 2,482,746 \$366,400		\$ 531,216
C0990	75	0	0	0
C0990 \$	\$ 1,461,869	\$ -	\$ -	\$ -
C0992	1	0	0	0
C0992 \$	\$ 81,738	\$ -	\$ -	\$ -
Total	117	3	1	4
Total \$	\$ 5,287,058	\$ 2,482,746	\$366,400	\$ 531,216

One hundred and seventeen (117) changes with a total value of \$5.29 million have been approved for Project 865512 Crenshaw/LAX Transit Project.

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

One (1) change with a value of 0.37 million has been approved for Project 460303 Airport Connector Project.

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

FINANCIAL/GRANT STATUS

	lions	

\$ in millions	(A) ORIGINAL	(B) TOTAL	(C) TOTAL	(D)	(D/B) ÆNTS	(E) EXPEND	(E/B) TURES	(F)	(F/B) FUNDING
SOURCE	BUDGET	FUNDS ANTICIPATED	FUNDS AVAILABLE	\$	%	\$	%	\$	SOURCE %
FEDERAL - CWAQ	68.2	54.0	0.0	54.0	100%	0.0	0%	0.0	0%
FEDERAL - SECTION 5309 BUS CAPT	8.6	8.6	8.6	8.6	100%	7.7	90%	7.7	90%
FEDERAL - REGIONAL STP	20.0	120.9	45.4	45.4	38%	13.5	11%	13.5	11%
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	22	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 PTMSEA	201.2	128.6	122.5	128.6	100%	122.3	94%	122.3	94%
STATE PROP 1 B LOCAL PARTINER 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%	317.0	48%	277.3	42%
OTHER FUNDS*	52.4	187.5	0.0	0.0	0%	0.0	0%	0.0	0%
PROP C 25% HGHWAY	148.9	189.5	3.3	59.2	31%	3.5	2%	3.5	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%
TOTAL	1,749.0	2,058.0	1,175.1	1,654.7	80.4%	535.9	26.0%	496.2	24.1%

NOTE: Expenditures are cumulative through November 2014.

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 is expected to be approved in December 2014.*

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 is expected to be approved in December 2014.*

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 is expected to be awarded no later than December 2014.

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.

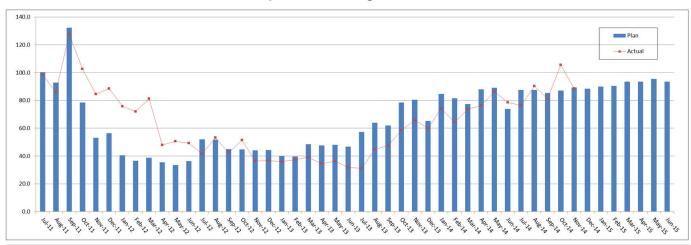
MEASURE R: \$377.4M has been allocated to the project through FY2015. Funds are available for drawdown.

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



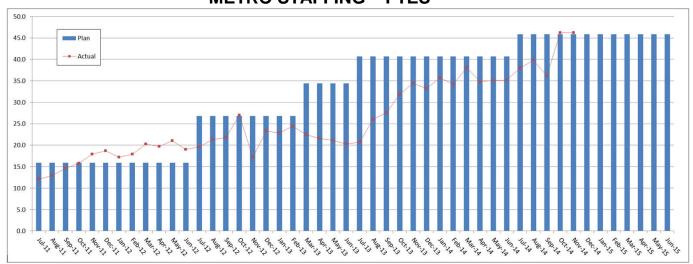
Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through November 2014.

TOTAL PROJECT STAFFING

For November 2014, there were a total of 46.2 FTE's for MTA's Project Administration staff and 42.2 FTE's for consulting staff. The total project staffing was 88.4 FTE's for November 2014. The overall FY15 Total Project Staffing plan averages 90.1 FTE's per month.

