

Metro

*Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA*



Agenda - Final

Thursday, April 12, 2018

10:15 AM

**One Gateway Plaza, Los Angeles, CA 90012,
3rd Floor, Metro Board Room**

Construction Committee

James Butts, Chair

Jacquelyn Dupont-Walker, Vice Chair

Robert Garcia

Janice Hahn

Sheila Kuehl

Carrie Bowen, non-voting member

Phillip A. Washington, Chief Executive Officer

METROPOLITAN TRANSPORTATION AUTHORITY BOARD RULES
(ALSO APPLIES TO BOARD COMMITTEES)

PUBLIC INPUT

A member of the public may address the Board on agenda items, before or during the Board or Committee's consideration of the item for one (1) minute per item, or at the discretion of the Chair. A request to address the Board should be submitted in person at the meeting to the Board Secretary. Individuals requesting to speak on more than three (3) agenda items will be allowed to speak up to a maximum of three (3) minutes per meeting. For individuals requiring translation service, time allowed will be doubled.

Notwithstanding the foregoing, and in accordance with the Brown Act, this agenda does not provide an opportunity for members of the public to address the Board on any Consent Calendar agenda item that has already been considered by a Committee, composed exclusively of members of the Board, at a public meeting wherein all interested members of the public were afforded the opportunity to address the Committee on the item, before or during the Committee's consideration of the item, and which has not been substantially changed since the Committee heard the item.

The public may also address the Board on non-agenda items within the subject matter jurisdiction of the Board during the public comment period, which will be held at the beginning and/or end of each meeting. Each person will be allowed to speak for up to three (3) minutes per meeting and may speak no more than once during the Public Comment period. Speakers will be called according to the order in which the speaker request forms are received. Elected officials, not their staff or deputies, may be called out of order and prior to the Board's consideration of the relevant item.

In accordance with State Law (Brown Act), all matters to be acted on by the MTA Board must be posted at least 72 hours prior to the Board meeting. In case of emergency, or when a subject matter arises subsequent to the posting of the agenda, upon making certain findings, the Board may act on an item that is not on the posted agenda.

CONDUCT IN THE BOARD ROOM - The following rules pertain to conduct at Metropolitan Transportation Authority meetings:

REMOVAL FROM THE BOARD ROOM The Chair shall order removed from the Board Room any person who commits the following acts with respect to any meeting of the MTA Board:

- a. Disorderly behavior toward the Board or any member of the staff thereof, tending to interrupt the due and orderly course of said meeting.
- b. A breach of the peace, boisterous conduct or violent disturbance, tending to interrupt the due and orderly course of said meeting.
- c. Disobedience of any lawful order of the Chair, which shall include an order to be seated or to refrain from addressing the Board; and
- d. Any other unlawful interference with the due and orderly course of said meeting.

INFORMATION RELATING TO AGENDAS AND ACTIONS OF THE BOARD

Agendas for the Regular MTA Board meetings are prepared by the Board Secretary and are available prior to the meeting in the MTA Records Management Department and on the Internet. Every meeting of the MTA Board of Directors is recorded on CD's and as MP3's and can be made available for a nominal charge.

DISCLOSURE OF CONTRIBUTIONS

The State Political Reform Act (Government Code Section 84308) requires that a party to a proceeding before an agency involving a license, permit, or other entitlement for use, including all contracts (other than competitively bid, labor, or personal employment contracts), shall disclose on the record of the proceeding any contributions in an amount of more than \$250 made within the preceding 12 months by the party, or his or her agent, to any officer of the agency, additionally PUC Code Sec. 130051.20 requires that no member accept a contribution of over ten dollars (\$10) in value or amount from a construction company, engineering firm, consultant, legal firm, or any company, vendor, or business entity that has contracted with the authority in the preceding four years. Persons required to make this disclosure shall do so by filling out a "Disclosure of Contribution" form which is available at the LACMTA Board and Committee Meetings. Failure to comply with this requirement may result in the assessment of civil or criminal penalties.

ADA REQUIREMENTS

Upon request, sign language interpretation, materials in alternative formats and other accommodations are available to the public for MTA-sponsored meetings and events. All requests for reasonable accommodations must be made at least three working days (72 hours) in advance of the scheduled meeting date. Please telephone (213) 922-4600 between 8 a.m. and 5 p.m., Monday through Friday. Our TDD line is (800) 252-9040.

LIMITED ENGLISH PROFICIENCY

A Spanish language interpreter is available at all Board Meetings. Interpreters for Committee meetings and all other languages must be requested 72 hours in advance of the meeting by calling (213) 922-4600 or (323) 466-3876.



323.466.3876 x2

Español

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한국어

日本語

中文

русский

ភាសាខ្មែរ

ภาษาไทย

Tiếng Việt

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HELPFUL PHONE NUMBERS

Copies of Agendas/Record of Board Action/Recordings of Meetings - (213) 922-4880 (Records Management Department)

General Information/Rules of the Board - (213) 922-4600

Internet Access to Agendas - www.metro.net

TDD line (800) 252-9040

NOTE: ACTION MAY BE TAKEN ON ANY ITEM IDENTIFIED ON THE AGENDA

CALL TO ORDER**ROLL CALL****APPROVE Consent Calendar Item(s): 31.**

Consent Calendar items are approved with one motion unless held by a Director for discussion and/or separate action.

CONSENT CALENDAR

- 31. SUBJECT: METRO GOLD LINE EASTSIDE ACCESS 1ST/CENTRAL STATION IMPROVEMENT PROJECT** [2018-0095](#)

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

- A. EXECUTE Modification No. 4 to Contract No. AE439330011938, with Ted Tokio Tanaka Architects (TTTA), for the Metro Gold Line Eastside Access 1st/Central Station Improvement Project (Eastside Access), for additional design services in the amount of \$487,959, increasing the Total Contract Value from \$2,060,492 to \$2,548,451; and
- B. INCREASE Contract Modification Authority (CMA) specific to Contract No. AE439330011938 for Eastside Access in the amount of \$412,041, increasing the total CMA amount from \$268,954 to \$680,995, to support additional services related to Eastside Access.

Attachments: [Attachment A - Procurement Summary.pdf](#)
[Attachment B - Contract Modification Log.pdf](#)
[Attachment C - DEOD Summary.pdf](#)

NON-CONSENT

- 32. SUBJECT: PROGRAM MANAGEMENT MAJOR PROJECT STATUS REPORT** [2018-0113](#)

RECOMMENDATION

RECEIVE oral report on the Major Project Status by the Chief Program Management Officer.

Attachments: [Presentation](#)

33. **SUBJECT: FISCAL YEAR 2019 PROGRAM MANAGEMENT ANNUAL PROGRAM EVALUATION** [2018-0018](#)

RECOMMENDATION

RECEIVE AND FILE report on FY2019 Program Management Annual Program Evaluation.

Attachments: [Presentation](#)

34. **SUBJECT: SYSTEMS ENGINEERING AND SUPPORT SERVICES** [2018-0066](#)

RECOMMENDATION

AUTHORIZE:

- A. the Chief Executive Officer to award a Task Order (TO) based seven-year cost plus fixed fee contract plus three one-year options, Contract No. AE47810E0128, to SECOTrans (Joint Venture of LTK Engineering Services, NBA Engineering Inc., Pacific Railway Enterprises Inc., and Ramos Consulting Services, Inc) for systems engineering and support services for design of rail and transit projects;
- B. an initial two year not-to-exceed amount of \$28,932,000 for Task Orders issued through Fiscal Year 2020; and
- C. the Chief Executive Officer to execute individual Task Orders and changes within the Board approved not-to-exceed amount for the contract.

Attachments: [Attachment A-Procurement Summary.pdf](#)
[Attachment B - DEOD Summary \(2\).pdf](#)

35. **SUBJECT: PERMEABLE PAVEMENT AND BIORETENTION PILOT PROJECT, DIVISION 4 MAINTENANCE FACILITY** [2018-0094](#)

RECOMMENDATION

APPROVE an increase in the Life of Project Budget (LOP) for Permeable Pavement and Bioretention Pilot Project (Project) in the amount of \$1.16 million increasing the LOP from \$940,000 to \$2.1 million to complete construction of the Project.

Attachments: [Attachment A - Procurement Summary C1160](#)
[Attachment B - DEOD Summary](#)

GENERAL PUBLIC COMMENT

Consideration of items not on the posted agenda, including: items to be presented and (if requested) referred to staff; items to be placed on the agenda for action at a future meeting of the Committee or Board; and/or items requiring immediate action because of an emergency situation or where the need to take immediate action came to the attention of the Committee subsequent to the posting of the agenda.

COMMENTS FROM THE PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S
SUBJECT MATTER JURISDICTION

Adjournment

**Board Report**

File #: 2018-0095, **File Type:** Contract**Agenda Number:** 31.

**CONSTRUCTION COMMITTEE
APRIL 12, 2018****SUBJECT: METRO GOLD LINE EASTSIDE ACCESS 1ST/CENTRAL
STATION IMPROVEMENT PROJECT****ACTION: APPROVE RECOMMENDATIONS****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to:

- A. EXECUTE Modification No. 4 to Contract No. AE439330011938, with Ted Tokio Tanaka Architects (TTTA), for the Metro Gold Line Eastside Access 1st/Central Station Improvement Project (Eastside Access), for additional design services in the amount of \$487,959, increasing the Total Contract Value from \$2,060,492 to \$2,548,451; and
- B. INCREASE Contract Modification Authority (CMA) specific to Contract No. AE439330011938 for Eastside Access in the amount of \$412,041, increasing the total CMA amount from \$268,954 to \$680,995, to support additional services related to Eastside Access.

ISSUE

The scope for the Eastside Access project falls predominantly within the public right of way. The scope of the design effort has increased to accommodate additional lighting, midblock crossings with pedestrian signals, bike lane additions, street parking reconfigurations, all of which required multiple iterations of plans and additional reviews, preparation of backup calculations, and approvals by multiple regulatory agencies. Within the footprint of the project, there are three other Metro projects including the Regional Connector, Emergency Security Operations Control (ESOC), and Division 20 Turn Back project, all of which has required additional coordination efforts. Various phases of the design development for these projects overlap each other, and in order to avoid duplication or omission, it has become necessary to have constant coordination between the four projects during the design development, including inter-project meetings to review respective scope in the overlapping areas, joint meetings with the City Bureaus for comment resolutions, and additional community interaction. The Modification is required in order to complete the design services suitable for bidding purposes. Staff is also requesting additional CMA in the amount of \$412,041 in case it is necessary to address any new issues as we move final design forward towards 100% completion.

DISCUSSION

The Eastside Access / 1st & Central Project (Project) is a Measure R funded project with a voter approved \$30 million allocation. The funding is intended to improve multi-modal linkages and enhancements from the Gold Line Eastside stations to the surrounding neighborhoods. A portion of these funds was dedicated to the development of improvements within a one-mile radius of the new 1st and Central Station for the Regional Connector project. The 1st and Central Station Improvement Project will improve pedestrian and bicycle safety, and has been designed in accordance with the policies and requirements of Metro and the City of Los Angeles.

During the development of the Project, a series of pedestrian, bicycle, and streetscape improvements to within a one-mile radius of 1st and Central Station were identified and included in the Connect US Action Plan. The series of first and last mile improvements within public Right-of-Way (ROW) were submitted for consideration to the Federal Transit Administration (FTA), who awarded TIGER VI funding in the amount of \$11,800,000 in September 2015 to fund construction of the improvements. To proceed with the 1st and Central Station Improvement Project, which is the third phase of the Eastside Access Project, Metro retained TTTA to provide design services from conceptual to final design and to provide design services during construction (DSDC). At present, the design work is approximately 65% complete, and staff anticipates completing all design work to 100% by January 2019.

The Project design and construction has been divided into seven segments: 1st Street (Segment 1), Alameda Esplanade (Segment 2), Los Angeles Street (Segment 3), 2nd and Traction (Segment 4), Central Avenue (Segment 5), Judge John Aiso (Segment 6), Santa Fe Spine (Segment 7). Additionally, there are common improvements such as additional signage for all segments.

The Life of Project (LOP) budget for this Project will be scheduled for consideration by the Metro Board upon completion of the design work and receipt of contractor bids, which is currently anticipated to be August 2019.

DETERMINATION OF SAFETY IMPACT

This Board action will not have an adverse impact on safety standards for Metro. Completion of the Eastside Access project will have a positive safety impact to Metro customers, pedestrians and bicyclists in the project area.

FINANCIAL IMPACT

Funding for this Contract is included in the FY18 budget under Project 460300 (Eastside Light Rail Access), Cost Center 8510 (Construction Project Management), and Account 50316 (Professional

Services). Funds for Project 460300 were also budgeted in Cost Center 4320 and Cost Center 4540. Since this is a multi-year contract, the Chief Program Management Officer and the Project Manager will be accountable to budget the cost for future years, including the exercise of any options for future phases.

IMPACT TO BUDGET

The sources of funds for the actions under Recommendation A are Measure R 35% funds. These funding sources are designated for this project and do not have an impact to Operations eligible funding.

ALTERNATIVES CONSIDERED

The Board may choose not to approve the staff recommendation. However, this disapproval would result in staff being unable to complete design and construction work for the Eastside Access project.

NEXT STEPS

Upon Board approval, staff will execute Modification No. 4 to Contract No. AE439330011938 with TTTA to allow the continuation of the design work for the Eastside Access Project.

ATTACHMENTS

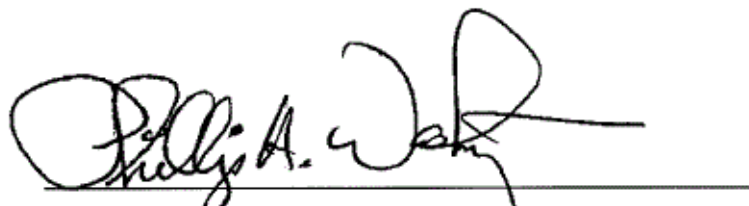
- Attachment A - Procurement Summary
- Attachment B - Contract Modification/Change Order Log
- Attachment C - DEOD Summary

Prepared by:

Milind Joshi, Senior Director, Project Engineering (213) 418-3211

Reviewed by:

Debra Avila, Chief Vendor/Contract Management Officer (213) 418-3051
Richard F. Clarke, Chief Program Management Officer (213) 922-7447



Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

**METRO GOLD LINE EASTSIDE ACCESS
1ST/ CENTRAL STATION IMPROVEMENT PROJECT / AE439330011938**

1.	Contract Number: AE439330011938		
2.	Contractor: Ted Tokio Tanaka Architects		
3.	Mod. Work Description: Supplemental coordination and design services required based on meetings with the City of Los Angeles and community expectations.		
4.	Contract Work Description: Metro Gold Line Eastside Access 1st / Central Station Improvement Project		
5.	The following data is current as of: 03/12/2018		
6.	Contract Completion Status		Financial Status
	Contract Awarded:	02/24/2016	Contract Award Amount: \$1,793,022
	Notice to Proceed (NTP):	02/24/2016	Total of Modifications Approved: \$267,470
	Original Complete Date:	08/31/2017	Pending Modifications (including this action): \$487,959
	Current Est. Complete Date:	12/31/2021	Current Contract Value (with this action): \$2,548,451
7.	Contract Administrator: Gina Romo		Telephone Number: (213) 922-7558
8.	Project Manager: Milind Joshi		Telephone Number: (213) 418-3211

A. Procurement Background

This Board Action is to approve Contract Modification No. 4 issued in support of additional design services to include additional lighting, midblock crossings with pedestrian signals, bike lane additions, street parking reconfigurations, and inter-projects coordination per meetings with City of Los Angeles. This Contract Modification also extends the period of performance through December 31, 2021.

