# **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).

**JANUARY 2014** 

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## **PROJECT SUMMARY**

#### **CRENSHAW/LAX TRANSIT PROJECT**

As of January 2014

LOCATION: Crenshaw I PE DESIGN/CONSULTAI			CONSTRUCTION MANAGEMENT CONSULTANT: Stantec CONTRACTOR: Walsh-Shea Corridor Constructors (WSCC)				
PROJECT PHOTO: Grou	ındbreakıng e	event on Janu	uary 21.	WORK COMPLETED PA	ST MONTH:		
			o WSCC continued refinement of project alignment and profile.  o WSCC continued development of traffic management plan for underground stations.  o WSCC continued design efforts on ground structures and local streets on all segments.  o Metro accepted WSCC Baseline Schedule  o Metro continued real estate acquistions.  o Metro Builders contractor continued street sewer relocations and continued LADWP water line relocations.				
EXPENDITURE STATUS (\$ In Millions)				SCHEDULE ASSESSME	NT		
	CURRENT	EXPENDED	PERCENT	MAJOR SCHEDULE	PRIOR	CURRENT	
ACTIVITIES	ESTIMATE	AMOUNT	EXPENDED	ACTIVITIES	PLAN	PLAN	VARIANCE WEEKS
				Environmental			
DESIGN	\$ 136.7	\$ 45.8	33.5%		Sep-11		Complete
				Record of Decision	Dec-11	Dec-11	Complete
RIGHT-OF-WAY	\$ 127.4	\$ 121.7	95.5%	Design		•	
CONSTRUCTION	\$ 1,353.1	\$ 110.1	8.1%	Preliminary Engineering	Nov-11	Nov-11	Complete
				Final Design Sep-15 Sep-15		On Schedule	
OTHER	\$ 440.8	\$ 62.5	14.2%	Right-of-Way			
TOTAL	\$ 2,058.0	\$ 340.1	16.5%	All parcels available	Aug-14	Oct-14	8 weeks
Note; cost as of February	1, 2014.			Construction			
AREAS OF CONCERN				D-B Notice to Proceed	Sep-13	Sep-13	Complete
o Right-of-way acquisition for	orecast dates tr	ending later tha	n planned	D-B Substantial Complete	Sep-18	Sep-18	On schedule
o CPUC approval of crossir				Revenue Service Date	Oct-19	Oct-19	On schedule
o Timely future reviews of V	VSCC's designs	s by City of Los	Angeles,				•
City of Inglewood, Caltrans,	=		-				
o Third party relocations pri		•	·				
o Execution of Agreement v	•						
ROW ACQUISITION	PLAN	ACQUIRED	REMAINING	CRITICAL ACTIVITIES /		K AHEAD	
PERMANENT PARCELS	34	13	o WSCC continue design confirmation.     o WSCC continue development of early work packages.     o WSCC commence demolition of buildings on property turned over.				
TEMPORARY PARCELS	40	1	39	o WSCC confinence define o WSCC prepare various o WSCC continue geotec	permit applicat	ions.	ocity tuilled OVEI.
TOTAL PARCELS	74	22	52	_	•		
	, ,			o Metro continue turning over properties to WSCC.     o Metro Builders contractor continue street sewer relocations.     o LADWP continue water line relocations at north end.			

### PROJECT OVERVIEW

#### **Major Contract Procurement**

The recommendation for award of Contract C0992 Concrete Ties was approved by the Metro Board of Directors on December 5, 2013. This contract was originally one but was split into two with a new contract number, C0992A, assigned for the rebid of running rail and bumping posts scope of work.

The recommendation for award of Contract C0992A bids was approved by the Metro Board of Directors on January 23, 2014. Anticipate a notice to proceed to be issued by the end of February 2014.

Solicitation of the last design-build contract to be issued for this project is Contract C0991 Southwestern Yard, which is planned to be advertised in 2015.

#### Construction

Contract C0990 - The advanced utility relocations Contractor, Metro Builders and Engineers Group, LTD (MBE) continues relocations along Crenshaw Blvd. The City of Los Angeles sewer relocations along 67<sup>th</sup> Street and Crenshaw and also around 60<sup>th</sup> street and Crenshaw, are estimated to be complete by end of April 2014. The City of Los Angeles storm drain at Leimert Park Place was substantially completed with punchlist work continuing into February 2014.

The LADWP (Water) scope of work for lowering and encasing four water crossings on Crenshaw Blvd commenced in December 2013 and is estimated to be complete by end of April 2014.

The contractor is behind schedule and submitted a revised construction schedule on December 12, 2013. The projected substantial completion date is April 28, 2014. The projected completion date does not appear to impact the follow-on design-build contractor C0988. See the Contract C0990 Status sheet on page 40 for more information.

**Contract C0988** – The design-builder, Walsh-Shea Corridor Constructors (WSCC) *completed* mobilization to the Integrated Project Management Office (IPMO) near Los Angeles International Airport. The design-builder continues final design with preparation of early required contract submittals. Facility design progress continues with utility relocations, station footprint definition, maintenance of traffic drawings and tunnel liner. Systems design progress continues with task force meetings addressing decisions needed on train control, traction power and communications. A main emphasis is on continuing design confirmation efforts for design criteria which is a key submittal planned for February 14, 2014. *Metro "accepted as noted" on January 16, 2014, WSCC re-submittal of the Baseline Schedule.* See Contract C0988 Status sheet on page 39 for more information.

## **PROJECT OVERVIEW (Continued)**

#### Right-of-Way

The Real Estate Acquisition and Management Plan (RAMP) and Relocation Plan were completed on October 24, 2012. Metro requested and FTA approved increasing the threshold value for property acquisitions from \$500,000 to \$1,500,000.

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).

#### **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. Preliminary engineering design has been completed and final design is scheduled to be completed by February 2014.

#### **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 City of Los Angeles. Metro needs to secure a legally binding 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.

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.

## **PROJECT OVERVIEW (Continued)**

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 federal percentages are as follows; local funding 79.9%, state funding 14.0% and federal funding 6.1%.

The project commitments thru January 2014 are \$1,633.1 million or 79.4% of the Current Budget. The project expenditures thru January 2014 are \$340.1 million or 16.6% of the Current Budget. The expenditures to date are for environmental/planning, preliminary engineering, third party utility relocation work, agency reviews/coordination, Contract C0990 advance utility relocations, Contract C0988 design-build mobilization and early design, right-of-way and professional services. Expenditures to date include the Southwestern Yard expenditures that are part of the 49% cost allocation share that the Project is responsible for paying for.

The project master schedule continues to reflect a forecast of October 2019 for Revenue Service which includes the additional two station options, Leimert Park Station and Hindry Station. This Baseline Revenue Service Date reflects the award of the design-build contract and ratification of a board motion to execute the bid options in the RFP conditioned upon amendment to the TIFIA loan agreement and execution of an agreement with the City of Los Angeles.

The project schedule contingency remains the same this period at 8.7 months.