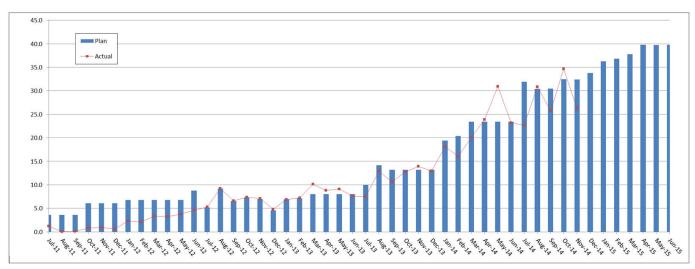
STAFFING STATUS (Continued) METRO STAFFING – FTES



Notes:

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- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through November 2014.

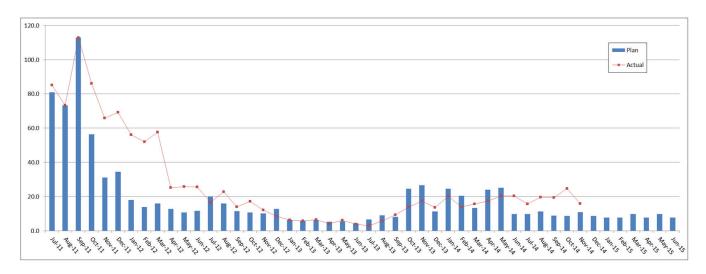
CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTES



Notes:

- 1. FTE = Full Time Equivalent
- 2. Staffing levels are for project 865512 only.
- 3. Actual staffing levels are cumulative through November 2014.

STAFFING STATUS (Continued) ENGINEERING SERVICES CONSULTANT - FTES



Notes:

- 1. FTE = Full Time Equivalent
- Staffing levels are for project 865512 only.
 Actual staffing levels are cumulative through November 2014.

REAL ESTATE STATUS

Contract No.	Number of Parcels	Certified	Decertified	Appraisals Complete	Offers Made	Agreements Signed	Condemnations Filed	Relocations Complete	Parcels Available to WSCC
C0988 C/LAX Transit C	orridor (D-B):	!							
Crenshaw Subdivision		ı	1		1	T	Г		
Full Takes	12	12		12	12	9	3	11	11
Part Takes (PT or SE)	10	9	1	9	9	3	5		2
TCE	10	10		10	10	1	9		
Subtotal Parcels	32	31	1	31	31	13	18	11	13
Harbor Subdivision									
Full Takes	14	14		14	14	12	2	12	14
Part Takes (PT or SE)	19	18	1	18	17	7	7		6
TCE	3	2	1	2	2		2		
Subtotal Parcels	36	34	2	34	33	19	11	12	20
Total CR/HS Parcels:	68	65	3	65	64	32	29	23	33
Southwestern Yard									
Full Takes	8	8		8	8	6	2	4	8
Part Takes	0								
TCE	0								
Subtotal Parcels:	8	8	0	8	8		2	4	8
Total SW Parcels:	8	8	0	8	8	6	2	4	8
C0990 C/LAX Advance	Utility Reloca	ations:							·
Total Parcels:	0								
Total Project Parcels	76	*73	3	74	73	38	31	27	41

- **74** acquisitions: ***73** planned for in the environmental report +**1** full take for the Harbor Subdivision that was not certified (HS-2706).
- 74 appraisals completed (including HS-2706).
- 74 offers made to property owners.
- **43** parcels acquired: **33** full take and **8** part takes/Temporary Construction Easement (TCE) provided to WSCC; **1** Crenshaw full take (HS-2701) has been acquired but WSCC will not take possession until work is ready to begin 1/15/15; **1** Order of Possession has been issued for full take Crenshaw parcel CR-3304. Owner/operator is ordered to vacate by 1/15/15.

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.
- Attended bi-weekly Management-Level Meetings with representative from the City of Los Angeles, Metro Engineering and Construction Management.
- Participated in Construction Work Plan (CWP) Reviews, Readiness Reviews and Construction Specification Reviews.
- Scheduled seven Testing Oversight verifications by an Independent Testing Laboratory (Ninyo and Moore) for various field activities including concrete cylinder testing, welder qualification reviews, concrete coring sample testing and nondestructive testing of deck beam welds.
- Attended a WSCC Quality Training Class on Nonconformance Reporting. The next Quality Training effort will focus on MSE Wall Installation and Inspection.
- Issued the Metro Audit Report of WSCC Design and Construction activities. WSCC response date is December 9, 2014.
- Issued a Nonconformance Report (NCR No, 11) for a Pile Installation problem at EXPO.