This Contract Modification was processed in accordance with Metro's Acquisition Policy and the contract type is a firm fixed price.

On February 24, 2016, Contract No. AE439330011938 was awarded to Ted Tokio Tanaka Architects in the amount of \$1,793,022 for the Metro Gold Line Eastside Access 1st/ Central Station Improvement Project.

Refer to Attachment B – Contract Modification/Change Order Log.

B. Cost Analysis

The recommended price has been determined to be fair and reasonable based upon an independent cost estimate (ICE), cost analysis, technical evaluation, fact finding and negotiation. All direct labor rates and fees remain unchanged from the original contract.

Proposal Amount	Metro ICE	Negotiated Amount
\$501,252	\$503,450	\$487,959

CONTRACT MODIFICATION/CHANGE ORDER LOG

**METRO GOLD LINE EASTSIDE ACCESS
1ST/ CENTRAL STATION IMPROVEMENT PROJECT / AE439330011938**

Mod. No.	Description	Status (approved or pending)	Date	\$ Amount
1	Authorization to begin Phase II	Approved	11/14/2016	\$0
2	Surveying and Soils Testing	Approved	03/16/2017	\$121,292
3	Additional Community Outreach	Approved	06/28/2017	\$146,178
4	Supplemental coordination and design services	Pending	04/19/2018	\$487,959
	Modification Total:			\$755,429
	Original Contract:		02/24/2016	\$1,793,022
	Total:			\$2,548,451

DEOD SUMMARY

**METRO GOLD LINE EASTSIDE ACCESS
1ST/ CENTRAL STATION IMPROVEMENT PROJECT / AE439330011938**

A. Small Business Participation

Ted Tokio Tanaka Architects (TTTA), an SBE Prime, made a 41.59% Small Business Enterprise (SBE) commitment. The project is 60% complete. TTTA is currently exceeding their commitment with an SBE participation of 54.66%.

Small Business Commitment	41.59% SBE	Small Business Participation	54.66% SBE
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	SBE Subcontractors	% Committed	Current Participation¹
1.	Ted Tokio Tanaka Architects (SBE Prime)	36.00%	49.89%
2.	Sapphos Environmental, Inc.	1.09%	0.88%
3.	Systems Consulting, LLC	4.50%	3.89%
	Total	41.59%	54.66%

¹Current Participation = Total Actual amount Paid-to-Date to SBE firms ÷ Total Actual Amount Paid-to-date to Prime.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy (LW/SCWRP) is applicable is not applicable to this Modification.

C. Prevailing Wage Applicability

Prevailing wage is not applicable to this Modification.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.



Board Report

File #: 2018-0113, File Type: Oral Report / Presentation

Agenda Number: 32.

CONSTRUCTION COMMITTEE APRIL 12, 2018

**SUBJECT: PROGRAM MANAGEMENT MAJOR PROJECT STATUS
REPORT**

ACTION: RECEIVE ORAL REPORT

RECOMMENDATION

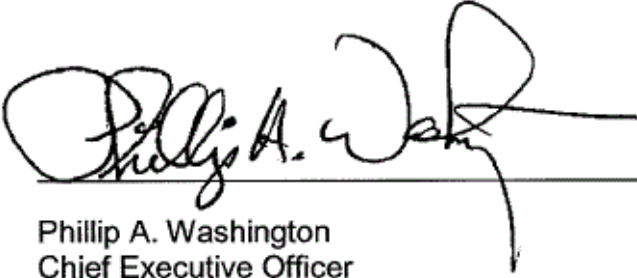
RECEIVE oral report on the Major Project Status by the Chief Program Management Officer.

DISCUSSION

- A. Update report covering the month of April 2018 by the Chief Program Management Officer; and
- B. At the January 26, 2018 Board meeting, the Board approved the continuation and expansion of the authority delegation within Life of Project (LOP) budget management on all Transit and Regional Rail Capital Projects program-wide. Staff is directed to provide quarterly reports on change orders and modifications that are above \$500,000. The first quarterly report to the Board is included in Attachment A.

Prepared by:

- **Master Schedule** - Julie Owen, DEO, Project Mgmt., (213) 922-7313
- **Crenshaw/LAX** - Charles Beauvoir, EO Project Mgmt., (213) 903-4113
- **Regional Connector** - Gary Baker, EO Project Mgmt., (213) 893-7191
- **Westside Purple Line Ext 1** - James Cohen, EO Project Mgmt., (213) 922-7911
- **Westside Purple Line Ext 2** - Michael McKenna, EO Project Mgmt., (213) 312-3132
- **Westside Purple Line Ext 3** - Michael McKenna, EO Project Mgmt., (213) 312-3132
- **Patsaouras Plaza Busway Station** - Timothy Lindholm, EO Project Engr., (213) 922-7297
- **Willowbrook/Rosa Park Station** - Timothy Lindholm, EO Project Engr., (213) 922-7297
- **The New Blue** - Androush Danielians, EO Project Engr., (213) 922-7598
- **Presentation** - Yohana Jonathan, Departmental System Analyst, (213) 922-7592



Phillip A. Washington
Chief Executive Officer

Program Management Major Project Status Report

Presented By

Richard Clarke

Chief Program Management Officer

















April 2018

Construction Committee

Los Angeles County Metropolitan Transportation Authority



PROJECT BUDGET & SCHEDULE STATUS SUMMARY CHART

Project	Cost Performance	Schedule Performance	Comments
Crenshaw/LAX			Project is 79% complete. The remaining cost contingency is below 2% of the total project budget (\$33.2 million in contingency remains). Contractor is 56 days behind schedule. Metro and contractor are working together to implement mitigation strategies to maintain planned revenue service in October 2019.
Regional Connector			Project is 49% complete and proceeding on schedule and cost forecast is within Life of Project budget.
Westside Purple Line Extension-Section 1			Project is 31% complete.
Westside Purple Line Extension-Section 2			Project is 6% complete with no significant issues.
Westside Purple Line Extension-Section 3			<ul style="list-style-type: none"> FTA approval for Entry into Engineering is expected in Spring 2018. FTA approval for LONP is also expected in Spring 2018. Award of Contract C1151 Tunnel is anticipated in April 2018.
Patsaouras Plaza			Project is 54% complete with approved substantial completion date of December 2018.
Willowbrook/Rosa Parks Station			Design activities are complete. Early Start Phase (Package E) contract awarded, second contract (Package A and C) in procurement process.
Metro Blue Line Projects			<p>Pedestrian Swing Gate project 95% complete. Experiencing delays from Union Pacific Rail Road. MBL Signal Rehab project 85% design work is in progress.</p> <p>MBL System and Track Refurbishment IFB issued 2/27. Bids are due 3/6</p> <p>City of Long Beach Fare Gates infrastructure design 100% complete for two stations.</p>

April 2018



On target



Possible problem



Major issue



Metro 2

Construction Committee

Los Angeles County Metropolitan Transportation Authority

TRANSIT MASTER SCHEDULE (Page 1 of 2)

TASK filters: Code Cleanup_1, Name contains, Show on Master Schedule, WBS Categories_WBS				* 00 Master Program (By Phase) no contin													13-Mar-18	
Activity Name	PMIS Project Manager	Start	Finish	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032
Transit Projects																		
Environmental																		
North San Fernando Valley BRT Improvements	Cencic	04-Jan-17 A	30-Jun-25															
North Hollywood to Pasadena BRT	Richmai	30-Jan-15 A	02-Sep-25															
Orange Line Grade Separations	Patel	23-May-16 A	30-Jun-25															
East San Fernando Valley Transit Corridor	Davis	11-Oct-10 A	06-Jul-29															
Vermont BRT Corridor	Cencic	30-Jan-15 A	06-Nov-29															
Crenshaw Northern Extension	Moosavi	16-Mar-18	17-Jun-47															
West Santa Ana Transit Corridor	Pan	01-Oct-09 A	09-Nov-28															
Sepulveda Phase 1 - Express Lanes	Wong	05-Mar-18	15-Jul-26															
Sepulveda Phase 2 - Transit Corridor	Zelmer	26-Apr-17 A	24-Nov-36															
Sepulveda Phase 3 - Westwood to LAX	Mieger	26-Apr-17 A	26-Jun-57															
South Bay Green Line Ext. Crenshaw Blvd in Tor	Khanna	23-Mar-17 A	15-May-30															
Eastside Transit Corridor Phase 2 (1 Align)	Liu	01-Mar-07 A	08-Nov-35															
Design																		
Airport Metro Connector	Zelmer	04-Oct-10 A	29-Dec-23															
Procurement																		
Purple Line Extension Section 3	McKenna	29-Feb-16 A	04-Mar-26															
Gold Line Foothill Extension Phase 2B	Meade	02-Oct-13 A	25-Mar-27															
Construction Contract																		
Crenshaw/LAX Transit Corridor	Beauvoir	01-Jul-09 A	06-Dec-19															
Regional Connector Transit Corridor	Baker	26-Jan-09 A	12-Dec-21															
Purple Line Extension Section 1	Cohen	01-Jun-07 A	29-Nov-23															
Purple Line Extension Section 2	McKenna	02-Mar-15 A	30-Aug-25															
Transit Facilities																		
Design																		
Div 20 Portal/Turnback	Meade	16-May-16 A	16-Jun-23															
Construction Contract																		
	Lindholm	07-May-15 A	30-Dec-20															

■ Planning / Environmental
 ■ ROW / Utility Relocation
 ■ DB Construction
 ■ System Testing
 Not Funded (Env/ROW/Test)

■ Design / Engineering
 ■ Adv / Award
 ■ DBB Construction
 Not Funded (Eng/Bid/Con)

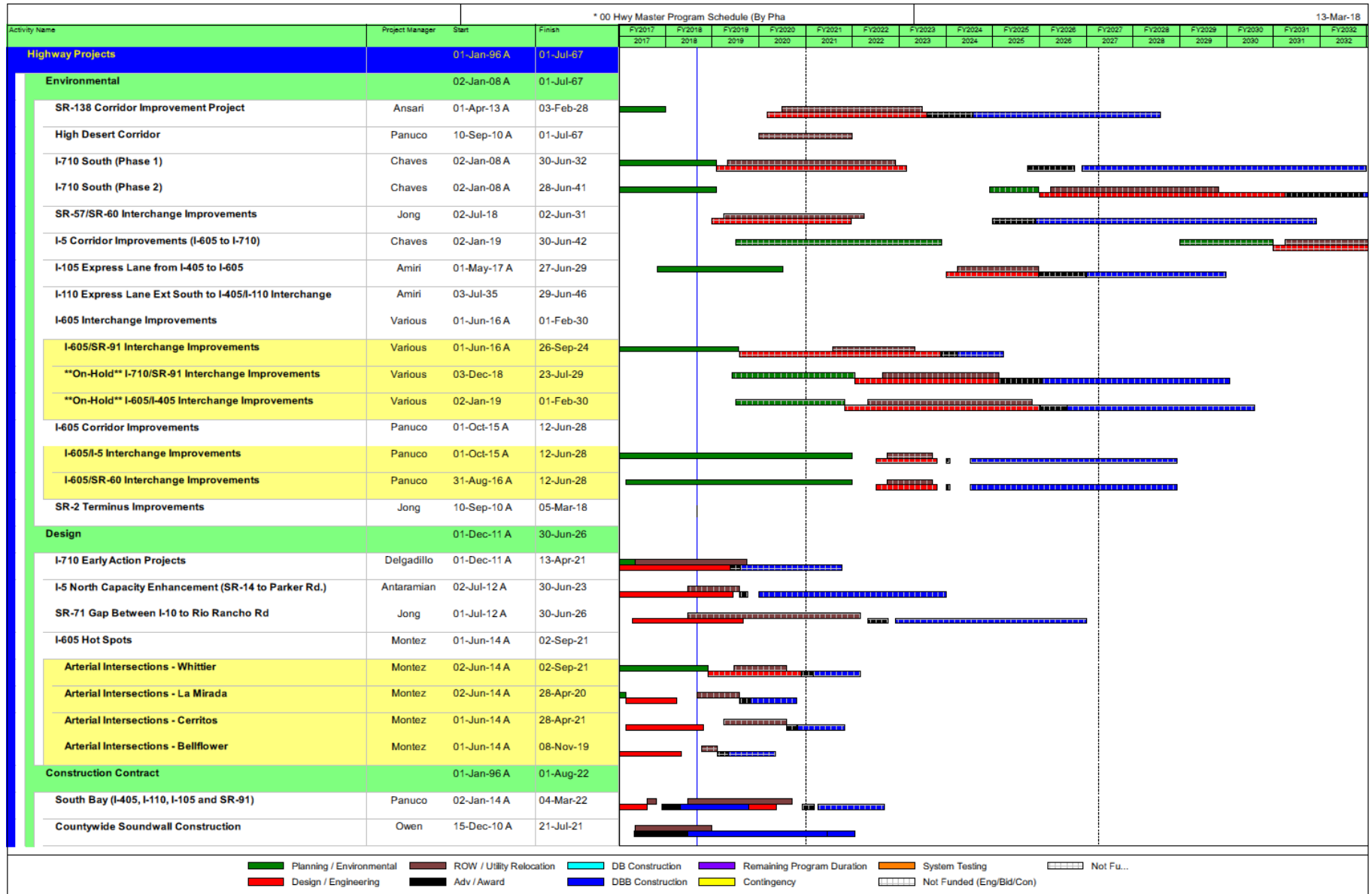
TRANSIT MASTER SCHEDULE (Page 2 of 2)