A Risk Assessment Workshop was held on December 11<sup>th</sup> and 12<sup>th</sup> for the purpose of conducting a risk assessment of the project at a key stage of the project; after issuance of the notice to proceed to the design-builder. The results from the workshop will provide the basis for updating the project's Risk Register and Risk and Contingency Management Plan. *The updated Risk Register is planned to be issued on February 14, 2014.* This was the third of five planned risk assessment workshops.

#### **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> A CSPP has been previously completed and submitted and approved by FAA for the Advanced Utility Relocation Contractor. Now a CSPP has to be submitted by the design-builder for their scope of work and get FAA approval before work can commence in the LAX area. The design-builder held an introductory meeting with FAA on November 19, 2013, to discuss access, height restrictions and site restrictions. *A follow-up meeting with FAA is planned for February 2014.* 

**Concern No. 2:** Metro has submitted five applications to the California Public Utilities Commission (CPUC) for approval of grade crossing improvements. None have been approved.

**Status/Action** Metro completed and submitted all formal applications. There have been protests on two of the five applications (1 and 4). *Metro continues to work with the CPUC on at least getting approval of the three applications (2, 3, and 5) that have had no protests.* 

The Crenshaw Subway Coalition Park-Mesa grade crossing issue remains open. The CPUC Administrative Law Judge is scheduled to issue the draft decision by February 28, 2014. This may allow for decision to be calendared on the CPUC Commission Meeting in late March or April 2014.

**Concern No. 3:** Execution of Local Match Agreements for 3 percent project funding is required with the City of Inglewood.

<u>Status/Action</u> Metro and the City of Inglewood have worked through various issues over the last few months and may have a solution to outstanding issues so an agreement can be executed in the near future.

Concern No. 4: Execution of Grant Agreement with City of Los Angeles for \$55.0 Million.

<u>Status/Action</u> The Agreement that will provide for the City of Los Angeles 3% contribution for the Crenshaw/LAX has been placed on the agenda for Metro's Finance, Budget and Audit Committee on March 19, 2014.

#### **MANAGEMENT ISSUES**

**Concern No. 5**: Right-of-way acquisition forecast dates are trending later than planned.

Status/Action Metro continues to turn over parcels to the design-builder as they are acquired. Twenty-one full takes and one temporary construction easement have been turned over through January 2014. However, some parcels are being delivered later than originally scheduled to the design-builder. Metro and the design-builder are working together to refine the turnover dates to ensure there is no impact to the design-builder's construction schedule. In addition, Metro is maintaining additional consultant staff to support existing Metro staff in appraisal reviews, making offers, relocations and any coordination efforts required.

**Concern No. 6:** Variance to nighttime working hours.

<u>Status/Action</u> Variances to nighttime working hours on all five construction segments had been approved by the Los Angeles Police Commission. See page 26 for map of variance segments. Variances have to be renewed every six months.

The variance to nighttime working hours for Segments A, B, C and E have been renewed thru June 3, 2014. The variance for Segment D for the design-builder is still suspended until WSCC prepares work plan for construction within this area and presents to Council District 8 and the LAPD Noise Commission.

Metro has been meeting with Council District 8 and has been successful in restoring variances from Council District 8 for the Advance Utility Relocations Contractor.

**Concern No. 7:** 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 the first submittals by WSCC to ensure that timely review requirements will be met to support WSCC's baseline 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. 8:** 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. Three changes were executed with WSCC for only the parallel design effort required. Three construction changes are planned for execution with WSCC in the near future.

**Concern No. 9:** Special Permitting Process (SPP).

<u>Status/Action</u> Requires City of Los Angeles to approve SPP for Crenshaw/LAX Project which exempts project from certain restrictions. *Application was approved by the City Council on January 6, 2014. However, an amendment is being prepared by the City of Los Angeles to address some additional Metro concerns. The amendment will be placed on a future City Council agenda in March 2014.* 

**Concern No. 10:** 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 is working closely with various third party agencies to have relocations of utilities performed in accordance with the design-builder's baseline schedule.

Concern No. 11: Drawdown of project contingency.

<u>Status/Action</u> Metro in December 2013 forecast a potential drawdown of unallocated contingency in the amount of \$8.6 million for third party utility relocation work. This contingency drawdown is earlier than was anticipated for this stage of the project. Metro has commenced review of third parties scope of works and will carefully review all invoices as they are received.

## **PROJECT ALIGNMENT**

## Crenshaw/LAX Transit Project





#### **BASE 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 will include 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 new 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 is bid-build Invitation for Bid (IFB) approach.

#### 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. Street improvements at the Slauson intersection have been added to the base work for which Metro will continue to seek partial reimbursement from the City of Los Angeles. The project delivery method for this contract is 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).

## **BASE 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 design-build Invitation for Bid (IFB) approach with a two-step evaluation process for technical qualifications and responsive low bid.

#### Owner-Supplied Equipment - Contract C0992 Crenshaw/LAX Procurement

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 is bid-build Invitation for Bid (IFB) approach.

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

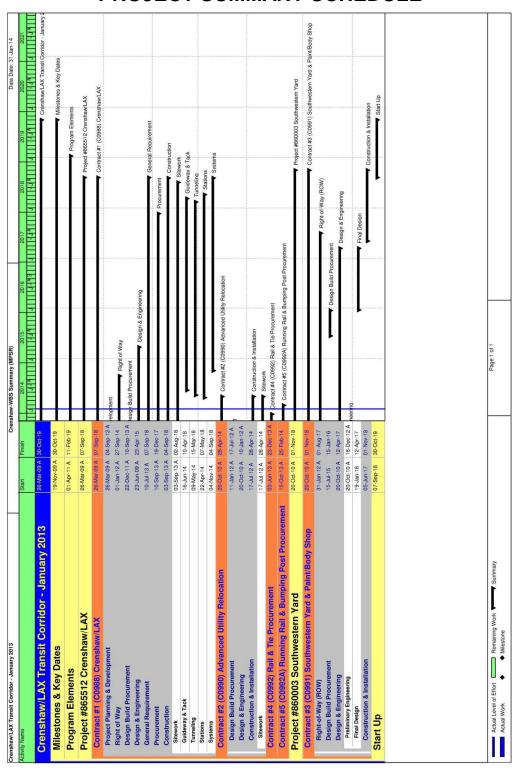
Metro has added a new contract for rebidding the procurement of running rail and bumping posts for the Design-Build Contract C0988 Crenshaw/LAX Transit Corridor Contractor.