C0992 Concrete Rail Ties

• No activities. Ties have been securely stored in various Project locations.

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 and Vernon Station
 - Noise Control Plan for Century Bridge
 - Noise Control Plan for Support of Excavation (SOE)
 - o Noise Control Plan for Cast-In-Drilled- Hole (CIDH)
 - Weekly Noise Monitoring Data for Century Bridge
 - o Green Construction Plan Monthly Reports
 - Sustainability Plan Monthly Reports
 - o Weekly Storm Water Pollution Prevent Plan (SWPPP) inspection reports
 - Weekly Fugitive Dust Inspection Reports
 - Weekly Noise Monitoring Reports, and
 - Various Construction Work Plans
- Submitted Quarterly Mitigation Monitoring Reporting Plan (July October) to FTA.
- Coordinated hazardous waste abatement for parcel SW-0103.
- Continued remediation of contaminated ballast and underlying soil on former BNSF railroad along Metro ROW.
- Conducted additional soil and groundwater investigations at Underground No. 3.
- Coordinated the permitting and removal of Underground Storage Tanks (USTs) with the City and County of Los Angeles.
- Coordinated with property owner's environmental consultant for parcel SW-0104 for installation of additional groundwater monitoring well.
- 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).
- Coordinated the relocation of nine Phase I trees in the City of Los Angeles along Crenshaw Blvd.
- Coordinated tree removal permit applications for the City of Los Angeles for Phase II on Crenshaw Blvd.
- Coordinated the removal for Phase III Harbor Subdivision city owned trees.
- Attended Contractor Weekly Progress meetings, Environmental Task-Force Meetings and various over-the-shoulder submittal meetings with Contractor.
- Attended CLC Meetings, Neighborhood Council Meetings and Construction Update Meeting to discuss tree removal and other environmental concerns.

CONSTRUCTION RELATIONS STATUS

- Conducted outreach via e-blast regarding Conference of Minority Transportation Officials Let's Talk Business.
- Conducted outreach for TOD Parking POD.
- Participated in Park Mesa Heights Community Council Meeting, 4th Avenue Block Club Community Meeting, Westchester Streetscape Improvement Association Community Meeting, Gateway to LA Bi-Monthly Meeting LAX Stakeholders, Hyde Park Organizational Partnership for Empowerment (HOPE) Community Meeting, Supervisor Mark Ridley Thomas CLC Pre-Meeting and CLC Economic Development POD Meeting.
- Coordinated Project updates to 2,967 recipients who opted-in to Daily Project Updates.
- Coordinated Crenshaw full closure outreach and Economic Development POD Outreach Meeting.
- Provide tree removal notices to 5,239 stakeholders in the City of Inglewood.

SYSTEMWIDE DESIGN AND ART PROGRAM STATUS

- Responded to RFIs and submittal drawings.
- Continued to refine project artwork opportunities.
- Continued to facilitate stage one artist selection panel process.
- Further development of strategy for construction fence artwork and other mitigation efforts.
- Participated in meetings with community stakeholders to discuss art program.

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.
- Reviewed contractor safety submittals and construction work plans to ensure compliance with contract specifications.
- Issued non-compliance letter to WSCC regarding lack of site security personnel.
- Conducted All-Hands Monthly Safety/Security Meeting with WCC's Construction Safety personnel.
- Walsh/Shea reported 84,425 work hours and one recordable incident for the month of November 2014. Total Project-to-Date work hours are 804,591 and five recordable incidents. The Project Incident Rate is 1.3. The Bureau of Labor Statistics (BLS) average recordable rate per 200,000 work-hours is 3.8.