TASK filters: Code Cleanup_1, Name contains, Show on Master Schedule, WBS Categories_WBS				* 00 Master Program (By Phase) no contin													13-Mar-18	
Activity Name	PMS Project Manager	Start	Finish	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032
				2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Willowbrooks/Rosa Parks Station Improvement	Lindholm	07-May-15 A	30-Dec-20															
Regional Rail Projects	Owens	02-Sep-13 A	24-Jun-27															
Environmental	Owens	01-Dec-14 A	24-Jun-27															
Link Union Station	Owens	01-Dec-14 A	24-Jun-27															
Design	Owens	01-Apr-15 A	02-May-22															
Brighton to Roxford Double Track	Owens	01-Sep-15 A	16-Mar-22															
Lone Hill to CP White	Owens	03-May-16 A	02-May-22															
Rosecrans & Marquardt Grade Separation	Owens	01-Apr-15 A	10-Dec-21															
Construction Contract	Owens	02-Sep-13 A	01-Jun-18															
Bob Hope Airport Station	Owens	02-Sep-13 A	01-Jun-18															
Bus Facilities Projects	Gurrola	31-Mar-14 A	14-Feb-19															
Construction Contract	Gurrola	31-Mar-14 A	14-Feb-19															
Patsouras Plaza	Gurrola	31-Mar-14 A	14-Feb-19															
State of Good Repair/Improvements		01-Jul-13 A	28-Jun-19															
Design	Danielans	13-Jun-16 A	28-Jun-19															
210 Freeway Barrier Rail	Danielans	13-Jun-16 A	28-Jun-19															
Construction Contract		01-Jul-13 A	30-Mar-18															
Pershing Sq. Esc. Replace & New Canopy Project	Patel	11-May-15 A	31-Aug-17 A															
MBL Ped Safety Enhancement At-Grade Crossing	Chong	01-Jul-13 A	30-Mar-18															
Small Capital	Joshi	14-Jul-15 A	07-Mar-22															
Design	Joshi	01-Mar-16 A	07-Mar-22															
Eastside Access Improvement Project	Joshi	01-Mar-16 A	07-Mar-22															
Procurement	Joshi	14-Jul-15 A	28-Feb-20															
Rail to Rail	Joshi	14-Jul-15 A	28-Feb-20															

■ Planning / Environmental
 ■ ROW / Utility Relocation
 ■ DB Construction
 ■ System Testing
 Not Funded (Env/ROW/Test)

■ Design / Engineering
 ■ Adv / Award
 ■ DBB Construction
 Not Funded (Eng/Bid/Con)

HIGHWAY MASTER SCHEDULE (Page 1 of 2)




HIGHWAY MASTER SCHEDULE (Page 2 of 2)


				* 00 Hwy Master Program Schedule (By Pha)														13-Mar-18	
Activity Name	Project Manager	Start	Finish	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032
				2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
I-5 North Capacity Enhancements SR-134 to SR-118	Subeh	01-Apr-98 A	15-Jun-20																
SR-118 to SR-170 (Segment 1A)	Subeh	30-Jul-99 A	15-Jul-16 A																
SR-170 to Buena Vista (Segments 2)	Subeh	01-Apr-98 A	16-Dec-15 A																
Magnolia to SR-134 (Segment 4)	Subeh	01-Apr-98 A	18-Dec-19																
Buena Vista to Magnolia (Segment 3)	Subeh	01-Apr-98 A	15-Jun-20																
I-5 South Capacity Enhancements from I-605 to Orange Cour	Gau	01-Jan-96 A	01-Aug-22																
I-5 Carmenita Road Interchange	Gau	01-Jan-01 A	20-Mar-18																
Alondra (Segment 1)	Gau	01-Jan-01 A	19-May-16 A																
Imperial Highway (Segment 4)	Gau	01-Jan-01 A	26-Jul-19																
Shoemaker - Rosecrans (Segment 3)	Gau	01-Jan-96 A	28-Nov-18																
Florence (Segment 5)	Gau	01-Jan-01 A	30-Jul-20																
Valley View (Segment 2)	Gau	01-Jan-96 A	01-Aug-22																

■ Planning / Environmental
 ■ ROW / Utility Relocation
 ■ DB Construction
 ■ Remaining Program Duration
 ■ System Testing
 Not Fu...

■ Design / Engineering
 ■ Adv / Award
 ■ DBB Construction
 ■ Contingency
 Not Funded (Eng/Bld/Con)

CRENSHAW/LAX TRANSIT PROJECT

 BUDGET		
	Current	Forecast
TOTAL COST	\$2,058M	\$2,058M

 SCHEDULE		
	Current	Forecast
REVENUE OPERATION	Oct 2019	Oct 2019

- Overall Project Progress is 79% complete; contractor needs to mitigate 56 day schedule delay
- The Green Line tie-in to Crenshaw/LAX Line is anticipated to be completed on schedule
- Contractor continues critical track work installation along southern area of alignment
- Contractor continues concrete wall and roof placements for cut-and-cover tunnels and the three underground stations along Crenshaw Boulevard
- The Southwestern Yard Maintenance Facility is progressing on schedule



Main shop building looking southwest



Green Line tie-in to Crenshaw track work and catenary

April 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Metro 7

REGIONAL CONNECTOR TRANSIT PROJECT

OK BUDGET		
	Current	Forecast
TOTAL COST	\$1,810M	\$1,810M
* Includes Board approved LOP budget plus finance costs.		

OK SCHEDULE		
	Current	Forecast
REVENUE OPERATION	Dec 2021	Dec 2021

- Overall Project Progress is 49%
- Underground:** Cross passages excavated; preparation for invert and walkways installation is ongoing
- Little Tokyo/Arts District Station:** Permanent station construction re-mobilizing
- Historic Broadway Station:** Underpinning of LA Times Building in progress; station box and ancillary area excavation continues under steady state
- Grand Av Arts/Bunker Hill Station:** Permanent structural concrete construction continues
- Flower Street:** Utility relocations, support of excavation, decking and excavation continues



Drilling and Installing Canopy Pipes for SEM Cavern at Broadway Station



Utility support installation for DWP Power and Storm Drain Box on Flower St

April 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Metro 8

WESTSIDE PURPLE LINE EXTENSION – SECTION 1

BUDGET

	Current	Forecast
TOTAL COST*	\$3,154M	\$3,154M

* Includes Board approved LOP budget plus finance costs.

SCHEDULE

	Current	Forecast
REVENUE OPERATION	Oct 2024 (FFGA)	Nov 2023

- Overall Project Progress is 31% complete.
- At the Wilshire/Western Retrieval Shaft, the 10-day closure for street decking was completed February 26, 2018. Installation of the water treatment system, dewatering wells and instrumentation is on-going.
- Concrete placement at the Wilshire/La Brea Station invert slab has commenced. Vertical conveyor construction at the south shaft site is underway, as well as continued installation of invert rebar and embeds.
- At the Wilshire/Fairfax Station, station excavation and the installation of walers and struts continues, along with the installation of the ventilation system.
- Station excavation under the concrete deck at Wilshire/La Cienega Station is underway. Installation of the dewatering system and the utility hanging effort continue.
- Tunnel Boring Machines (TBMs) were delivered to Los Angeles in December 2017. All of the TBM components are at the contractor's Riverside staging area. Tunneling is planned to start in August 2018.



Wilshire/La Brea Station



Wilshire/Fairfax Station

April 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Metro 9

WESTSIDE PURPLE LINE EXTENSION – SECTION 2

BUDGET

	Current	Forecast
TOTAL COST*	\$2,530M	\$2,530M

* Includes Board approved LOP budget plus finance costs.

SCHEDULE

	Current	Forecast
REVENUE OPERATION	Dec 2026 (FFGA)	Aug 2025

- Overall project progress is 6% complete.
- Final design progress is 53% complete.
- Century City Constellation: AT&T and LADWP (Power) utility relocations are ongoing.
- Wilshire/Rodeo: Southern California Gas (SCG) and AT&T utility relocations are ongoing.
- Negotiations with the City of Beverly Hills (COBH) for a Memorandum Of Agreement (MOA) for the C1120 Contract began in August 2017 and are anticipated to complete by April 2018.



AT&T Conduit Installation in Century City

April 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



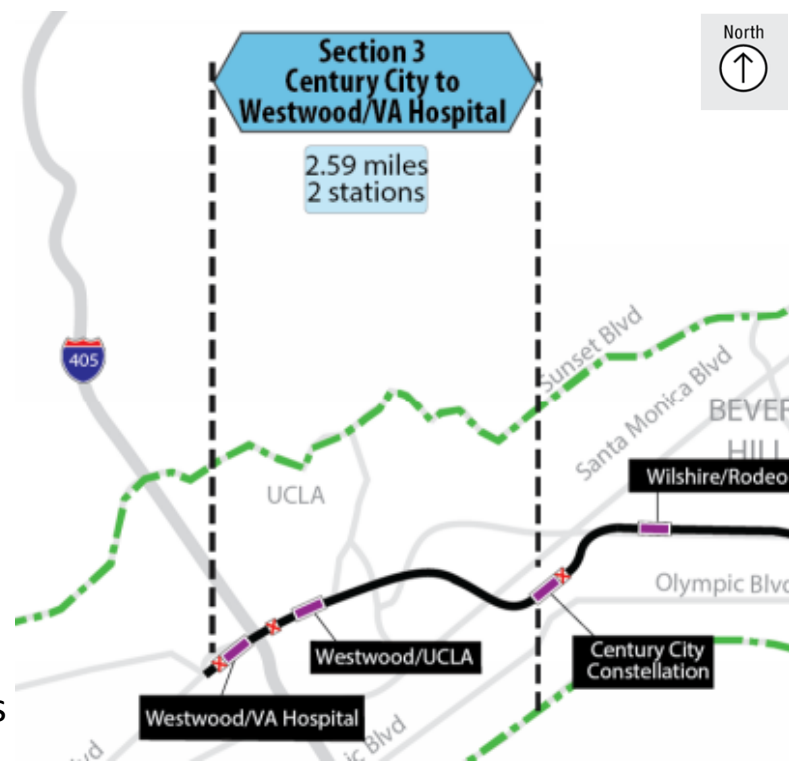
Metro 10

WESTSIDE PURPLE LINE EXTENSION – SECTION 3

OK BUDGET		
TOTAL COST	Current	Forecast
	TBD	\$3,587M

OK SCHEDULE		
REVENUE OPERATION	Current	Forecast
	TBD	2026

- FTA approval for Entry into Engineering and Letter of No Prejudice (LONP) for the Tunnel Contract are expected in Spring 2018.
- C1151 Tunnel Contract – Technical proposals were received on November 13, 2017. Price proposals are due on April 6, 2018.
- C1152 Stations, Trackwork and Systems Contract – Request for Qualifications (RFQ)/Request for Proposals (RFP) was issued on September 15, 2017. Qualifications from respondents were received on November 20, 2017. Price Proposals are due on May 21, 2018.
- C1153 Advanced Utility Relocations (AUR) Contract – Kick off meeting was conducted in January 2018. Construction is scheduled to begin in April 2018.



April 2018



On target



Possible problem



Major issue





Metro 11

Construction Committee

Los Angeles County Metropolitan Transportation Authority

PATSAOURAS PLAZA BUSWAY STATION

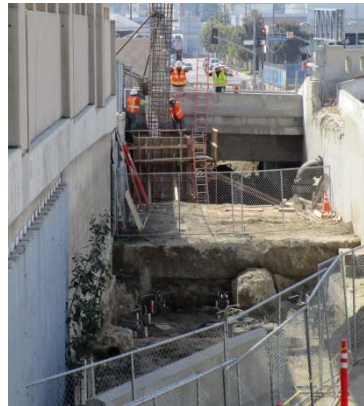
 BUDGET	Current	Forecast
TOTAL COST	\$39.7M	\$39.7M

 SCHEDULE	Current	Forecast
SUBSTANTIAL COMPLETION	Dec 2018	Feb 2019

- Overall project progress is 54% complete
- All concrete deck pours completed, on 28-day curing period and deck post-tension ongoing
- Falsework removal to follow
- Elevator foundations started at south end of bus plaza
- Human bones continue to be discovered, Native American monitor and coroner involved (no delay yet)
- Vignes Street on/off-ramp intermittent non-peak closures ongoing
- Reviewed Project Status concerns with contractor, contractor has been responsive with submittals



View of project site



Elevator Foundations



Bridge Deck

April 2018



On target



Possible problem



Major issue


Construction Committee


Los Angeles County Metropolitan Transportation Authority



Metro 12

WILLOWBROOK/ROSA PARKS STATION

 BUDGET	Current	Forecast
TOTAL COST	N/A	\$92.4M

 SCHEDULE	Current	Forecast
SUBSTANTIAL COMPLETION	July 2020	July 2020

- Early Start Phase (Package E) Construction mobilization has begun.
- Package A and C at 100% design completion. Procurement of this contract is underway. Package includes provisions for the closure of the Blue Line (the New Blue).
- Pedestrian grade crossing documents submitted to Union Pacific and Public Utilities Commission.
- Staff planning to bring Life of Project Budget request to Board in May 2018.



South Platform Improvements



Central Plaza & Bus Bays



Main Plaza

April 2018



On target



Possible problem



Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Metro 13

THE NEW BLUE

<u>Project Name</u>	Budget	Percent Completed	Forecast Completion	Status
▪ Pedestrian Gates	\$31.4M	95%	June 2018	◆
▪ City of Long Beach Fare Gates Design	\$6M*	100%(Design)	Mar 2018	OK
▪ Blue Line Signal Rehabilitation (OCS, Signals, Div. 11)	\$119M	14%	Aug 2019	OK
▪ Blue Line Track and System Refurbishment (Track, Turnouts, OCS and includes 2 Stations Fare Gates Phase I)	\$90.8M	N/A	Aug 2019	OK
Total: \$247.2M				

Project Status

- **Pedestrian Gates**
 - Construction completed within Cities of Long Beach and Compton
 - Construction within City and County of LA 95% complete
 - Two crossings in the City of LA were inspected by CPUC and commissioning in late February.
 - Schedule for commissioning four more crossings within the County of LA in March
 - 13 crossings completed pending on UPRR work to open.
- **City of Long Beach Fare Gates Design**
 - Design completed on 5th and Wardlow Stations
- **MBL Signal Rehab 85% Design in Progress**
- **MBL Track and System Refurb IFB Feb 18**



*Budget Estimate

April 2018

OK On target

Possible problem

! Major issue

Construction Committee

Los Angeles County Metropolitan Transportation Authority



Crenshaw/LAX Transit Project

Change Activity

February 2018

APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (December 1, 2017 - February 28, 2018)

MOD/CHANGE #	DESCRIPTION	Submission Date	Approval Date	Amount
DESIGN BUILD CONTRACT C0988				
MOD-00345	Oil Water Separator at UG Stations: The sump pump discharge from the Underground Stations requires treatment to meet the City of Los Angeles Department of Public Works Bureau of Sanitation Industrial Waste Management Division discharge limits.	1/12/2018	2/8/2018	\$1,299,995
CO-00153.1	Radio System - Additional Head-end Equipment: Relocate the Uplink above ground antennas from their original proposed location at the TPSS #8 site to their new location above ground at the CLAX Exposition Station. Provide all of the necessary detailed design, material, equipment, and labor for a complete installation.	2/5/2018	2/16/2018	\$862,138
CO-00176.1	Underground Station Emergency Vent: This change order is issued to clarify to WSCC and its subcontractors exactly which elements of the three (3) underground stations' emergency ventilation fan and damper work Metro believes to be impacted by the UL 2196 delisting and includes authorization to begin procurement of materials and immediate construction thereof.	2/2/2018	2/15/2018	\$800,000
CO-00180.1	Cable Transmission System - Construction: Construct the Cable Transmission System capable of multiple service types including E-Line, E-LAN, and E-Tree. The CTS fiber optic backbone consisting of two 144 strand fiber cables form the data transmission infrastructure for the FW 9500 nodes. Each FW 9500 node is to be configured to transmit data over both 144 strand fiber cables. Each 144 strand fiber cable is to be connected to the fiber cable at the Exposition/Crenshaw station and the Green Line/Aviation station to provide a redundant pathway for C/LAX data transmissions to ROC.	2/2/2018	2/14/2018	\$1,180,296
CO-00204	Radio Redundancy Radio Rooms: Contractor shall provide labor, materials and equipment to construct two new radio rooms at Underground Guideways UG1 and UG-3.	2/5/2018	2/15/2018	\$846,316