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

## **KEY MILESTONES SIX- MONTH LOOK AHEAD**

ontract C0992A Running Rail NTP  02/25/14  03/07/14  ontract C0990 - Substantial Completion  04/28/14  MTA Staff  MTA Board Action  FTA (Federal								
ontract C0992A Running Rail NTP  02/25/14  03/07/14  ontract C0998 Design Confirmation Submittal  03/07/14  ontract C0990 - Substantial Completion  04/28/14  MTA Staff  MTA Board Action  FTA (Federal			Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
ontract C0988 Design Confirmation Submittal  03/07/14  ontract C0990 - Substantial Completion  04/28/14  MTA Staff  MTA Board Action  FTA (Federal	Contract C0992A Running Rail Board Approval	1/23/2014A	W					
ontract C0990 - Substantial Completion  04/28/14	Contract C0992A Running Rail NTP	02/25/14		Ø				
◆ MTA Staff	Contract C0988 Design Confirmation Submittal	03/07/14			Ch.			
· · · · · · · · · · · · · · · · · · ·	Contract C0990 - Substantial Completion	04/28/14						
· · · · · · · · · · · · · · · · · · ·								
Other Agencies Contractors OHMM Walsh Shea Corridor Constructors	◆ MTA Staff MTA Board Action	FTA (Federal						
	△ Other Agencies ☐ Contractors	<u></u> нмм		Walsh Shea	a Corridor Cor	nstructors		
"A" following date is actual and completed	"A" following date is actual and completed	* New						

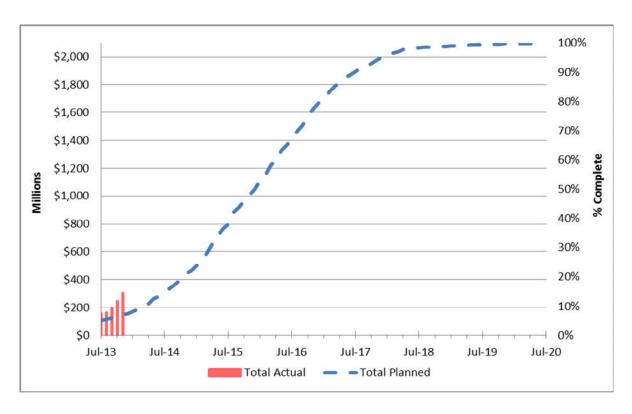
## PROJECT SUMMARY SCHEDULE



## **SCHEDULE MEASUREMENTS**

Current Revenue Service:	Status 10/30/2019	Change from Last Period	Comment
Forecast Revenue Service:	10/30/2019	None	
TIFIA Revenue Service:	10/30/2019	None	
Final Design Progress:			
Contract C0988	28%	6%	NTP issued 9/10/2013
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	0%	0%	NTP issued 9/10/2013
Contract C0990	79%	2%	Behind Schedule
Contract C0991	0%	-	
Contract C0992	0%	-	NTP issued 12/23/2013
Contract C0992A	0%	-	Awarded 1/23/2014
Cumulative To Date Progress:	14.1%		

#### **OVERALL CONSTRUCTION PROGRESS CURVE STATUS**



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

The cumulative overall final design and construction progress is 14.1%.

Construction progress for C0990 is 80%. This contractor continues to be behind schedule. See Contract C0990 Status sheet, page 40, for more information.

Final Design for C0988 commenced upon MTA issuing NTP on September 10, 2013. Cumulative final design progress to date is 28%. There is no construction progress to date. See Contract C0988 Status sheet, page 39, for more information.

#### **MAJOR EQUIPMENT DELIVERY STATUS**

#### **Tunnel Boring Machine**

WSCC, the design-builder for Contract C0988, will procure the tunnel boring machine and equipment. A purchase order for the equipment has been released by the design-builder.

#### **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 includes 20 LRVs for the Crenshaw/LAX project and two additional cars for spares.

#### **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.

#### **Running Rail and Concrete Ties**

Procurement of the concrete ties contract was awarded and Notice to Proceed was issued in December 23, 2013. Procurement of the running rail approved by the MTA Board of Directors on January 23, 2014.

## **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 critical path moves through final design for the alignment and completing shop drawings to begin procurement of the tunnel boring machines (TBMs). The TBMs are a long lead item and as packages of final design are approved for construction, work will commence on the alignment construction activities prior to the TBMs arrival, assembly and testing.

The critical path then flows to remaining construction elements: tunneling, guideway construction, station construction, and systems installation. 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.

#### **PROJECT COST STATUS**

Crenshaw/LAX Transit Corridor COST REPORT BY ELEMENT PERIOD: JANUARY 2014 UNITS IN DOLLARS

SCC		ORIGINAL	CURREI	NT BUDGET	COMM	ITMENTS	EXPEN	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	- LINIOD	452,500,001	- LINIOD	437,482,844	3,600,000	12,400,000	- LINIOD	452,500,001	- V/III/II/OL
20	STATIONS	153,906,000		316,050,000		300,550,000	359,026	1,285,377		316,050,000	
30	SOUTHWESTERN YARD	66,673,000	-	66,673,000	-					66,673,000	-
40	SITEWORK\SPECIAL CONDITIONS (Note 5)	235,576,000	-	348,565,999	-	326,936,496	16,017,973	96,437,291	-	357,220,999	8,655,000
50	SYSTEMS	125,132,000	-	169,311,000	-	149,821,000		-	-	169,311,000	-
10-50	CONSTRUCTION	1,052,622,000	-	1,353,100,000		1,214,790,340	19,976,999	110,122,668		1,361,755,000	8,655,000
60	RIGHT-OF-WAY (Note 3)	132,294,000	-	127,400,000	22,745,128	141,971,139	12,542,025	121,718,901	-	127,400,000	-
70	LRT VEHICLES	87,780,000	-	82,100,000	-	82,050,901	-	7,331,542	-	82,100,000	-
80	PROFESSIONAL SERVICES (Note 4)	273,147,000	-	295,900,000	1,016,904	168,255,507	5,548,008	75,412,142	-	295,900,000	(0)
90	UNALLOCATED CONTINGENCY	177,157,000	-	173,500,000		-	1	-	-	164,845,000	(8,655,000)
	865512 & 860003 - SUBTOTAL	1,723,000,000	-	2,032,000,000	23,762,032	1,607,067,886	38,067,032	314,585,254	-	2,032,000,000	-
	ENVIRONMENTAL/PLANNING-405512	5,526,150	-	5,526,150		5,524,858		5,524,858	-	5,524,858	(1,292)
	ENVIRONMENTAL/PLANNING-465512	20,473,850	1	20,473,850		20,475,142	•	20,023,238	•	20,475,142	1,292
	405512 & 465512 - SUBTOTAL	26,000,000	-	26,000,000	-	26,000,000	-	25,548,097	-	26,000,000	-
	405512, 465512, 865512 & 860003 - TOTAL	1,749,000,000	-	2,058,000,000	23,762,032	1,633,067,886	38,067,032	340,133,350	-	2,058,000,000	-

Note-1: 405512, 465512, 865512 and 860003 are internal MTA project numbers to differentiate between environmental/planning and construction components of the project.

## **PROJECT COST ANALYSIS**

#### **Original Budget and Current Budget:**

The Board in October 2011 established the Life-of-Project (LOP) budget of \$1,749 million for the Crenshaw/LAX Transit Corridor 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
  - 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 above continues to include 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 forecast cost for the Southwestern Yard. The \$139.4 million is spread among the appropriate SCC categories in the Project Cost Status table on previous page. The categories include SCC 30, 60, 80 and 90.

Note-2: Project 865512 & 860003 expenditures are cumulative through 01-Feb-2014.

Note-3: Includes \$81,736,391 commitments and \$81,621,623 expenditures for the Southwestern Yard project 860003 (49% of \$285.2 million forecast budget).

Note-4: Includes \$2,268,307 commitments and \$575,146 expenditures for the Southwestern Yard project 860003 (49% of \$285.2 million forecast budget).