THIRD PARTY AGREEMENT STATUS

Third Party	Type of Agreement	Forecast Execution Date	Required Need Date	Status/ Comments
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	3/15	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

- Advance relocation of DWP-Power conduits, manholes and conduits completed at MLK and Expo Station sites. Installation of the cable started in August 2013. Work at Crenshaw/Expo Station is complete. Work at Crenshaw/MLK Station has been completed.
- 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:
 - o Crenshaw/MLK 24" relocation was completed in September 2014.
 - o Crenshaw @ 60th St. relocation in progress, to complete by end of March 2015.
 - o Crenshaw @ 63rd St. relocation in progress, to complete by end of April 2015.
 - Crenshaw @ Hyde Park St. relocation to start January 2015 and complete by end of May 2015.
- Design is complete by SCE for advance relocation of fiber crossings and pole supports along the Harbor Subdivision. Construction completed in July 2014.
- Design is complete by SCE for the advance relocation of power crossings and pole supports on Redondo Blvd. at High St. Construction completed in July 2014.
- SCE Power (10) new services and relocations scheduled for completion from 2014 thru 2017. The near term work would include:
 - Design is complete by SCE for advance relocation of fiber crossings and pole supports along the Harbor Subdivision. Construction completed in July 2014.
 - Design is complete by SCE for the advance relocation of power crossings and pole supports on Redondo Blvd. at High St. Construction completed in July 2014.
 - Relocation of underground power line to accommodate new pedestrian undercrossing at Faithful Central Bible Church property.
- Tesoro Oil design in progress for 8" gas line. Construction should commence in June 2015 and complete in September 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	Туре	City
A1211018	Eucalytpus 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
14004040	W 1501 Ot 1	0.10	
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	e 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.

Crenshaw/LAX Transit	Project
Monthly Project Status	Report

CHRONOLOGY OF EVENTS (Continued)

	toriologi or Eventio (continuou)
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)

	1011010101010101010101010101010101010101
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.
March 7, 2014	Issued Notice to Proceed to LB Foster Rail Technology Corp., Contract C0992A Rail and Bumping Posts.
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.

CONTRACT C0988 STATUS

Crenshaw/LAX Transit Corridor

PE Design Contractor: Hatch Mott MacDonald (HMM)

CM Consultant: Stantec

Contractor: - Walsh Shea Corridor Constructors (WSCC)

Progress/Work Completed:

- Submitted Interim Design on COLA Streetscape.
 Submitted Segment A Readiness for Construction Design on Aerial Guideway and Stations; Continued Segment A Readiness for Construction Design on Local Streets
- Submitted Segment B Readiness for Construction Design on Stations; Continued Segment B Readiness for Construction Design on Local Street Park Mesa; Continued Segment B Final Design on Guideway.
- Submitted Segment C Readiness for Construction Design on Underground Structures and MLK/Vernon/Expo Stations; Continued Segment C Readiness for Construction Design on Guideway & Local Street.
- Commenced Final Design OCS.
- Continued Readiness for Construction Design TPSS & Communication.

Construction

- Continued potholing in the Vernon & MLK Station.
- Continued geotechnical monitoring at Vernon, MLK & Expo Station.
 Continued with SWPPP Implementation Segments A, B & C.
- Continued Construction for CSM in Expo.
- Commenced and completed Phase 1 deck operation at Expo Station.
- Continued utility relocation/ protection work at Expo Station Area
- Continued utility relocation/ protection work at MLK, Vernon & Century.
- Commenced and completed hazmat abatement/demo of Park Mesa
- Continued CIDH work at Century Blvd. Bridge.
- Completed delivery of TBM components to the project site.

Contract No.: C0988

Status as of November 28, 2014



Areas of Concern:

- BOE approval process for SOE design

Schedule Assessment:

Metro's assessment of the contractor's schedule update is that they are behind on meeting interim design milestones.

Contractor's Oct 2014 schedule update indicates Milestone 1 - Contract Substantial Completion is 50 calendar days behind.

Cost Assessment:

The current construction contract cost forecast is \$1,278.71 million and is within the Board authorized budget.

The Contractor submitted their 15th payment application in the approved amount of \$18,196,728.01.