Crenshaw/LAX Transit Project

Change Activity

February 2018

PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K

MOD/CHANGE #	DESCRIPTION	Rough Order of Magnitude Cost
DESIGN BUILD CONTRACT C0988		
MOD-00304	<u>Back Charge for Metro payments to COLA for in scope of contract TCO Services:</u> This credit change is to back charge WSCC for Traffic Control Officers (TCO) for the period of January 2014 thru June 30, 2017 (paid by Metro to LADOT per the Master Cooperative Agreement with City of Los Angeles.)	Credit between \$1M and \$5M
MOD-00354	<u>COLA Request to Replace Concrete Street Light and Signal Poles with Steel Poles - MLK area:</u> Revise street lighting design for Segment C limits between 48th St to Exposition Blvd per LABSL comments on the Segment C 85%-2 Street Lighting Design. Restore steel 15 ft. /40 ft. Davit pedestrian/street lights poles, and remove/replace concrete street light poles with steel 40 ft. Davit light poles.	Between \$1M and \$5M
CO-00129	<u>Elimination Crossover Sta 56+57.50:</u> Design builder shall eliminate the crossover at Sta. 56+57.50, north of 104th (or sought of Aviation/Century Station) and provide a credit to Metro labor, material and equipment, testing and commissioning to furnish and install crossover.	Credit between \$500K - \$1M
CO-00152.1	<u>Radio System - Additional Tunnel Amplifiers:</u> Provide radio amplifiers in certain UG3 and UG4 tunnels crosspassages as shown in the Metro approved design prepared by WSCC.	Between \$500K - \$1M
CO-00202	<u>Crenshaw Median Landscaping & Maintenance:</u> Construct drought-resistant landscaping with a drip irrigation system in the median of Crenshaw Blvd., on both sides of the LRT Guideway within the Park Mesa Heights Area from 60th Street to Vernon Ave, in lieu of the originally designed hardscape median (striped AC pavement) per the latest revised landscape & irrigation plans & details for Segments B-2 & C.	Between \$1M and \$5M

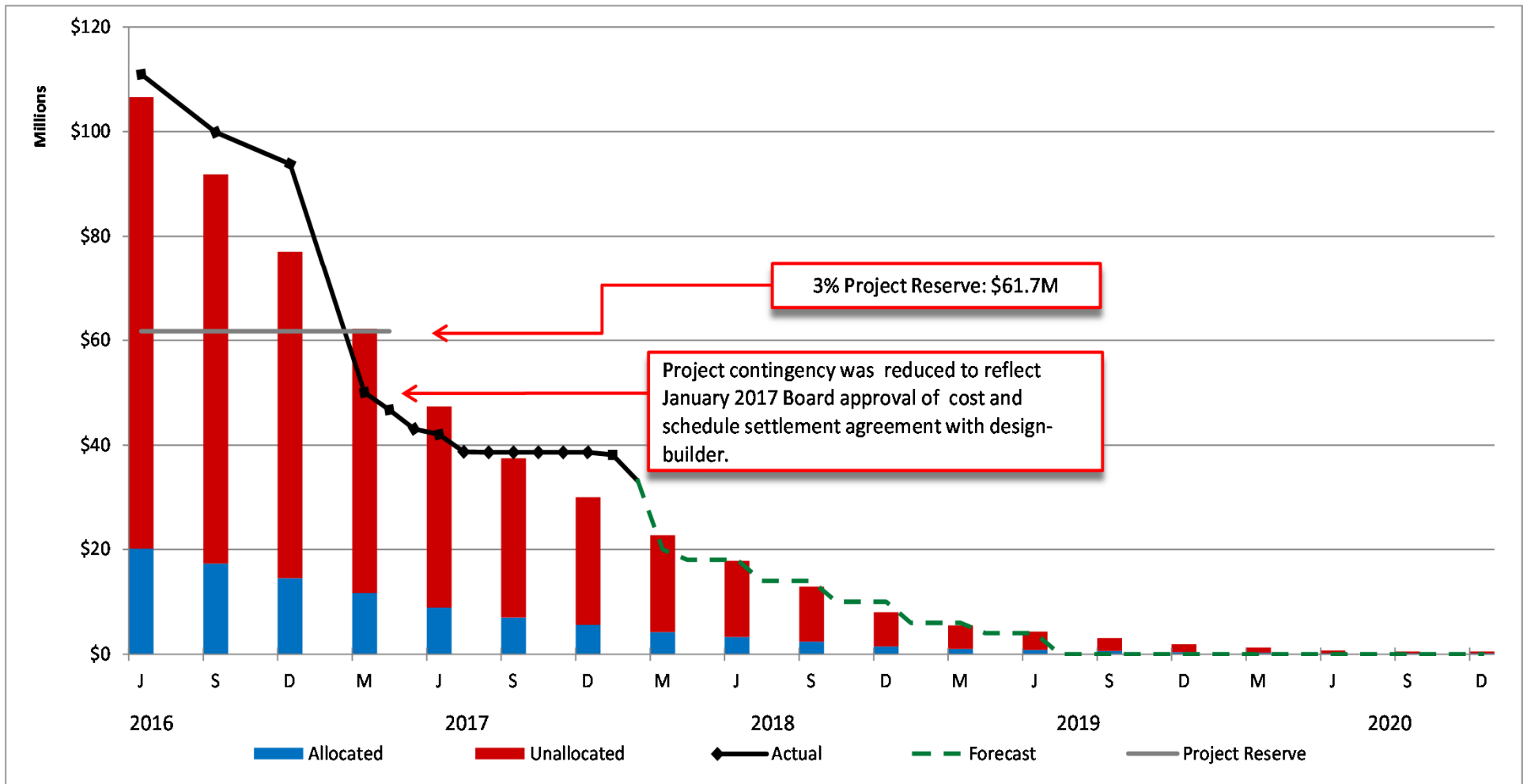
PROFESSIONAL SERVICES CONTRACTS

Design Support Services During Construction Contract E0117		
MOD-00044	<u>Extend Crenshaw/LAX Phase III DSDC and Commence Phase IV System Activation:</u> It is critical that there is no disruption in Phase III design service during construction and Phase IV "System Activation." The Revenue Service Date (RSD) is October 2019 and close out is through 2020.	Between \$5M and \$10M

Crenshaw/LAX Transit Project

Project Cost Contingency Drawdown

February 2018



Regional Connector Change Activity

February 2018



APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (December 1, 2017 - February 28, 2018)

MOD/CHANGE #	DESCRIPTION	SUBMISSION DATE	APPROVAL DATE	AMOUNT
DESIGN BUILD CONTRACT C0980				
C0980-MOD-00101.1	<u>ADDITIONAL WORK DUE TO COMMONWEALTH AGREEMENT:</u> Contractor shall design and construct enhanced construction barriers and enclosed fence and gate structures referred to as Work Stations Contractor Work Areas 1, 2, 3, and 4 in the executed Settlement Agreement dated June 30, 2015; including permits, design, and artwork coordination with representatives of FSP and Metro that are in addition to the base Contract Scope of Work.	1/9/2018	1/25/2018	\$951,000
PROFESSIONAL SERVICES CONTRACTS				
Design Support Services During Construction Contract E0119				
E0119-Mod-0026.1	<u>FY2019 FUNDING FOR DESIGN SUPPORT DURING CONSTRUCTION:</u> Additional effort required for FY19 for design services during construction.	N/A	2/1/2018	\$4,446,988
Construction Management Support Services Contract MC070				
MC070-MOD-00015	<u>FY2019 FUNDING FOR CONSTRUCTION MANAGEMENT SUPPORT SERVICES:</u> Additional effort required for FY19 for construction management support services.	N/A	2/8/2018	\$10,652,889
OTHER AGREEMENTS				
Letter Agreements				
1	Letter Agreement with City of Los Angeles for Sewer near Tunnels on Flower Street east of 4th Street	1/11/2018	1/12/2018	\$1,000,000

Regional Connector Change Activity

February 2018

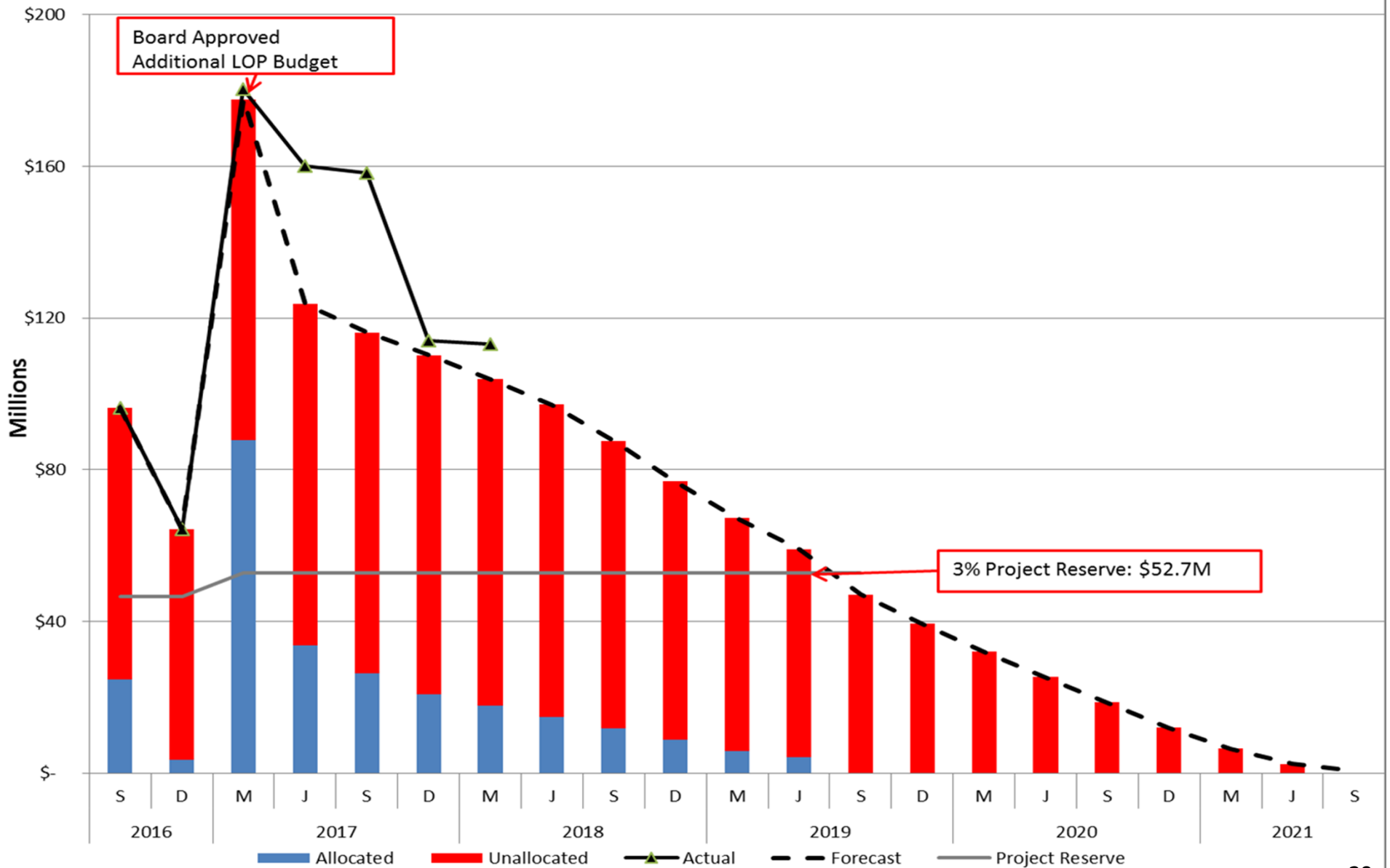


PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K

CHANGE NOTICE #	DESCRIPTION	ROUGH ORDER OF MAGNITUDE COST
DESIGN BUILD CONTRACT C0980		
C0980-CN-00099	REVISE 2ND/HOPE STATION PEDESTRIAN- CONSTRUCTION: Construct the 2nd/Hope Pedestrian Bridge in accordance with revised design.	Between \$1 and \$5 Million
C0980-CN-00106.1	REVISIONS TO METRO COMMUNICATIONS SYSTEMS: This change eliminates the Fujitsu Flashwave 9500 as a Metro-Furnished Good. Contractor shall procure the Optical Network switch using Native Ethernet (10GB); re-configure the existing Gold Line Eastside Cable Transmission System (CTS) to operate via the communications room at Location 61A of Division 20; and relocate the existing Little Tokyo CTS node and associated circuits to the communications room at Location 61A of Division 20.	Between \$500K and less than \$1M
C0980-CN-00111	ADDITIONAL ACOUSTICAL TREATMENTS FOR AREAS NOT SPECIFIED IN THE PROJECT: Construct additional acoustical treatments in all stations beyond what was indicated in the Contract Documents. This change includes approximately 92,471 SF of additional acoustical treatments.	Between \$1 and \$5 Million
C0980-CN-00145	ADD WYE JUNCTION FAN PLANT - CONSTRUCTION: Construct an additional fan plant at the 1st & Alameda Junction (also referred to as the "wye") based on the following approved MODs: C0980-MOD 0033/CN 00053.2 Add "Wye" Junction Fan Plant Design Only and C0980-MOD 0087/CN-00108 Revision to Wye Junction Fan Plant Design. This work also includes the elimination of the previously designed eight tunnel booster fans with all associated mechanical, electrical and system components.	Between \$10 and \$15 Million
C0980-CN-000148	PLATFORM STAND-ALONE VALIDATORS: Contractor shall modify the Stations to accommodate installation of six (6) Stand-Alone Validators (SAVs) on the platforms. Provide and install communication conduit, with pull strings, from each SAV to the TC&C room. Provide and install power conduit and cable, from each SAV to the East and West power panels. Provide additional 20-amp 1-pole breakers and/or reassign spare breakers as indicated. Contractor shall allow for a load of 35 Watts per SAV; Accommodate SAV base opening 6" wide by 4" deep for power and communication conduits; Metro will furnish and install SAVs in a similar manner as for other UFS equipment.	Between \$500K and less than \$1M
C0980-CN-00158	2ND AND BROADWAY STATION REVISED OVERBUILD DESIGN PARAMETERS (DESIGN AND CONSTRUCTION): Contractor shall provide all necessary labor, materials, and supervision to redesign various components of the 2nd and Broadway Station, and to design and construct an overbuild load transfer system in accordance with the Revised Overbuild Loading Parameters to accommodate future development by Tribune, including relocation of the emergency stairways, ventilation shafts/ducts and other elements as needed to accommodate the Overbuild Structure Load Transfer System.	Between \$1 and \$5 Million
C0980-CN-00166	LEFT TUNNEL TUNNEL BORING MACHINE DIFFERING SITE CONDITIONS: Resolution of all impacts due to Differing Site Conditions experienced during mining of the Left Tunnel.	Between \$5 and \$10 Million