Note-5: Includes \$150,000 commitments and \$0 expenditures for the Southwestern Yard project 860003 (49% of \$285.2 million forecast budget).

## PROJECT COST ANALYSIS (Continued)

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.

#### **Current Forecast:**

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

#### **Commitments:**

The commitments are cumulative through February 1, 2014. The total commitments increased by \$23.8 million this period primarily due to the following:

- SCC-60 (Right-of-Way) has increased by \$22.8 million for real estate appraisal, environmental, and relocation.
- SCC-80 (Professional Services) has increased by \$1.0 million for Metro project administration, legal services, third party scope of work with Los Angeles Police Department, project management support services with Hill International, Inc., community relations, labor compliances monitoring, and environmental consultant services.

The \$1,633.1 million in commitments to date represents 79.4% of the current budget.

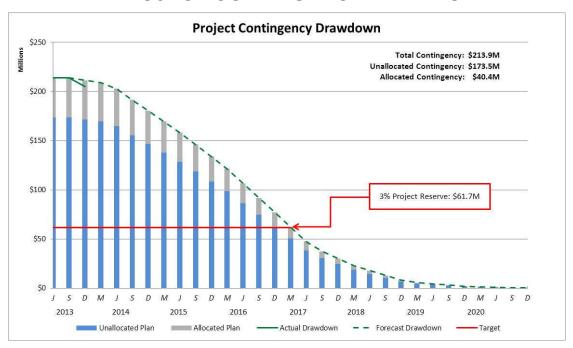
#### **Expenditures:**

The expenditures are cumulative through February 1, 2014. The total expenditures increased by \$38.1 million this period due to the following:

- SCC-10 (Guideways and Track) has increased by \$3.6 million for cost associated with Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-20 (Stations, Stops, Terminals, Intermodal) has increased by \$0.4 million for cost associated with Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-40 (Sitework and Special Conditions) has increased by \$16.0 million for costs associated with Contract C0988 Crenshaw/LAX Transit Corridor.
- SCC-60 (Right-of-Way) has increased by \$12.5 million for costs associated with real estate appraisal, acquisition, environmental, and relocation.
- SCC-80 (Professional Services) has increased by \$5.6 million for costs associated with Contract C0988 Crenshaw/LAX Transit Corridor, Engineering and Design Contract E0117, Metro project administration, IPMO field office lease and utilities, construction management support services, legal services, geotechnical investigation, third party scope of work with Los Angeles City Departments, community relations and environmental consultant services.

The \$340.1 million in expenditures to date represents 16.6% of the Current Budget.

#### PROJECT CONTINGENCY DRAWDOWN



Through 01-Feb-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.

#### **Current Period Contingency Drawdown Status:**

There was no drawdown this period.

#### **Cumulative Contingency Status:**

The cumulative contingency is \$205,211,792 or 10.0%.

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

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

• DBE Goal – Design 20.40%

Current DBE Commitment \$18,771,983 (19.76%)

Current DBE Participation \$ 794,294 (3.72%)

Fourteen (14) design subcontractors have been identified to-date

• DBE Goal – Construction 20%

Current DBE Commitment \$8,948,709 (0.76%)

Current DBE Participation \$ 597,384 (0.79%)

## PROJECT LABOR AGREEMENTS (PLA) STATUS

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

(Reporting Data as of January 31, 2014)

• Targeted Worker Goal – 40.00%

• Targeted Worker Current Participation - 68.44%

Apprentice Worker Goal - 20.00%

Apprentice Worker Current Participation - 16.12%

Disadvantaged Worker Goal - 10.00%

Disadvantaged Worker Current Participation 26.58%

\$3,000,000

#### **SUMMARY OF CHANGES**

#### **Summary of Changes Approved Changes by Cost Level** C0988, 10 Changes C0990, 32 Changes C0991, 0 Changes C0992, 0 Changes C0992A, 0 Changes (\$2,000,000) (\$1,000,000) \$0 \$1,000,000 \$2,000,000 C0992A, 0 C0992, 0 C0991, 0 C0990, 32 C0988, 10 Changes Changes Changes Changes Changes ■ Under \$100K 0 260,582 47,820 ■ \$100K to \$250K 0 0 0 673,238 120,458 ■ \$250K to \$1M 0 0 0 251,864 366,400 Over \$1M 0 0 0 0 (1,050,000)**Potential Changes by Cost Level** C0988, 2 Changes C0990, 8 Changes C0991, 0 Changes C0992, 0 Changes C0992A, 0 Changes

	C0992A, 0	C0992, 0	C0991, 0	C0990, 8	C0988, 2
	Changes	Changes	Changes	Changes	Changes
■ Under \$100K	0	0	0	85,954	0
■\$100K to \$250K	0	0	0	754,476	0
■\$250K to \$1M	0	0	0	0	0
Over \$1M	0	0	0	0	2,873,604

\$2,000,000

\$1,000,000

\$0

Thirty-two changes total valued at 0.1 million have been executed since execution of Contract C0990. The project team has identified and is evaluating an additional eight potential changes valued at \$0.8 million.

Ten changes total valued at 0.5 million have been executed since execution of Contract C0988. The project team has identified and is evaluating an additional two potential changes to the contract valued at \$2.9 million.

0%

0%

16.6%

0.0

4.9

324.2 15.8%

0%

10%

0.0

4.9

340.1

## FINANCIAL/GRANT STATUS

\$in millions										
	(A)	(B)	(C)	(D)	(D/B)	(E)	(E/B)	(F)	(F/B)	
201 - 20-	ORIGINAL	TOTAL	TOTAL	COMMITIV	ENTS	EXPEND!	TURES	BILLED to		
SOURCE	BUDGET	FUNDS	FUNDS						SOURCE	
		ANTICIPATED	AVAILABLE	\$	%	\$	%	\$	%	
FEDERAL - OMAQ	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%	7.3	86%	7.3	86%	
FEDERAL - REGIONAL STP	20.0	48.2	0.0	48.2	100%	0.0	0%	0.0	0%	
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	22	100%	2.2	100%	2.2	100%	
	0.470	0.470	0.470	0.470	4000/	0.470	40007	0.470	40007	
STATE PPM	0.178	0.178	0.178	0.178	100%	0.178	100%	0.178	100%	
STATE PROP 1B PTMSEA	201.2	201.2	23.4	201.2	100%	23.4	12%	23.4	12%	
CTATE POOD 4 D L COAL DARWED POOC	0.0	49.5	49.5	49.5	100%	49.5	100%	49.5	100%	
STATE PROP 1 B LOCAL PARTINER PROG	0.0	49.5	49.5	40.0	10076	48.3	10076	49.5	10076	
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	347.1	661.1	100%	234.1	35%	218.2	33%	
55. 210	557.1	557.1		301	.5576	20	3070	_101_	30,0	
OTHER FUNDS*	52.4	187.5	0.0	0.0	0%	0.0	0%	0.0	0%	
PROP C 25% HIGHWAY	148.9	189.6	3.8	7.8	4%	3.4	2%	3.4	2%	

NOTE: Expenditures are cumulative through January 2014.