Schedule Summary:

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:	1824	
5.	Elapsed Time from NTP:	444	

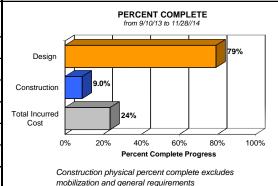
Cost Summary: \$ In millions 1. Award Value: 1,272.63 2. Executed Modifications: 6.08

3. Approved Change Orders:

4. Current Contract Value (1 + 2 + 3): 1,278.71

5. Incurred Cost: 301.27

Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance
Milestone 1 - Contract Substantial Completion	09/08/18	09/08/18	10/28/18	-50
Milestone 2 - UFS Completion	03/09/18	03/09/18	04/23/18	-45
Milestone 3 - Commence SIT Phase I	06/09/18	06/09/18	05/03/18	37
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	03/07/17	90
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

PE Design Contractor: Hatch Mott MacDonald (HMM) Contract No.: C0990 **CM Consultant: Stantec** Contractor: - Metro Builders and Engineers Group LTD Status as of November 28, 2014 Areas of Concern: Progress/Work Completed: - The construction was substantially completed on Aug 21, 2014 Cost Assessment: **Schedule Assessment:** The current construction contract cost forecast is \$9.29 million and Metro has agreed to grant a total of 124 calendar day time extension as a within the Board authorized budget. The forecast has increased result of lost production due to sandy soil conditions and revised installation methodology for sewer line work at 59th & Crenshaw, and traffic control and from the previous reporting period primarily due to approved change orders. work hour restriction to 67th & Crenshaw. The Contractor submitted their 23rd payment application in the Metro granted substantial completion to Metro Builders, the Advanced Utility approved amount of 62,512. Contractor on August 21, 2014, which is 276 calendar days behind. The unpaid amount is the scope deletion from the base contract and remaining balance of provisional sums . Schedule Summary: Cost Summary: \$ In millions 1. Date of Award: 05/30/12 1. Award Value: 7.83 2. Notice to Proceed: 07/17/12 2. Executed Modifications: 0.97 3. Original Substantial Completion Duration: 365 3. Approved Change Orders: 0.49 4. Current Substantial Completion Duration: 468 4. Current Contract Value (1 + 2 + 3): 9.29 5. Elapsed Time from NTP: 753 5. Incurred Cost: 9.12 Calendar PERCENT COMPLETE Original Current Day Milestones Contract Contract Forecast Variance Milestone 1 - Contract Substantial 07/17/13 11/18/13 08/21/14 -276 Completion Design Construction Total Incurred Cost 100% 40% 60% **Percent Complete Progress** Construction physical percent complete excludes mobilization and general requirements

CONTRACT C0991 STATUS

Southwestern Yard

PE Design Contractor: Hatch Mott MacDonald (HMM) CM Consultant: Stantec Contractor: - TBD					Contract No.: C0991 Status as of November 28, 2014			
Progress/Work Completed: - Metro advertised the Southwestern Yard (Division 16) design build contract on August 29, 2014 There have been three Amendments issued: #1 September 19, 2014 #2 October 24, 2014 #3 November 25, 2014					Areas of Concern: - None.			
Schedule Assessment:					Cost Assessment:			
- Step One Technical Bid and Step To January 8, 2015.	wo Price bio	d submittal	required o	n	Cost Assessment:			
Schedule Summary:					Cost Summary: \$ In millions			
Date of Award:					1. Award Value:			
Notice to Proceed:					Executed Modifications:			
Original Substantial Completion D	uration:				Approved Change Orders:			
Current Substantial Completion D					4. Current Contract Value (1 + 2 + 3):			
Elapsed Time from NTP:	uration.				5. Incurred Cost:			
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	PERCENT COMPLETE fromto			
MS#1 Yard and Main Shop Design Completion				0	Design 0%			
MS#2 Main Shop Communication Room				0	Design 0%			
Completion MS#3 Main Shop Substantial					Construction 0%			
Completion				0	- Constitution			
MS#4 Southwestern Yard Substantial Completion				0	Total Incurred 0%			
					Cost			
				 	0% 20% 40% 60% 80% 100%			
					Percent Complete Progress			
					Construction physical percent complete excludes mobilization and general requirements			