Regional Connector

Project Cost Contingency Drawdown



Westside Purple Line Extension – Section 1 Change Activity

February 2018



- No Approved Modifications/Changes to Report This Period

PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K		
MOD/CHANGE #	DESCRIPTION	Rough Order of Magnitude Cost
DESIGN BUILD CONTRACT C1045		
CN-42.3	Radio Subsystem Redundancy: Procure and install a complete switching network to allow failover switching on Westside Purple Line Extension (WPLE) Sections 1 and 2 including redundancy of the radio system. Metro has revised the radio system to avoid a Single Point of Failure of the primary radio system.	Between \$500K - \$1M
CN-56	Implement CoBH MoA: This Change will compensate the Design-Build Contractor for revised work hours, holiday schedule and additional mitigation measures required by the Memorandum of Understanding (MOA). Work is currently being performed under the terms of the MOA with the City of Beverly Hills (CoBH).	More than \$15M
CN-63	La Brea - Additional Instrumentation Requested by BOE: Provides new/revised criteria that the Contactor must now use for the design and evaluation of the Support of Excavation (SOE) for the Wilshire/La Brea Station. Given the larger than expected settlement predictions, LABOE has requested additional instrumentation to be installed.	Between \$1M - \$5M
CN-64.1	La Brea - Impacts from Metro SOE Deviation Request: Provides new/revised criteria that the Contactor must now use for the design and evaluation of the Support of Excavation (SOE) for the Wilshire/La Brea Station.	Between \$500K - \$1M
CN-65.1	Fairfax - Impacts from Metro SOE Deviation Request: Provides new/revised criteria that the Contactor must now use for the design and evaluation of the Support of Excavation (SOE) for the Wilshire/Fairfax Station.	Between \$500K - \$1M
CN-66	La Brea - Additional Dewatering Treatment and Discharge Costs: The Contractor has encountered two different 'Differing Site Conditions' (DSC) that have resulted in additional costs to operate and maintain the dewatering systems.	Between \$1M - \$5M
CN-67.1	Tactile Guidance: Construction and Plaza Material Change: This change was requested by Metro Systemwide Planning in coordination with Metro ADA. Two tone tiles to be installed at all three stations to ensure sufficient contrast to meet ADA requirements.	Between \$500K - \$1M
CN-68	Increased Ventilation of Station Ancillary Rooms: Change to increase the ventilation requirements at the station stairs and corridor areas to accommodate surrounding soils.	Between \$1M - \$5M
CN-72.1	Stations - Art Related Changes: Installation of LED lighting at the plaza level (edge of the art glass) to reduce the foot-candle requirements and art area. This change will reduce the cost of installation and Storage of Work.	Between \$500K - \$1M
CN-77	Additional Interpretation for Building Settlement - Project Wide: The additional instrumentation required by Metro and LABOE will require additional reporting and analysis by the contractor. This change will accommodate the additional analysis and reporting.	Between \$1M - \$5M

Westside Purple Line Extension – Section 1

Change Activity

February 2018

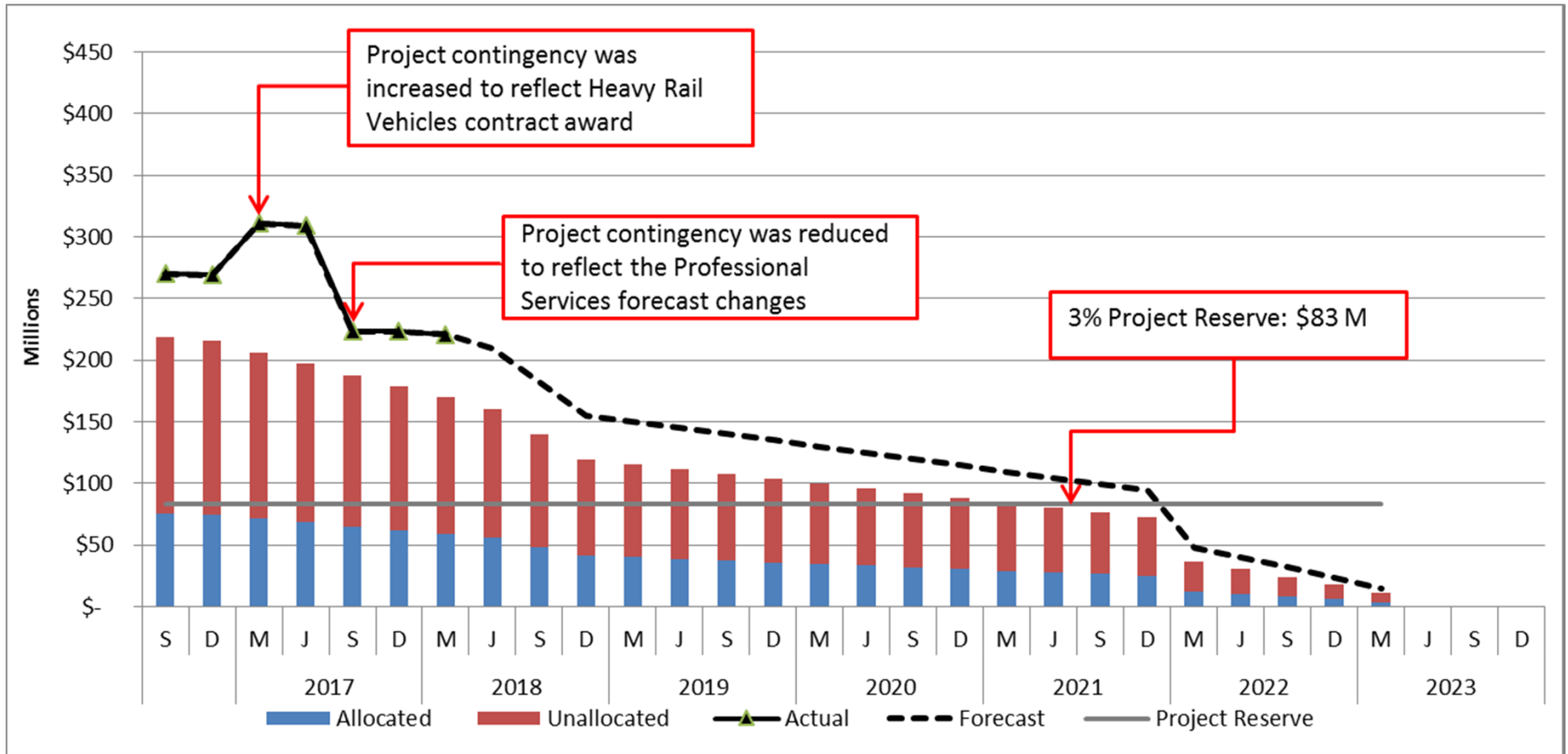


PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K		
MOD/CHANGE #	DESCRIPTION	Rough Order of Magnitude Cost
DESIGN BUILD CONTRACT C1045		
CN-78	Fairfax - DWP Ductbank Conflicts with Deck Beams: The location of LADWP ductbanks at Wilshire/Fairfax Station were higher than what was indicated on the as-built drawings. This change accommodates the mitigation efforts needed to remediate the higher ductbank.	Between \$500K - \$1M
CN-79	Western - Property Status Change (Fee to TCE) Impacts, Parcel W-0103: Accommodates the change in parcel handoff status from a 'Fee Take' to a 'Temporary Construction Easement' (TCE).	Between \$500K - \$1M
CN-83	Western - Additional Dewatering and Treatment: To accommodate the higher than expected groundwater inflows experienced at the Wilshire/Western shaft.	Between \$1M - \$5M
CN-84	Western – Impacts from Metro SOE Deviation Request: Provides new/revised criteria that the Contactor must now use for the design and evaluation of the Support of Excavation (SOE) for the Wilshire/Western Retrieval Shaft.	Between \$500K - \$1M
CN-85	La Brea - BOE Additional Utility Hanging Requirements: Accommodates additional utility supports required by LABOE for the Sewer and Storm Drain Lines at the Wilshire/La Brea Station.	Between \$500K - \$1M
CN-87	La Brea - Bracing Impacts due to DWP ductbank (ECI-004): Accommodates the re-installation of four struts at Wilshire/La Brea Station due to conflicts with the existing electrical ductbanks.	Between \$1M - \$5M
CN-93	La Brea - Center Access Shaft - Design and Construction Costs (incl ECI-003): Construction of a central muck shaft on Wilshire Blvd at La Brea Station to help increase station excavation rates and facilitate material placement.	Between \$500K - \$1M
CN-98	Implement Wireless - Stations and Tunnels: Provisions for the installation of Cellular Service on the WPLE Section 1 Project.	Between \$500K - \$1M
CN-99	Oil Well Horizontal Investigation in lieu of TBM Probe-ahead: Change to accommodate horizontal directional drilling to locate abandoned oil wells.	Between \$1M - \$5M
CN-102	Golder Gas Investigation and Report: Change to accommodate additional Geotechnical field work, analysis and investigation.	Between \$500K - \$1M
CONTRACT C1078 (Div 20 MOW/NRV Bldg)		
CN-11	Schedule Impacts from Arcadis Work (includes Chalmers Impacts): Change to accommodate construction schedule extension due to site impacts.	Between \$1M - \$5M
CN-16	Install Street Lights Both Sides, Trees and Drip Irrigation: Site restoration in accordance with LABOE requirements.	Between \$500K - \$1M
CN-22	Hazardous Materials - Chalmers Pan Handle	Between \$500K - \$1M
CN-24	Support of Building Art Work: Change accommodates the selected artwork, now designed, to be installed on the west and north walls of the new Metro Building.	Between \$500K - \$1M

Westside Purple Line Extension – Section 1

Project Cost Contingency Drawdown

February 2018



Westside Purple Line Extension – Section 2

Change Activity

February 2018



APPROVED MODIFICATIONS/CHANGES GREATER THAN \$500K IN THIS REPORTING PERIOD (December 1, 2017 - February 28, 2018)

MOD/CHANGE #	DESCRIPTION	Submission Date	Approval Date	Amount
DESIGN BUILD CONTRACT C1120				
MOD-00005	Alternative for a Precast Steel Special Lining: Allow the use of a concrete precast lining for the Special Lining Section in both the BR and BL tunnels as an alternative to the steel lining indicated in the Contract Documents. The Contractor shall design, furnish and install a Special Lining Section consisting of post-tensioned precast concrete segments. This was a VE proposal submitted by the contractor and accepted by Metro.	1/11/2018	1/26/2018	Credit \$22,279,221
CO-00002	Worksite Traffic Control for SCG & AT&T Advanced Utility Relocations: Southern California Gas (SCG) and AT&T are scheduled to perform AUR at the same time within close proximity of each other. The project master schedule assumes each utility would provide their own traffic control. However, the overlap in traffic control areas can cause conflicts and both utilities are concerned that one utility's traffic control efforts may interfere with the other's work. To mitigate this and to expedite the work, both utilities have agreed to allow the C1120 Contractor (TPOG) to provide the overall traffic control. WSP has designed the traffic control plans and obtained City of Beverly Hills approval, and TPOG will implement the traffic control plans per WSP's design. Metro issued this <u>Unilateral</u> Change to formally direct the Contractor to commence work and invoice for work performed while both parties continue evaluating the Scope of Work and continue negotiations. Once the Scope of Work and pricing is agreed upon, Metro intends to issue a Contract Modification.	N/A	1/24/2018	\$2,242,400.00
CO-00003	Century City Constellation Station: Main Entrance (Design): Information on the main entrance at the Century City Constellation Station that was provided in the Contract Documents at the time of the RFP was based on a standard entrance configuration on the property at 1950 Avenue of the Stars in the location given in the Final EIS/EIR. The property owner was known to be planning a development, but hadn't informed Metro of its final configuration. Since then, the property owner has begun planning for its development and has been working with Metro to coordinate a station entrance that supports both the needs of the Project and the development. That coordination resulted in issuance of CN-3 in June 2017. Subsequently, the developer revised its plan necessitating changes to the proposed station entrance configuration for coordination purposes. In addition to reconfiguring the main entrance, the appendages associated with the east ancillary module that were located on 1950 Avenue of the Stars have also been reconfigured to better manage the special constraints of the development footprint of the site. Metro issued this <u>Unilateral</u> Change to formally direct the Contractor to commence work and invoice for work performed while both parties continue evaluating the Scope of Work and continue negotiations. Once the Scope of Work and pricing is agreed upon, Metro intends to issue a Contract Modification.	N/A	2/2/2018	\$983,114.00