PROP C 40% DISCRETIONARY

PROPA35% RAIL CAPITAL

TOTAL

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

Total Funds Anticipated based on Board approved June 2013 Revised Funding

10.2

50.4

2,058.0

0.0

4.8

1,749.0

0.0

4.9

1,000.6

0.0

4.9

1,633.1

0%

0%

79.4%

<sup>\*</sup> Other funds include: Local Agency Funds (\$107.473), 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. Metro submitted a formal submittal in November 2013 for review and approval.

**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 is expected to be approved *in February 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 current financial plan is to drawdown funds not prior than FY16.

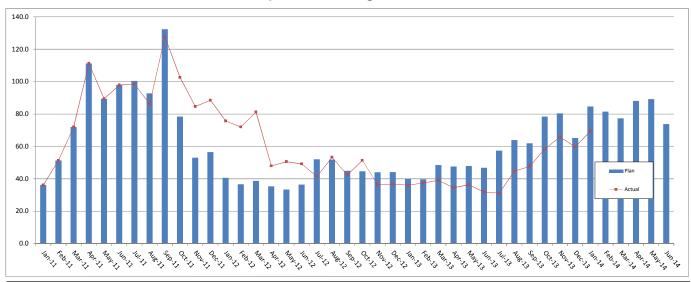
**MEASURE R:** \$53.4M has been allocated to the project based on the January 2012 Funding Plan. Funds are available for drawdown. An additional \$293.7M for FY13 has been allocated to the project based on the proposed May 2012 Measure R Extension Long Range Plan.

**PROP C 25% HIGHWAY:** \$3.8M has been allocated to the project based on the January 2012 Funding Plan. Funds are available for drawdown.

**PROP A 35% RAIL CAPITAL:** Based on November 2011 Long Range Transportation Plan, \$4.8 M of Proposition A 35% Rail Capital was allocated in FY2012 for the project. No Proposition A 35% Rail Capital Funds are allocated for Fiscal 2013 and 2014.

## **STAFFING STATUS**

## Total Project Staffing - FTES



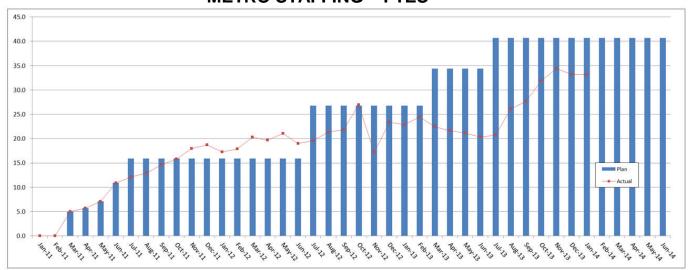
#### Notes:

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

#### **TOTAL PROJECT STAFFING**

For January 2014, there were a total of 33.2 FTE's for MTA's Project Administration staff and 36.2 FTE's for consulting staff. The total project staffing was 69.4 FTE's for January 2014. The overall FY14 Total Project Staffing plan averages 75.1 FTE's per month.

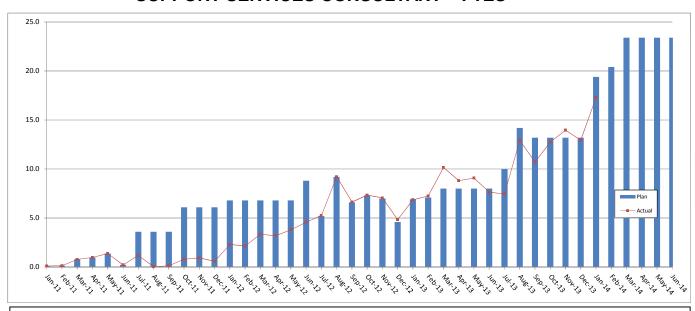
# STAFFING STATUS (Continued) METRO STAFFING – FTES



#### Notes:

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

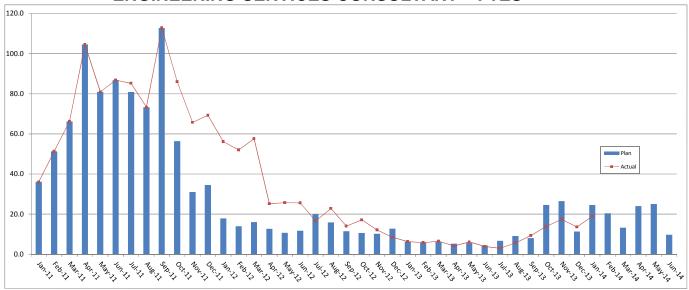
## CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTES



#### Notes:

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

# 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 January 2014.

## **REAL ESTATE STATUS**

Contract No.	Number of Parcels	Certified	Decertified	Appraisals in Process/Compl	Offers Made	Agreements Signed	Condemnation Filed	Relocations Complete	Parcels Available
C0988 C/LAX Transit Corrido	r (D-B):								
Crenshaw	<u> </u>	<u> </u>			<u> </u>				
Full Takes	12	12		12	12	4	4	8	8
Part Takes (PT or SE)	10	9	1	8	7	1		ļ	1
TCE	10	10		9	1				
Subtotal Parcels	32	31	1	29	20	5	4	8	9
Relocations	8							8	
Harbor Subdivision								 	
Full Takes	14	14		15	15	6	10	11	11
Part Takes (PT or SE)	19	18	1	18	8				
TCE	3	2	1	2	<u> </u>			ļ	
Subtotal Parcels	36	34	2	35	23	6	10	11	11
Relocations	11				<u> </u>			11	
Total HS/CR Parcels:	68	65	3	65	43	11	14	19	20
C0991Southwestern Yard (D-	·B):								
Full Takes	8	8		8	8	3	5	2	2
Part Takes	0								
TCE	0								
Subtotal Parcels:	8	8	0	8	8	3	5	2	2
Relocations	4							2	
C0990 C/LAX Advance Utility	Relocation	s:							
Total Parcels:	0								
Total Project Parcels	76	73	3	72*	51	14	19	21	22

<sup>\* 72</sup> appraisals complete (two properties were not appraised due to the nature of the acquisitions). With the addition of these two properties there is a total of 74 planned parcels. One of the full takes for the Harbor Subdivision was not certified.

- 51 offers made to property owners.
- 22 parcels acquired.

## **QUALITY ASSURANCE STATUS**

C0988 Crenshaw/LAX Transit Corridor Design-Build Contract

- Approved the WSCC Project Quality Program Manual.
- Construction Work Plans were reviewed and approved for preliminary project work activities including pot holing, surveys, geotechnical borings and demolition.

## **ENVIRONMENTAL STATUS**

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

- Coordinated hazardous waste abatement activities at Expo Station parcels.
- Attended weekly progress meeting, task force meetings and various over the shoulder submittal meetings.
- Reviewed the following Contractor Submittals:
  - Notice of Intent (NOI0 for the Strom Water Pollution Prevention Plan (SWPPP).
  - o Tree Inventory (Phase 1).
  - o Asbestos Abatement Work Plan.
  - Lead Abatement Work Plan.
  - o Contractor Generated Hazardous Waste Management Plan.
  - Baseline Schedule.
  - Various Construction Work Plans.