CONTRACT C0992 STATUS

Concrete Ties

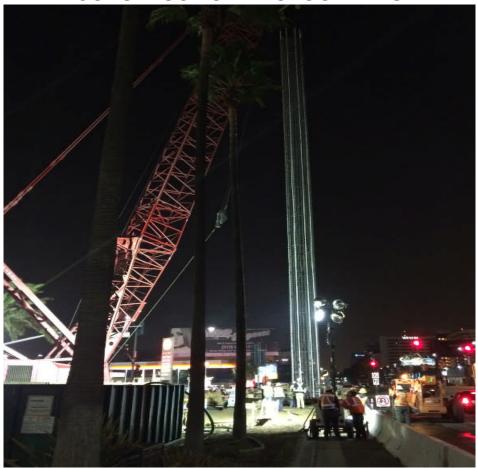
PE Design Contractor: Hatch Mott MacDonald (HMM) CM Consultant: Stantec Contractor: Rocla Concrete Tie Inc.					Contract No.: C0992 Status as of November 28, 2014			
Contractor: Rocla Concrete Tie Inc. Progress/Work Completed: - All 19,936 concrete ties have been received onsite by the design-builder (Contract C0988) Contract is in close-out pending resolution of any Buy America issues.					Areas of Concern	•	eview by FTA.	
Schedule Assessment: 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. All concrete ties have been delivered to job site by August 15, 2014.					Cost Assessment: The current contract cost forecast is \$2,243,035 The unpaid balance of \$178,454.29 is the tax amount of the base contract.			
Schedule Summary:					Cost Summary:	\$ In millio	ne	
Date of Award:			12/10/13		Award Value:	Ψ III IIIIIIC	2.16	
Notice to Proceed:			12/23/13		Executed Modif	fications:	0.08	
Original Substantial Completion I	Juration:		220		Approved Change Orders:			
Current Substantial Completion E			235			ct Value (1 + 2 + 3): -	2.24	
Elapsed Time from NTP:	ouration.		235		Incurred Cost:	or value (1 + 2 + 3).	2.06	
Milestones Milestone 1 - Contract Substantial Completion	Contract C		Forecast 08/15/14	Calendar Day Variance 0 0 0 0 0 0	Delivered Shipped Total Incurred Cost 0%	Percent Complete Progre		
						action physical percent complete ex ation and general requirements	xcludes	

CONTRACT C0992A STATUS

Running Rail and Bumping Posts

PE Design Contractor: Hatch I CM Consultant: Stantec Contractor: LB Foster Rail Tec	Contract No.: C0992A Status as of November 28, 2014								
Contractor: LB Foster Rail Technology Corp Progress/Work Completed: - All 115RE SS Blank Stick Rails have been delivered to the job site All 115RE HH rail have been delivered to job site.					Areas of Cond				
Schedule Assessment: 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 date has been changed from 12/31/2014 to 9/30/2015.					Cost Assessment: The current contract cost forecast is \$5,184,044.79. No invoice was received in November 2014.				
					_				
1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP:			01/23/14 03/07/14 300 558 266		1. Award Valu 2. Executed M 3. Approved C 4. Current Cor 5. Incurred Co	e: lodifications hange Orde ntract Value	ers:	In millions -	5.2 5.2 4.8
	Original	Current		Calendar Day			PERCENT COM		
Milestones Milestone 1 - Contract Substantial Completion	Contract 12/31/14	Contract 09/30/15	09/30/15		Design	0%	IIGII 3/7/2014 to 1	11/20/14	
				0	Construction Total Incurred Cost				93%
				0	0%		Percent Comple		
							vsical percent co general requirer		des

CONSTRUCTION PHOTOGRAPHS



Aviation/Century Aerial Structure CIDH Cage Setting.



Tunnel Boring Machine Cutter Head onsite.



Tunnel Boring Machine Screw Conveyor.



Setting Pin Pile on Crenshaw Boulevard.



Continued to excavate going north on Crenshaw Boulevard.



Continue to weld beams on the south side of station.



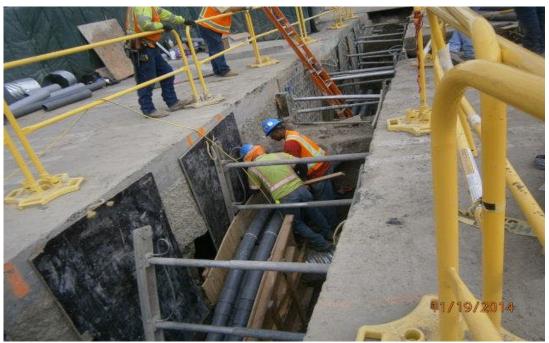
Placing deck beams 25 and 26.