OTHER AGREEMENTS

N/A	Temporary Right of Access Agreement (ROA) for 2040 Century Park East: Approval of the ROA allowed LACMTA to turn the property over to the Project's contractor in February 2018. Without the ROA, access would have been delayed until after acquisition of the temporary construction easement is completed, which is anticipated to take several months. The terms of the ROA have been structured to provide LACMTA, and its contractor, appropriate use of the property while protecting and securing the owner's interests. (Refer to Board Box dated 1/9/18).	N/A	1/9/2018	\$750,000.00
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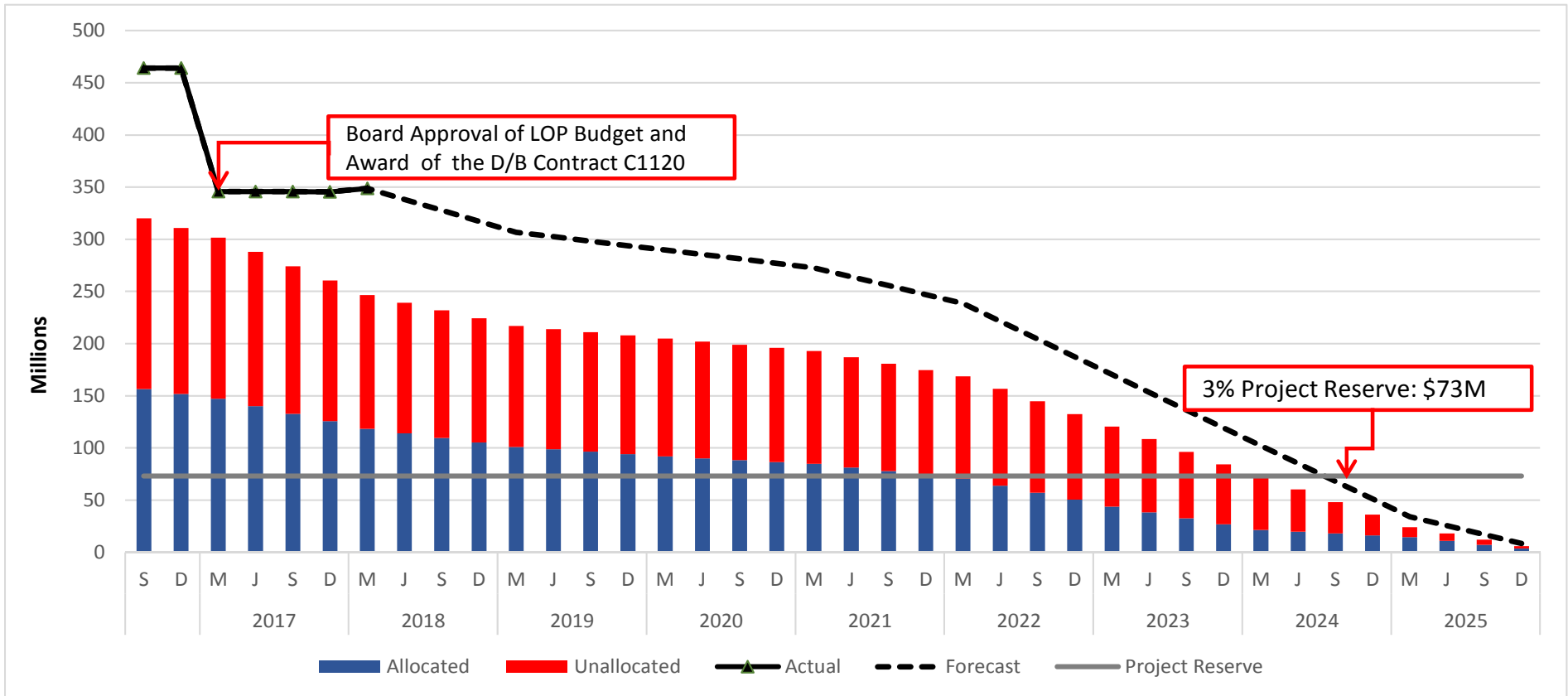
PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K

MOD/CHANGE #	DESCRIPTION	Rough Order of Magnitude Cost
DESIGN BUILD CONTRACT C1120		
CN-00014	Field Office Tenant Improvements at Former AAA Building (1950 Century Park East): The Project acquired the property located at 1950 Century Park East which was owned by the Automobile Club of Southern California ("AAA"). The office building will be used by the construction management team as its field office during the period of construction, as such, it will require tenant improvements to accommodate the team.	Between \$1M and \$5M

Westside Purple Line Extension – Section 2

Project Cost Contingency Drawdown

February 2018



Metro Blue Line Signal System Rehabilitation Change Activity

February 2018



PENDING MODIFICATIONS/CHANGES GREATER THAN \$500K		
MOD/CHANGE #	DESCRIPTION	Rough Order of Magnitude Cost
DESIGN BUILD CONTRACT C1081		
CN 02 (mod number not yet assigned)	Non-Vital Relays Replacements and Implementations of the Aspect Configurations - This CN is for modifications on the Train Control scope to include the replacement of the existing non-vital relays for the existing interlockings and to complete the aspect configurations modifications for the entire Blue Line. Contract Documents Affected: Scope Modifications to Section 01 11 00 Scope of Work Drawings Nos. TC-100 thru TC-1 20 and TC-122 thru TC-140	Between \$1M and \$5M
CN 03 (mod number not yet assigned)	OCS Work Scope in Los Angeles Central Business District – This CN is for Modifications on the Overhead Catenary System (OCS) scope to include: 1) The replacement of the contact wire(s) for the MBL/Expo Junction 2) Lowering of the conductor wire at Flower Venice crossing 3) Replace existing OCS under the 1-10 structure to OCR The Los Angeles Central Business District (CBD) from intersection of Flower and Venice to the intersection of Flower/18th Street and the	Between \$1M and \$5M



Board Report

File #: 2018-0018, File Type: Program

Agenda Number: 33.

CONSTRUCTION COMMITTEE APRIL 12, 2018

**SUBJECT: FISCAL YEAR 2019 PROGRAM MANAGEMENT
ANNUAL PROGRAM EVALUATION**

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE report on FY2019 Program Management Annual Program Evaluation.

ISSUE

The Annual Program Evaluation (APE) is a priority initiative created to evaluate Metro's capital program annually. Given the challenges of managing a multi-billion dollar capital program, a comprehensive review of the risks associated with the costs and schedules of the program is conducted on an annual basis. This report summarizes the results of the FY2019 APE review performed by Program Management.

DISCUSSION

The APE initiative is a comprehensive evaluation of Metro's capital program, including Transit, Highway, and Regional Rail projects. As part of the process, staff reviewed and updated project costs and schedules to current conditions, challenges, and risks. Any changes to project budgets/schedules and the reasons for the adjustments are to be reported to the Board annually for approval. In addition, APE serves as a project management tool bringing greater consistency, transparency, and discipline to better manage and deliver Board-approved projects. The APE is a dynamic tool, which is updated annually as projects move towards completion and any changes approved by the Board are incorporated.

FY19 Results

For the FY2019 APE, Program Management focused on new and carry-over projects to FY2019 with project cost estimated at \$5 million or greater. Program Management staff evaluated 66 projects, including 31 Transit projects, 28 Highway projects, and 7 Regional Rail projects (see presentation for a complete project listing), which total approximately \$16 billion. Compared to the FY18 APE review, the FY19 program size has increased 16% or approximately by \$2.2 billion since the FY18 review.

The major focus remains on managing the projects within the Board-approved life of project (LOP)

budgets and schedules established for these projects. A summary of the potential adjustments, requiring future Board approval, to Metro's capital program in FY19 is reported in the FY2019 Program Management APE presentation (page 54).

Challenges

With the significant increase in number and size of projects and the accelerated implementation schedule for delivering Metro's capital program, including the projects on the 28 by 2028 initiative, Metro is currently undertaking the largest transportation capital program in the nation. Metro's capability and capacity to deliver multiple complex mega projects on-time and within budget creates an unprecedented challenge to project delivery.

Efforts to improve, innovate, and increase our capabilities to deliver projects are essential. Our ability to encourage and attract a competitive and qualified pool of contractors, small businesses, and workforce on Metro projects is integral to project delivery. Building and delivering projects in a growing construction market with a shortage of skilled workers may impact project costs and must be managed effectively. Also, continued commitment by various external jurisdictions for efficient Third Party review and approval is key to successful delivery of Metro's capital program.

Strategic Initiatives

Program Management has begun and will continue to implement various strategic initiatives to bring improved planning, consistency, transparency, and discipline to project delivery. There are new organizational approaches, including systematic approaches to Quality Assurance. Program Management has made significant efforts to develop new and enhance existing project management procedures, establish new training program, and improve its Best Practices/Lessons Learned Program. Recently at the January 2018 Board meeting, the Board approved delegation of authority for LOP budget management on all transit and regional rail projects.

In an effort to consistently manage and support successful delivery of capital projects, staff recommends establishing and consistently implementing a Concurrent Non-Project Activities project for each major capital project. The Concurrent Non-Project Activities project, already implemented on several Metro major capital projects, tracks betterments, non-federally eligible costs, unknown regulatory requirements, and other activities that are not included as part of the core project scope. A Board adoption of these Concurrent Non-Project Activities projects is required and is typically budgeted outside of the Board adopted major capital project LOP budget. Having these Concurrent Non-Project Activities projects will protect the integrity of the major capital project core LOP budget and improve transparency.

FINANCIAL IMPACT

The FY19 Program Management APE report does not have any specific budgetary or financial impacts. The APE report serves as an annual and early notice instrument to assess the scope, cost and schedule risk items affecting the respective projects under the oversight of Program Management. Risk items affecting scope, cost and schedule are identified on a project by project basis within the APE Presentation.

Should any of the potential project risks affecting scope, cost and schedule parameters be realized, the Chief Program Management Officer will return to the Board with separate recommendations to address the identified risks and adjust the project cost and/or schedule accordingly.

NEXT STEPS

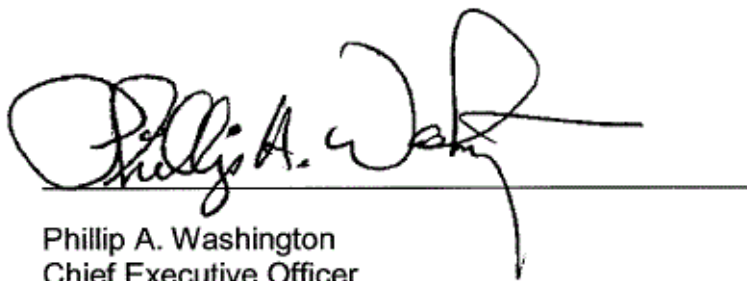
Program Management will request the resources required for project delivery success through the FY19 Budget process for Board approval. Project managers will manage to deliver projects safely, on-time and within the Board-approved budgets. Staff will continue to provide the Board with monthly updates on the project status throughout the year. The next FY20 Program Management APE report will be presented to the Board in spring 2019.

Prepared by:

Brian Boudreau, Senior Executive Officer, Program Control; 213-922-2474

Reviewed by:

Richard F. Clarke, Chief Program Management Officer; 213-922-7557



Phillip A. Washington
Chief Executive Officer



Fiscal Year 2019 Program Management Annual Program Evaluation



Presentation Overview

- Purpose and Process
- Capital Program Status
- Capital Program Costs and Schedules
- Adjustments for FY2019
- Summary
- Next Steps



Purpose

- Annual evaluation of Metro's capital program
- Reporting to the Board any project budget and schedule changes, and reasons for the changes
- A project management tool bringing greater consistency, transparency, and discipline
- Facilitates financial planning
- Reduces the number of requests to the Board for budget adjustments



Process

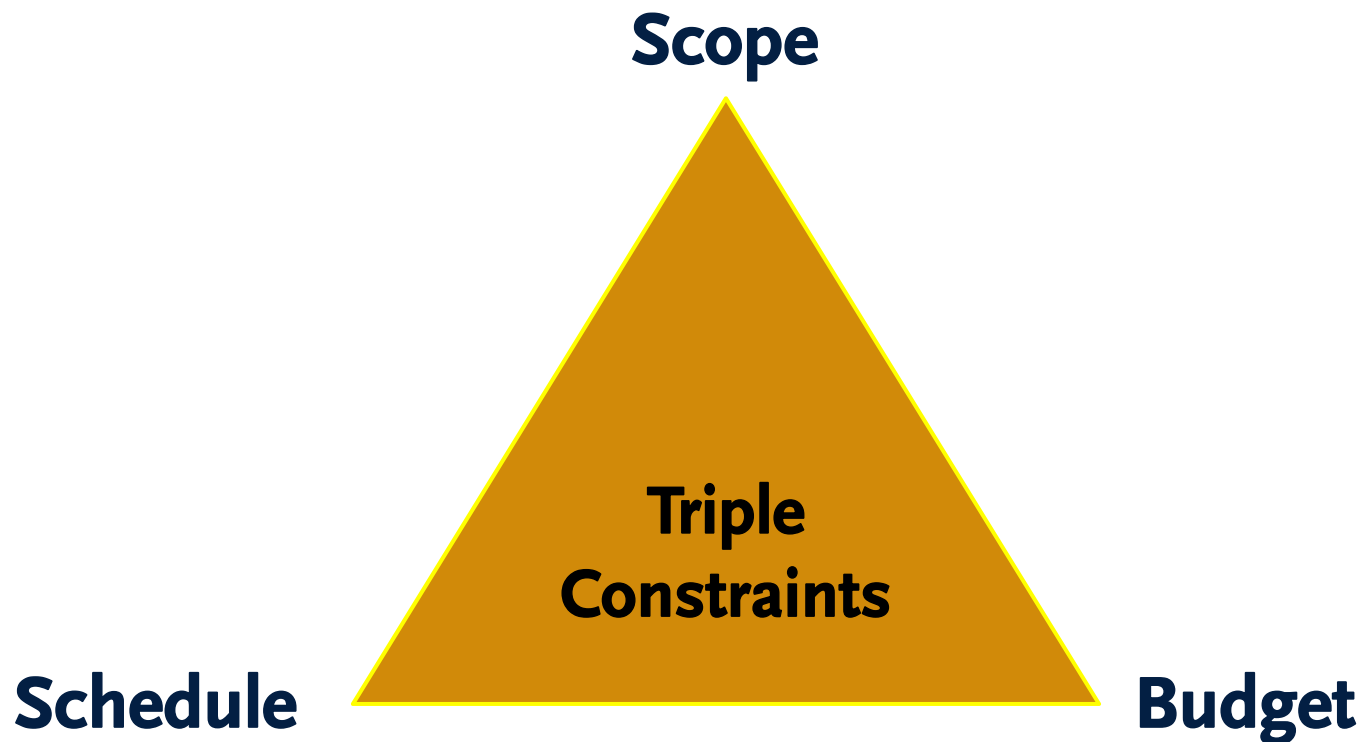
- A review of project costs and schedules
- Update project capital cost estimates to current conditions, including price trends and changes
- Focus on budget to complete current project phase/milestone
- Include APE results in future fiscal year annual budget review and adoption by the Board



Project Management



One side of the triangle cannot be changed without affecting the other sides:



FY19 Scope

- Focus on capital projects with total project cost greater than \$5M being managed by Program Management:
 - Major Transit Construction Projects – 6 projects
 - Other Transit Capital Projects – 25 projects
 - Regional Rail Projects – 7 projects
 - Highway Program – 28 projects
- Project budgets in the APE focus on authorized funding amount
- Project funding amounts remain within the annual budget limit approved by the Board