#### **C0990 Advanced Utilities Contract**

- Coordinated background noise monitoring for nighttime advanced utility work.
- Coordinated Archaeological Monitoring and Storm Water Pollution Prevention Plan (SWPPP) Inspections.

## **CONSTRUCTION RELATIONS STATUS**

- Participated in project briefing with the City of Los Angeles, Councilmember Herb Wesson, Jr. and Councilmember Bernard Parks.
- Participated in Project Groundbreaking event.
- Participated in project briefing with The Los Angeles Times.
- Participated in planning meeting with Tesoro Oil owners regarding gas line at Crenshaw/60<sup>th</sup> St. to discuss plan for outreach efforts.
- Conducted outreach and disseminated construction notices for fiver new project related work activities.
- Participated in project staff and Walsh-Shea Corridor Constructors weekly meeting.
- Provided project briefing and construction safety awareness training to West Area Neighborhood Council, People's Tabernacle of Faith, Marlton Elementary School and Crenshaw Church of Christ.
- Participated in Crenshaw/LAX Community Leadership Council Quarterly Meeting and City of Inglewood Interface Meeting.

#### **CREATIVE SERVICES STATUS**

#### Art Program

- Artist selection development.
- Ongoing community outreach.
- Design Build Mobilization.
- Scheduled Artist Workshops.
- Planning for construction fence temporary artwork.
- Held briefing sessions for Curatorial Advisory Panelists.

## **SAFETY & SECURITY STATUS**

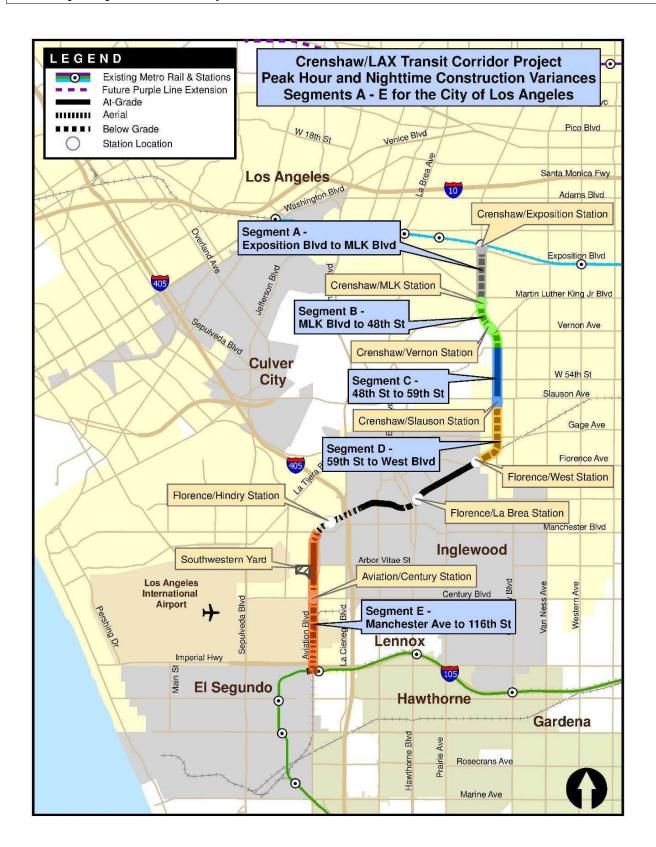
- Participated in weekly progress meetings with Construction Manager and Contractor Management to discuss safety/security related issues and construction schedules.
- IPO staff participated in Construction Safety Orientation conducted by Walsh & Shea Safety personnel.
- Monitored construction activities on a daily basis including night construction activities to ensure compliance with contract specifications.
- Reviewed contractor submittals and work plans to ensure compliance with contract specifications.
- Conducted All-hands Safety Meeting with LAPD, LA Sheriff and WSCC's site safety personnel.
- Metro Builders reported 5,165 work hours and zero incidents. Walsh/Shea reported 16,476 work hours and no accidents for the month of January 2014. Total Project-to-Date work hours are 130,953 with one recordable incident. The incident rate for the project is 1.5. The national recordable rate average 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	5/14	N/A	Executed Letter of Agreement April 2012. <i>Metro working on outstanding issues.</i>
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/ <b>13</b>	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**

- Relocation of Qwest ducts completed.
- Relocation of DWP-Power conduits, and manholes completed at Manchester Avenue; Installation of cable started and cut-over should complete by March 2014.
- 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 to be complete by March 2014.
- Design complete by DWP-Water for advance relocation of eleven (11) water lines along Crenshaw Boulevard. Construction will start in late September 2013. Work is forecast to complete by April 2014.
- Design in progress by SCE for advance relocation of fiber crossings and pole supports along the Harbor Subdivision. Completion expected by March 2014.
- Design in progress by SCE for the advance relocation of power crossings and pole supports on Redondo Blvd. at High St. completion expected June 2014.



# **CPUC CROSSING SUMMARY**

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
711212020	21,1	5.225 5.555g	2007.11.90.00
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

# **CPUC CROSSING SUMMARY (Continued)**

Metro filed formal grade applications to CPUC between November 16, 2012 and January 23, 2013. Protests were received on CPUC Application Packages 1 and 4; no protests were received on CPUC Application Packages 2, 3 and 5. Status by CPUC application is below:

#A1211018 - Package 1, Centinela, Eucalyptus and Pedestrian Underpass West of Eucalyptus

Status: The CPUC Administrative Law Judge (ALJ) is working on the Decision with support from local CPUC staff. Metro is concurrently in discussion with City of Inglewood for resolution. CPUC has accepted the settlement agreement between Metro and Faithful Central Bible Church regarding Eucalyptus and the pedestrian underpass. Forecast CPUC Commission Approval: March 27, 2014

#A1212030 - Package 2, At-Grade Gated Crossings in Inglewood

Status: Local CPUC Rail Safety Staff is continuing to work on the reports for these uncontested crossings and is targeted to complete the reports by end of February. Forecast CPUC Commission Approval: March 27, 2014

#A1212029 - Package 3, At-Grade Gated Crossings in Inglewood and Los Angeles

Status: Local CPUC Rail Safety Staff is continuing to work on the reports for these uncontested crossings and is targeted to complete the reports by end of February. Forecast CPUC Commission Approval: March 27, 2014

#A1301012 - Package 4, Crenshaw Street-Running Crossings

Status: The CPUC Administrative Law Judge (ALJ) is working on the Decision with support from local CPUC staff. The CPUC Administrative Law Judge is scheduled to issue the draft decision by February 28; however, this may be delayed since the Decision for Centinela has not been issued. The Crenshaw Subway Coalition did not issue a Brief or Reply Brief. Forecast CPUC Commission Approval: April 10, 2014

#A1302025 - Package 5, Grade Separated Crossings

Local CPUC Rail Safety staff completed their report, and this item is on the CPUC agenda on February 17, 2014 as a consent item for the CPUC Commission meeting scheduled for February 27, 2014. Forecast CPUC Commission Approval: February 27, 2014

Note: # is the CPUC action number.