Placing bracing beams for beams 34 and 35.



Placing deck beam #34, 35,36 and 37.



Continued to place duct run at Expo and Crenshaw.



Place base for connecting ramp on Rodeo Place and Crenshaw.



City of Los Angeles – BOE on site inspecting work south of Rodeo.

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.

November 2014

APPENDIX

LIST OF ACRONYMS

ACE Advanced Conceptual Engineering Americans with Disabilities Act ADA ADR Alternative Dispute Resolution Administrative Law Judge ALJ **AMC** Airport Metro Connector APM **Automated People Mover** Alternative Technical Concept ATC 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

CLC Community Leadership Council

CM Construction Manager

CMAQ Congestion Mitigation and Air Quality Improvement Program

CN Change Notice
CO Change Order
CPM Critical Path Method

CPUC California Public Utilities Commission

CR Camera Ready

CRMMP Cultural Resources Monitoring and Mitigation Plan

CSM Cutter Soil Mixing

CSPP Construction Safety Phasing Plan
CTC California Transportation Commission

CUD Contract Unit Description CWP Construction Work Plan

DB Design Build
DBB Design Bid Build

DBE Disadvantaged Business Enterprise

LIST OF ACRONYMS (Continued)

DOT	Department of Transportation
DRB	Dispute Review Board
DWP	Department of Water and Power
EEO	Equal Employment Opportunity
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPBM	Earth Pressure Balance Machine
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 Federal Emergency Management Agency FEMA

Full Funding Grant Agreement FFGA **FIS** Financial Information System

FLSR Fire Life Safety Report

FONSI Finding of No Significant Impact Federal Railroad Administration FRA

FSEIR Final Supplemental Environmental Impact Report Final Supplemental Environmental Impact Statement **FSEIS**

FTA Federal Transit Administration

FTE Full Time Equivalent

Geotechnical Baseline Report **GBR**

GDSR Geotechnical Design Summary Report

GFE Good Faith Effort HMM Hatch Mott MacDonald

Howard, Needles, Tammen and Bergendoff **HNTB**

IFB Invitation for Bid

Integrated Project Management Office **IPMO ITF** Intermodal Transportation Facility

JV Joint Venture LA Los Angeles

Los Angeles Bureau of Engineering LABOE LABOS Los Angeles Bureau of Sanitation Los Angeles Bureau of Street Lighting LABSL LACFCD Los Angeles County Flood Control District

LACMTA Los Angeles County Metropolitan Transportation Authority

LADOT Los Angeles Department of Transportation **LADPW** Los Angeles Department of Public Works **LADWP** Los Angeles Department of Water and Power

LAUSD Los Angeles Unified School District

LIST OF ACRONYMS (Continued)

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

LRTP Long Range Transportation Plan

LRV Light Rail Vehicle

MBE Metro Builders and Engineers Group, Ltd

MCA Master Cooperative Agreement

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

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

LIST OF ACRONYMS (Continued)

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

RFMP Rail Fleet Management Plan 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

LIST OF ACRONYMS (Continued)

SIT	System Integration Testing
SOE	Support of Excavation
SOQ	Statement of Qualification
SOV	Schedule Of Value
SOW	Statement Of Work

Special Provision Specific Plan Amendment Study **SPAS Special Permitting Process** SPP

SSMP Safety and Security Management Plan

Surface Transportation Board STB

State Transportation Improvement Program STIP

Surface Transportation Program STP

STV Group STV

SP

UFS

SWPP Storm Water Prevention Plan **SWY** Southwestern Yard (Division 16)

TBD To Be Determined **TBM Tunnel Boring Machine**

Temporary Construction Easement TCE Traffic Congestion Relief Program **TCRP**

TIFIA Transportation Infrastructure Finance and Innovation Act Transportation Investment Generating Economic Recovery TIGER

TOD Transit Oriented Development **TPSS Traction Power Substation TRACS** Transit Automatic Control System Threat Vulnerability Analysis TVA TVM **Ticket Vending Machine** Universal Fare System

USDOT United States Department Of Transportation

VΕ Value Engineering

WBS Work Breakdown Structure

WP Work Package

WSCC Walsh/Shea Corridor Constructor

Year of Expenditure YOE