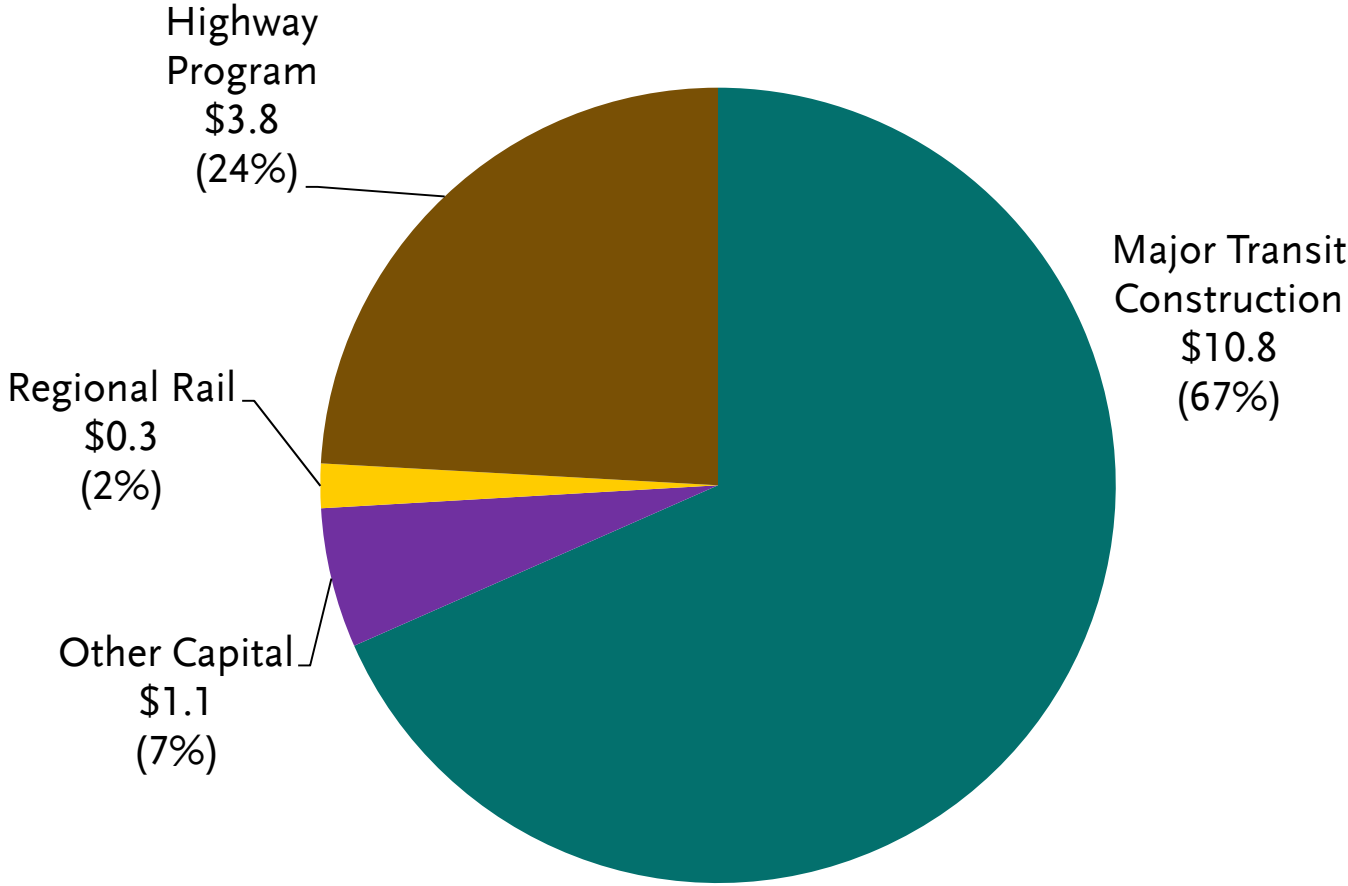


FY19 Scope

- In addition to the projects in APE, Program Management also manages/oversees 100+ Operations Capital Improvements and State of Good Repair projects
- In total, Program Management manages and supports volume of 170+ projects with a total authorized value estimated at \$16.8 billion
- Approximately \$16 billion of approved budget in projects are included in the FY19 APE review



FY19 Current Program: \$16 B



\$ in billions



Program Highlights

- Overall Program increased from \$13.8 billion in FY18 to \$16 billion in FY19
- Program dollars approved for Major Transit Construction projects increased 16% from FY18 to FY19
- With implementation of Measure M and 28 by 2028 Initiative, Metro's capital program will grow significantly in the next decade



Program Challenges

- Deliver multiple large and complex projects on-time and within budget
- Collaborate with stakeholders to meet community expectations
- Commitment of efficient third party review/approval by various external jurisdictions
- Encourage competitive and qualified pool of contractors, small businesses, and workforce on Metro projects
- Manage cost risks impacted by shortage of skilled workers in a growing construction market
- Maintain sufficient resources and staffing needed to manage and support project delivery
- Achieve continuous improvement in project delivery through innovation and application of best practices



Strategic Initiatives

Implement strategic initiatives to bring improved planning, consistency, transparency, and discipline to project delivery:

- Establish more reliable Life-of-Project budgets
- Conduct Annual Program Evaluation of Metro's capital program
- Engage robust management and support services consulting teams to augment technical expertise and resources
- Implement new organizational approaches
- Continue systematic approach for Quality Assurance (on-going)



Strategic Initiatives

- Improved Change Control Procedure
- Implemented Project Readiness Procedure
- Implemented Project Delivery Selection Procedure
- Established Program Management Leadership Institute (PMLI)
- Enhanced Risk Management Program
- Improved Best Practices/Lessons Learned Program
- Received Board Delegated Authority for LOP Budget Management on all transit and regional rail projects
 - Quarterly reporting to the Board on Changes and Modifications that are above \$500,000



Strategic Initiatives

Consistent Implementation of Concurrent Non-Project Activities Project for Major Capital Projects

- Concurrent Non-Project Activities Project are implemented on several Metro projects, including Metro Gold Line Eastside Extension Phase 1 Project and the Regional Connector Project
- Intended to track betterments, non-federally eligible costs and other activities not part of the core project scope
- Concurrent Non-Project Activities Project is approved by the Board but budgeted outside of the Board adopted major capital project LOP budget
- This will protect the integrity of the core LOP Budget and improve transparency



Metro Transit Program



Metro Transit Capital Projects

Type	Project Budget (in millions)	# of Projects
Major Transit Construction	\$10,804	6
Other Transit Capital	\$1,051	25
Bus Facilities	\$143	9
Rail Facilities	\$242	6
Wayside Systems	\$150	2
Security/Safety	\$124	2
Misc. Capital	\$392	6
Total Transit Capital Program	\$11,855	31



Metro Transit Capital Program Summary

Projects Completion In FY2018

- Metro Pershing Replacement/ Modernization Project (2nd Quarter)
- Bus Facility Maintenance Improvements & Enhancements Phase I (Scheduled 4th Quarter)
- Metro Blue Line Pedestrian Safety Enhancement at Grade Crossings (Scheduled 4th Quarter)



Project Completion Planned in FY2019:

- Metro Silver Line Improvements and Upgrades



Metro Transit Capital Program Summary

Projects Transitioned from Planning to Program Management in FY18:

- Willowbrook/Rosa Parks Station Improvements Project
- Airport Metro Connector Project (96th Street Station)
- Metro Gold Line Eastside Access Project
- Rail to Rail Corridor Active Transportation Connector Project

Planned Transition from Planning to Program Management in FY19:

- Orange Line Bus Rapid Transit Improvement Project
- North Hollywood to Pasadena Bus Rapid Transit Project
- East San Fernando Valley Transit Corridor Project



Crenshaw/LAX Transit Project



Crenshaw/LAX Transit Project

Project Budget: \$2,058M

Project Completion: October 2019

Project Complete: 79%

Accomplishments:

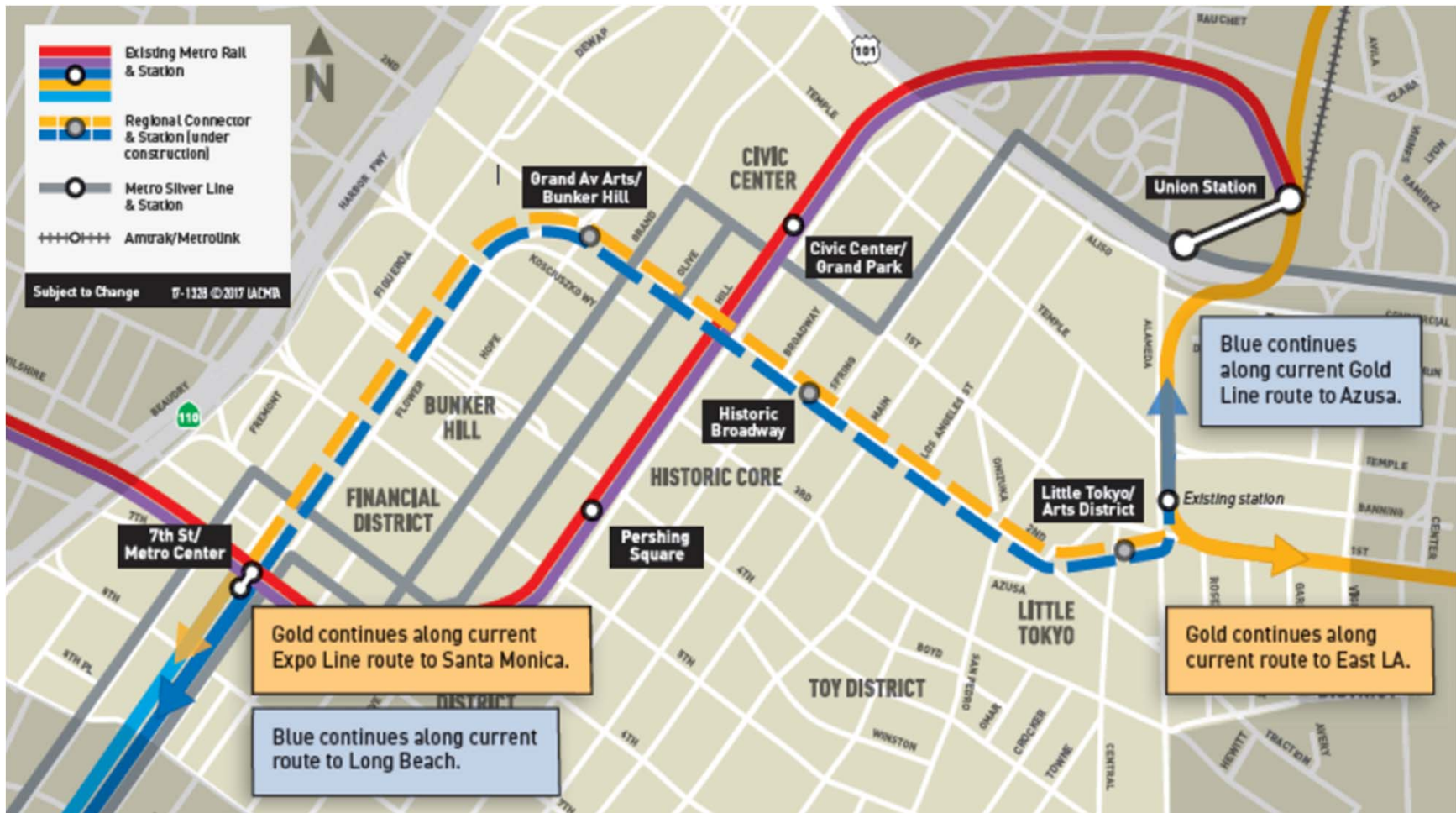
- All five tunnel structures are complete
- All six at-grade and aerial stations' structures are complete
- The three underground stations' structures are approaching 80% completion
- Continuing critical track work installation along the southern section of the eight mile alignment
- Systems installation has commenced
- Working closely with community to mitigate any concerns during construction

Challenges / Risks:

- Limited remaining cost contingency
- Near-term need for concurrent non-project activities to capture Crenshaw/LAX Project non-federal eligible costs and betterments which currently are reducing available project contingency
- Contractor behind schedule and is required to mitigate delays to achieve revised baseline schedule. Metro and contractor mitigating delays to ensure meeting October 30, 2019 revenue service date



Regional Connector Transit Project



Regional Connector Transit Project

Project Budget: \$1,756 M

(Excludes finance costs)

Project Completion: December 2021

Project Complete: 49%

Accomplishments:

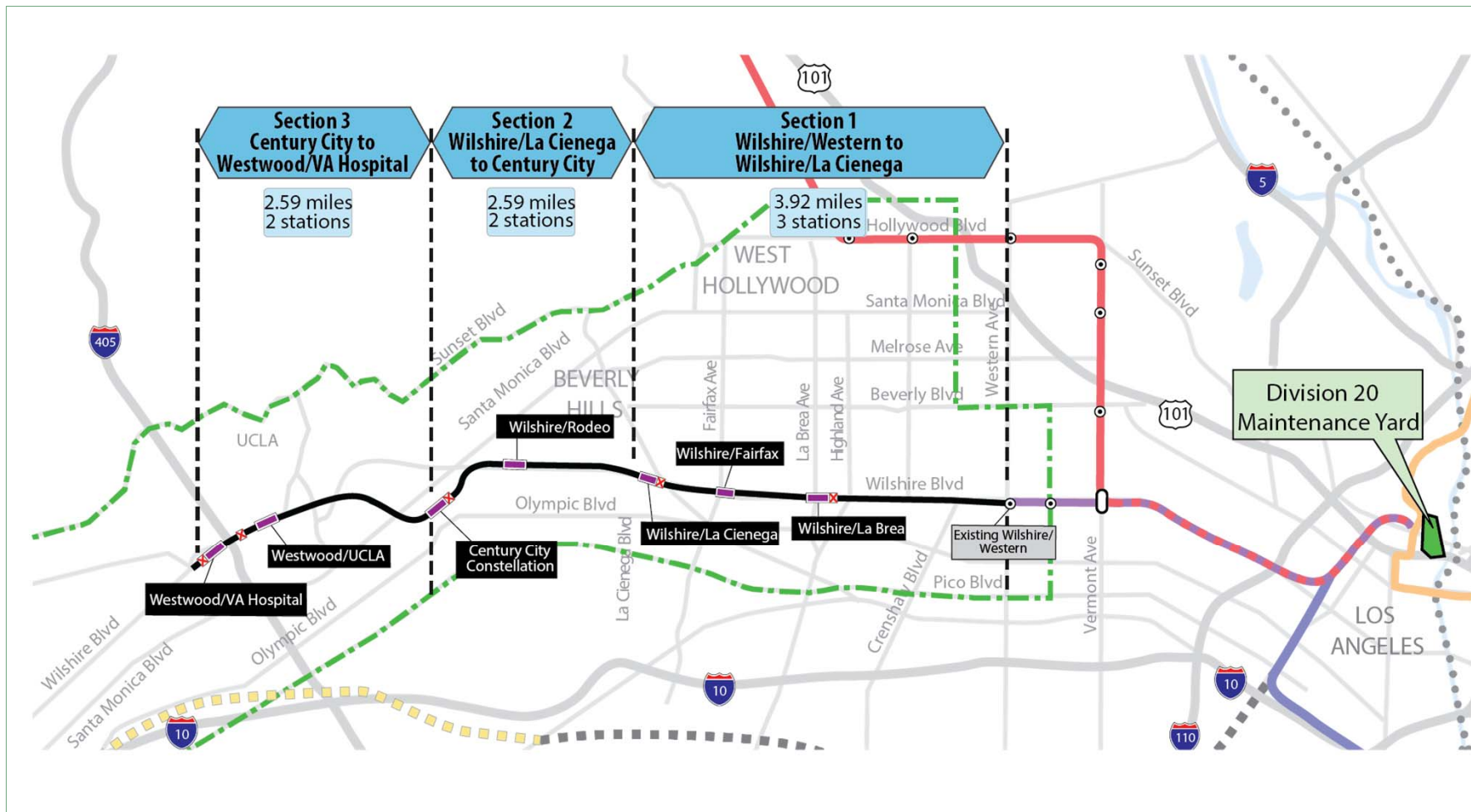
- Successfully completed tunnel boring machine (TBM) operations; retired TBM "Angeli" in mid-January
- Initiated build-out of permanent structural elements at the Grand Av Arts/Bunker Hill Station
- Advanced support of excavation (SOE) installations and utility relocations on Flower Street sufficient to facilitate completion of decking placement from 4th Street to 6th Street; steady state operations are now underway between these stakeholder-sensitive points
- Safely initiated and completed closure of 6th Street east of Flower Street to facilitate key utility relocations in the intersection
- Completed 126" LA County Storm Line relocation along 2nd between Broadway and Spring to allow station box excavation and adjacent building underpinning
- Executed global agreement with contractor which addressed cumulative schedule and cost impacts of numerous utility interferences