# **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.

<b>Crenshaw/LAX Transit Project</b>
<b>Monthly Project Status Report</b>

January 2014

# **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.

## **CONTRACT C0988 STATUS**

Crenshaw/LAX Transit Corridor

PE Design Contractor: Hatch Mott MacDonald (HMM)

**CM Consultant: Stantec** 

Contractor: - Walsh Shea Corridor Constructors (WSCC)

## Contract No.: C0988

# -64

#### Progress/Work Completed:

- Completed data processing of Lidar
- Continued development of Maintenance of Traffic Plans for Vernon Stations & Green Line
- Updated Project Alignment and Profile and will submit to Metro for review
- Continued design on early works utility package and coordination of third
- Continued design for City of LA Storm Drain and Sanitary Sewer and City of Inglewood Storm Drain and Water
- Continued development of the 3D model and design Confirmation activities for Track/Trackway and Ductbank
- Final Above Ground Geotechnical Planning Report approved
- Continued design efforts on ground structures, substations, and local streets on all Segments
- Continued design confirmation efforts for design criteria for the Systems
- Completed the material procurement of Muck Handling System
- Continued with the fabrication of the Tunnel Boring Machine
- Started potholing in the Harbor Subdivision Segment A
- Started SWPP implementation Segment B

# Status as of January 31, 2014 Areas of Concern:

- None

#### Schedule Assessment:

Contractor revised baseline schedule submittal received on Dec 24, 2013 and approved by Metro on Jan 17, 2014.

#### **Cost Assessment:**

The current construction contract cost forecast is \$1,273.16 million and is within the Board authorized budget.

The Contractor submitted their 5th payment application in the approved amount of \$26,567,392.89.

#### Schedule Summary:

1. Date of Award:	07/01/13
2. Notice to Proceed:	09/10/13
3. Original Substantial Completion Duration:	1824
4. Current Substantial Completion Duration:	1824
5. Elapsed Time from NTP:	143

#### Cost Summary: \$ In millions

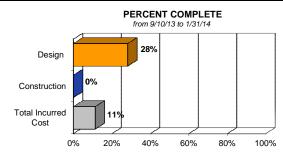
1.	Award Value:	1,272.63
2.	Executed Modifications:	0.53

3. Approved Change Orders:

4. Current Contract Value (1 + 2 + 3): 1,273.16

5. Incurred Cost: 144.38

Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance
Milestone 1 - Contract Substantial Completion	09/08/18	09/08/18		
Milestone 2 - UFS Completion	03/09/18	03/09/18		
Milestone 3 - Commence SIT Phase I	06/09/18	06/09/18		
Milestone 4 - Const./Turnover Parcels SW-0101, 0102, 0103	12/04/15	12/04/15		
Milestone 5 - Const./Turnover Parcels SW-0002, 0003, 0004, 0104	06/05/17	06/05/17		
Milestone 6 - Const./Turnover Parcels SW-0001	08/01/17	08/01/17		



Percent Complete Progress

Construction physical percent complete excludes mobilization and general requirements

#### **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 January 31, 2014 Progress/Work Completed:
- Work has continued at 59th Street & Crenshaw with sewer excavation, sewer shoring, bedding/laying of sewer pipe, and sewer encasement.
- Work has continued at 67th sewer relocation: excavation, shoring, Areas of Concern: - Sandy soil conditions at 59th & Crenshaw have resulted in a slower than anticipated rate of excavation for sewer relocation - Work has continued at both sewer relocation. Excavation, chairing, bedding/laying of sewer pipe.
- Work has continued at Crenshaw & Liemart park Strom drain relocation and will be completed in Feb 2014.
- Work has continued at Crenshaw & 48th, 50th, and Slauson waterline: excavation, shoring, bedding/laying of pipe. with an estimated production loss of 82%. These sandy soil conditions are anticipated at 67th & Crenshaw. **Cost Assessment:** Schedule Assessment: The forecast dates for Contract Milestones shown in the table below are The current construction contract cost forecast is \$7.97million and within the Board authorized budget. The forecast has increased based on the contractor's Dec13 Schedule Update. from the previous reporting period primarily due to approved MTA's assessment of the contractor's forecast completion date shown in the change orders. table below (and projected current cash flow burn rates) is a potential completion of April 28th, 2014. The Contractor previously submitted their 14th Payment application in the approved amount of \$303,243. MTA has reviewed TIA#3 and agrees to an extension of 42 work days (59 calendar day) as a result of lost production due to Sandy Soil Conditions at Increase in costs to the construction contract award value are a 59th & Crenshaw result of design enhancements and change orders. Decreases are the result of scope deletions. The Contractor submitted TIA#4 resubmittal was partially approved by MTA to an extension of 10 work day (14 calendar day) as a result of revised installation methodology for sewer line work at 59th & Crenshaw and LADOT requirements. The Contractor submitted TIA#5 which was rejected by MTA as the DWP work delays were concurrent with other Contractor caused delays. MTA has reviewed TIA 6.0 and agreed to 5 work days (7 calendar day) as result of the traffic control and work hour restriction to 67th & Crenshaw. Zero time has been granted for the Contractor submittal TIA#8 and #9 as they were concurrent with the other project delays. 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: (0.20)3. Original Substantial Completion Duration: 365 3. Approved Change Orders: 0.33 4. Current Substantial Completion Duration: 468 4. Current Contract Value (1 + 2 + 3): 7.96 5. Elapsed Time from NTP: 5. Incurred Cost: 563 6.29 Calendar PERCENT COMPLETE from 7/17/12 to 1/31/14 Original Current Day Milestones Contract Contract Forecast Variance Milestone 1 - Contract Substantial 07/17/13 11/18/13 04/28/14 -161 Completion Construction Total Incurred Cost

0%

40%

Construction physical percent complete excludes mobilization and general requirements

60%

Percent Complete Progress

80%

100%

# **CONTRACT C0991 STATUS**

Southwestern Yard

PE Design Contractor: Hatch CM Consultant: Stantec Contractor: - TBD  Progress/Work Completed: - PE drawing package completed I - IFB contract package on hold. Re approach slated for April 2014.	December 201	12.		Status as of January 31, 2014  Areas of Concern: - None.			
Schedule Assessment:				Cost Assessment:			
Schedule Summary:  1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion 4. Current Substantial Completion 5. Elapsed Time from NTP:				Cost Summary: \$ In millions  1. Award Value: 2. Executed Modifications: 3. Approved Change Orders: 4. Current Contract Value (1 + 2 + 3): 5. Incurred Cost:			
Milestones	Original Contract	Current	PERCENT COMPLETE  fromto				
			Construction physical percent co mobilization and general requirer				

# **CONTRACT C0992 STATUS**

**Concrete Ties** 

PE Design Contractor: Hatch M CM Consultant: Stantec Contractor: Rocla Concrete Tie		nald (HM	Contract No.: C0992				
	IIIC.		Status as of January 31, 2014				
Progress/Work Completed: - Bids received on August 27, 2013 - Metro Board approved Contract Award on December 5, 2013 - Notice to Proceed issued on December 23, 2013					Areas of Concern: - None.		
Schedule Assessment:					Cost Assessment:		
					The current construction contract cost forecast is \$2,161,297		
Schedule Summary:			12/10/13		Cost Summary: \$ In millions		
Date of Award:					1. Award Value: 2.1		
2. Notice to Proceed:			12/23/13		2. Executed Modifications:		
3. Original Substantial Completion D	uration:		220		3. Approved Change Orders:		
4. Current Substantial Completion D	uration:		220 39		4. Current Contract Value (1 + 2 + 3): - 2.1		
5. Elapsed Time from NTP:				5. Incurred Cost:			
Milestones	Original Contract	Current Contract	Forecast	Calendar Day Variance	from 12/23/2013 t/31/14		
Milestone 1 - Contract Substantial	07/31/14	07/31/14	07/31/14	0			
Conmpletion					Design 0%		
0		Construction 0%					
				0	Construction 0%		
				0	Total Incurred 0%		
				0	Cost 0% 40% 60% 80% 100%		
0					Percent Complete Progress		
					Construction physical percent complete excludes mobilization and general requirements		

# **CONTRACT C0992A STATUS**

Running Rail and Bumping Posts

1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion Duration: 4. Current Substantial Completion Duration: 5. Elapsed Time from NTP:  Calendar Day Variance  Milestones  Original Current Contract Co	PE Design Contractor: Hatch M CM Consultant: Stantec Contractor: LB Foster Rail Tech			Contract No.: C0992A Status as of: January 31, 2014	
Schedule Summary:  1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion Duration: 4. Current Substantial Completion Duration: 5. Elapsed Time from NTP:  Calendar Day Variance  Milestones  Original Contract Contract Contract Ontract Ontract Contract Ontract	<ul> <li>Bids received on August 27, 2013.</li> <li>Contract C0992 was split into two conow under new Contract C0992A.</li> <li>Contract C0992A was advertised on Bids were received on November 20.</li> <li>Metro Board approved Contract Aw</li> </ul>	October 15, ), 2013. ard on Janua	2013. ary 23, 201	Areas of Concern:	
1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion Duration: 4. Current Substantial Completion Duration: 5. Elapsed Time from NTP:  Calendar Day Variance  Milestones  Original Current Contract Variance  Original Contract C	Schedule Assessment:				Cost Assessment:
1. Date of Award: 2. Notice to Proceed: 3. Original Substantial Completion Duration: 4. Current Substantial Completion Duration: 5. Elapsed Time from NTP:  Calendar Day Variance  Milestones  Original Current Contract Co	Schedule Summary:				Cost Summary: \$ In millions
3. Original Substantial Completion Duration: 4. Current Substantial Completion Duration: 5. Elapsed Time from NTP:  Calendar Day Variance  Milestones  Original Current Contract Value (1 + 2 + 3):  Original Current Day Variance  Design  Oconstruction  Oconstruct					
4. Current Substantial Completion Duration:  5. Elapsed Time from NTP:  Calendar Day Variance  Milestones  Original Current Contract Contract  Outract Contract Value (1 + 2 + 3):  Outract Contract Value (1 + 2 + 3):  Outract Contract Contract  Outract Contract  Ou	2. Notice to Proceed:				2. Executed Modifications:
5. Elapsed Time from NTP:  Calendar Day Variance  Original Current Contract Contract Oniginal Current Contract Oniginal Current Contract Oniginal Current Contract Oniginal Current Day Variance Oniginal Current Day Va	3. Original Substantial Completion D	ouration:			3. Approved Change Orders:
5. Elapsed Time from NTP:  Calendar Day Variance  Original Current Contract Contract Oniginal Current Contract Oniginal Current Contract Oniginal Current Contract Oniginal Current Day Variance Oniginal Current Day Va	4. Current Substantial Completion D	uration:			4. Current Contract Value (1 + 2 + 3):
Milestones	5. Elapsed Time from NTP:				5. Incurred Cost:
Design 0% 0% 0% 0% 0% 0% 0% 0% 0% 00% 100%	Milestones			fromto	
0 Construction 0%  Total Incurred Cost  0				0	Posign 0%
0 Total Incurred Cost				Design	
0 Total Incurred Cost 0% 20% 40% 60% 80% 100%				0	Construction 0%
0 0% 20% 40% 60% 80% 100%					
0 0% 20% 40% 60% 80% 100%				0	
				0	
0 Percent Complete Progress				0% 20% 40% 60% 80% 100%  Percent Complete Progress	
Construction physical percent complete excludes mobilization and general requirements					

# **CONSTRUCTION PHOTOGRAPHS**



Groundbreaking.



Groundbreaking.

# **CONSTRUCTION PHOTOGRAPHS**



Groundbreaking.



Groundbreaking.

# 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.

### LIST OF ACRONYMS

ACE Advanced Conceptual Engineering
ADR Alternative Dispute Resolution
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

BNSF Burlington Northern Santa Fe Railway Company

BOC Bus Operations Control

CADD Computer Aided Drafting and Design CALTRANS California Department of Transportation

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

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

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

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

## LIST OF ACRONYMS (Continued)

FAA Federal Aviation Administration FAR Federal Acquisition Regulation FCBC Faith Central Bible Church

FD Final Design

FEIR Final Environmental Impact Report FEIS Final Environmental Impact Statement

FFGA Full Funding Grant Agreement

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

GDSR Geotechnical Design Summary Report

GFE Good Faith Effort HMM Hatch Mott MacDonald

IFB Invitation for Bid

IPMO Integrated Project Management Office ITF Intermodal Transportation Facility

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
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

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

# LIST OF ACRONYMS (Continued)

MBE Metro Builders and Engineers Group, Ltd MCA Master Cooperative Agreement

MIS Major Investment Study

MOS Minimum Operating Segment
MOU Memorandum of Understanding
MPS Master Program Schedule
MPSR Monthly Project Status Report
MSF Maintenance & Storage Facility

N/A Not Applicable

NEPA National Environmental Protection Act NFPA National Fire Protection Association

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

PIP Project Implementation Plan PLA Project Labor Agreement

PM Project Manager

PMIP Project Management Implementation 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

RFC Request For Change

## LIST OF ACRONYMS (Continued)

RFMP Rail Fleet Management Plan RFP Request For Proposals RFQ Request For Qualifications

RFSC Request for Special Consideration

RHA Risk Hazard Analysis

RLPE Red Light Photo Enforcement

ROC Rail Operations Center ROD Record Of Decision

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

SCAQMD Southern California Air Quality Management District

SCADA Supervisory Control and Data Acquisition

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 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

TBD To Be Determined
TBM Tunnel Boring Machine

TCE Temporary Construction Easement TCRP Traffic Congestion Relief Program

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

# **LIST OF ACRONYMS (Continued)**

TOD Transit Oriented Development
TPSS Traction Power Substation
TPACS Transit Automatic Control State

TRACS Transit Automatic Control System
TVA Threat Vulnerability Analysis
TVM Ticket Vending Machine
UFS Universal Fare System

USDOT United States Department Of Transportation

VCA Voluntary Cleanup Agreement

VE Value Engineering

WBS Work Breakdown Structure

WP Work Package

WSCC Walsh/Shea Corridor Constructor

YOE Year of Expenditure