Challenges/Risks:

- Transitioning from a TBM mining-centric priority to permanent station and cut/cover guideway construction
- Securing and retaining sufficient craft labor resources to safely, and efficiently prosecute the work
- Effectively identify and manage risks early to afford broader response options for improving or protecting schedule and costs
- Maintaining stakeholder support for necessary traffic control, extended work-hour permits, and general disruptions inherent to heavy construction in a dense urban setting
- Relocating LADWP underground power assets south of 6th/Flower intersection to allow LADWP forces to complete the cabling and intercepts throughout the area per plan and schedule



Westside Purple Line Extension Project



Westside Purple Line Extension Section 1

Project Budget: \$2,779 M
(Excludes finance costs)

Forecast Completion: November 2023
Project Complete: 31%

Accomplishments:

FY18

- Completed Wilshire/La Brea Station excavation and began station concrete operations
- Delivery of tunnel boring machines (TBM)
- Completed Wilshire/La Cienega Station street decking and began excavation
- Completed Wilshire/Western TBM retrieval site piling and street decking

Planned FY19

- Commence Reach 1 tunnel drive from Wilshire/La Brea Station to Wilshire/Western TBM retrieval site
- Complete excavation and temporary TBM support slab at Wilshire/Western TBM retrieval site
- Begin Wilshire/Fairfax Station concrete operations
- Complete excavation at Wilshire/La Cienega Station

Challenge:

- Potential schedule delay due to differing site conditions



Westside Purple Line Extension Section 2

Project Budget: \$ 2,441M

(Excludes finance costs)

Forecast Completion: August 2025

Project Complete: 6%

Accomplishments:

FY18

- Completed joint trench civil work, telecom cable pulling and splicing, and Southern California Gas (SCG) utility relocations at Century City Constellation Station
- Completed Southern California Edison (SCE) utility relocations at Wilshire/Rodeo Station
- Began SCG and AT&T utility relocations at Wilshire/Rodeo Station
- Signed Memorandum of Agreement (MOA) with the City of Beverly Hills for third party utility relocations
- Continue property acquisitions, final design, manufacturing of TBMs, and construction mobilization

Planned FY19

- Complete third party utility relocations civil work at Century City Constellation Station
- Complete final design
- Deliver and assemble tunnel boring machines and begin tunnel mining
- Begin construction of Wilshire/Rodeo Station
- Acquire all subsurface property easements

Challenge:

- Manage in accordance with the signed MOA with the City of Beverly Hills



Westside Purple Line Extension Section 3

Projected Budget through FY19: \$364M

Forecast Completion: TBD

Working Project Estimate: \$3.0 B

(Excludes finance costs)

Accomplishments:

FY18

- Submitted Request for Letter of No Prejudice to FTA for the Tunnels Contract
- Issued Stations, Trackwork and Systems Contract solicitation
- Executed the Construction Management Support Services Contract
- Issued the Notice to Proceed (NTP) for Wilshire/UCLA Advanced Utility Relocations

Planned FY19

- Complete real estate certification process and begin property acquisitions
- Substantially complete Wilshire/UCLA Advanced Utility Relocations
- Continue third party utility relocations
- Issue NTP for Stations, Trackwork and Systems Contract (Planned 4th Quarter)
- Complete final design of the Tunnels
- Tunnel boring machine power becomes available
- Receive approval of the Full Funding Grant Agreement from FTA

Challenges/Risks:

- Secure FTA's funding commitment; may impact cost and schedule
 - Timely receipt of construction and staging areas at the VA Hospital and the Army Reserve to begin construction as currently planned
-



Gold Line Foothill Extension Phase 2B



Gold Line Foothill Extension Phase 2B

Project Budget: \$1,407 M

Forecast Completion: 2027

Accomplishments:

- Ground breaking in December 2017
- Commenced year long Design-Build solicitation for Phase 2B Alignment in November 2017
- Submitted 28 of 50 grade crossing applications to California Public Utility Commission

Challenges/Risks:

- Construction while under operations and accommodating future projects
- Close coordination with Third Party entities, including SCRRA (Metrolink), San Bernardino County Transportation Authority, and Cities
- Secure commitment from Transit and Intercity Rail Capital Program to fully fund approved budget
- Lawsuits from local jurisdictions



Patsaouras Plaza Busway Station

Project Budget: \$ 39.7 M

Project Completion: December 2018

Project Complete: 54%

Accomplishments:

- Completion of all major design work
- Completion and approval of all bridge falsework and bridge foundations
- Major concrete work is in progress

Challenges/Risks:

- Third party review/approvals, including the City of Los Angeles and Caltrans, in a timely manner
- Potential budget and schedule impacts due to design changes and unforeseen field conditions during underground construction
- Maintain planned schedule milestones



Metro Blue Line Signal Rehabilitation Project

Project Budget: \$ 119 M

Project Completion: April 2021

Project Complete: 14%

Accomplishments:

- Met Cap & Trade deadline for project funding
- Issued Notice to Proceed to contractor
- Complete 60% design is under review

Challenges/Risks:

- Track allocation coordination with other projects/maintenance on Metro Blue Line
- Existing aged ductbank/conduits may require replacement, potential additional scope
- Complete the resignaling scope within the scheduled Metro Blue Line shutdown window



New train control



Project adds 4 Crossovers



Willowbrook/Rosa Parks Station Project

Approved Budget through FY19: \$36.0 M
Working Project Estimate: \$ 92.4 M

Forecast Completion: Summer 2020

Accomplishments:

- Completion of real estate acquisition
- Completion of all final design work
- First contract has been awarded, and procurement of second contract is underway



Challenges/Risks:

- Continue Third Party cooperation review/approval, including City of Los Angeles, County, Caltrans, Union Pacific, Public Utility Commission to be consistent with project schedule
- Construction phase plan coordination during Metro operations
- Meet groundbreaking deadline for funding



Emergency Security Operations Center

Project Budget: \$ 113 M

Forecast Completion: Phase 1 in Dec. 2021

Accomplishments:

- Completed preliminary engineering drawings in July 2017
- Issued best value design build procurement in 2nd quarter 2018
- Completion of Constructability review

Challenges/Risks:

- Coordination with adjacent Division 20 Portal Widening Turnback and LINK US projects
- Staff intends to provide \$100,000 per stipend agreement for unsuccessful responsive bidders on the design build solicitation to enhance competition
- Staff plans to return to the Board in Winter 2019 for an increase to LOP budget



Highway Program





Highway Program Status Summary (Measure R Funded)

#	Project	Current Phase	Estimated Costs through Current Phase (\$mil)	Current Phase Completion
1	I-5 South – Alondra	Construction	\$114.1	Completed
2	I-5 South – Valley View Interchange	Construction	\$631.1	Aug 2022
3	I-5 South – Shoemaker, Rosecrans, Bloomfield	Construction	\$188.2	Mar 2019
4	I-5 South – San Antonio, Imperial Hwy and Orr Day	Construction	\$323.3	Jul 2019
5	I-5 South – Florence	Construction	\$211.7	Jul 2020
6	I-5 South – Carmenita Interchange	Construction	\$419.9	Mar 2018
7	I-5 North – HOV from SR 118 to SR 170	Construction	\$219.5	Completed
8	I-5 North – HOV from FR 170 to North of Buena Vista	Construction	\$94.7	Completed
9	I-5 North – North of Buena Vista to South of Magnolia Blvd	Construction	\$402.4	Jun 2020
10	I-5 North –Magnolia Blvd to SR 134	Construction	\$137.4	Apr 2019



Highway Program Status Summary (Measure R Funded)

#	Project	Current Phase	Estimated Costs through Current Phase (\$mil)	Current Phase Completion
11	I-5 North HOV Project SR 14 to Parker Road	Plans, Specifications & Estimates (PS&E)	\$42.4	Dec 2018
12	Interstate 605 Corridor Hot Spots – I-605/I-5 Interchange Improvement	Project Approval/Environmental Document (PAED)	\$30.3	Jul 2021
13	Interstate 605 Corridor Hot Spots – I-605/SR 60 Interchange Improvement	PAED	\$41.6	Jul 2021
14	Interstate 605 Corridor Hot Spots – SR-91 Westbound Widening at I-605 Interchange	PAED	\$9.3	Dec 2018
15	Interstate 605 Corridor Hot Spots – I-605 Beverly Interchange Improvement Project	PAED/PS&E	\$3.5	Apr 2019
16	I-605 from SR-91 to South St. Improvements Project	PAED/PS&E	\$4.5	Jan 2019



Highway Program Status Summary (Measure R Funded)

#	Project	Current Phase	Estimated Costs through Current Phase (\$mil)	Current Phase Completion
17	Interstate 405 Crenshaw Blvd On and Off Ramp Improvements	PS&E	\$20.0	Mar 2020
18	Interstate 405 and I-110 Aux Lane from SR 91 to Torrance Blvd	Construction	\$44.0	Dec 2019
19	I-710 (South) Corridor Improvement Projects	PAED	\$91.0	Sep 2018
20	I-710 (South) Early Action Projects - Soundwall Projects (3 locations)	PS&E & ROW	\$12.7	Aug 2019
21	I-710 (North) Early Action Projects	PAED	\$47.0	Jun 2018
22	Soundwall Package 10	PS&E	\$59.4	Dec 2018
23	Soundwall Package 11	Construction	\$89.2	Dec 2021
Subtotal Measure R Highway Projects			\$3,237.2	

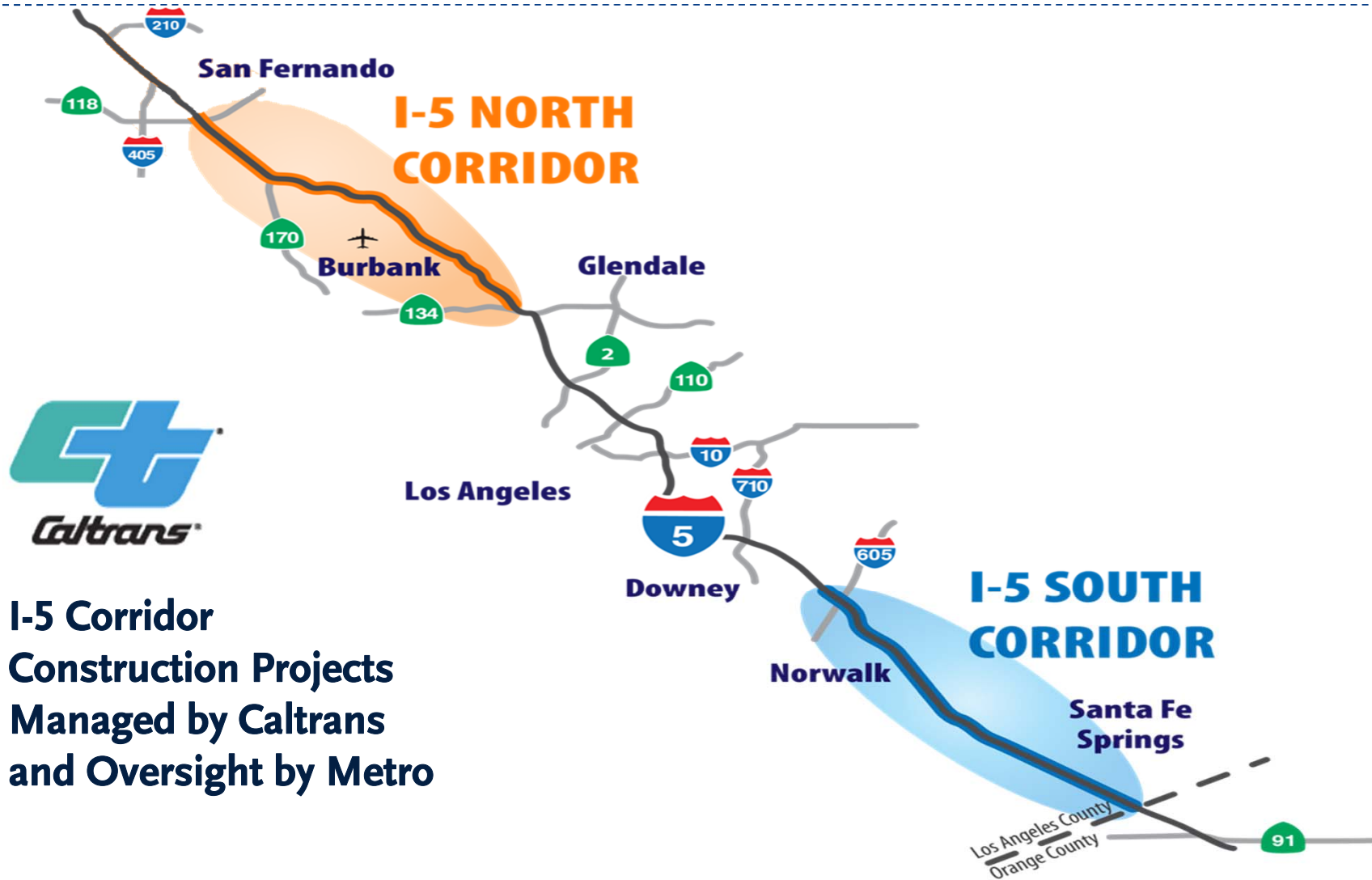


Highway Program Status Summary (Non-Measure R Funded)

#	Project	Current Phase	Estimated Costs through Current Phase (\$mil)	Current Phase Completion
24	I-10 HOV from Puente Avenue to Citrus Avenue (Seg. 2)	Construction	\$195.6	Apr 2019
25	I-10 HOV from Citrus Avenue to SR 57 (Seg. 3)	Construction	\$268.7	Jan 2022
26	SR-57/SR-60 Interchange Improvements (Eastbound and Westbound flyover off-ramp to Grand Ave, Eastbound on-ramp SR-60)	PS&E and ROW	\$54.0	Jul 2020
27	SR 71: Interstate 10 to Mission Blvd	PS&E and ROW	\$16.0	Dec 2020
28	SR 71: Mission Blvd to Rio Rancho Road	PS&E and ROW	\$40.0	Aug 2019
	Subtotal Non-Measure R Funded Highway Projects		\$574.3	
	TOTAL HIGHWAY PROGRAM		\$3,811.5	



I-5 Corridor Construction





I-5 North: SR 118 to SR 134



PHASE: CONSTRUCTION

Project Managed by Caltrans :

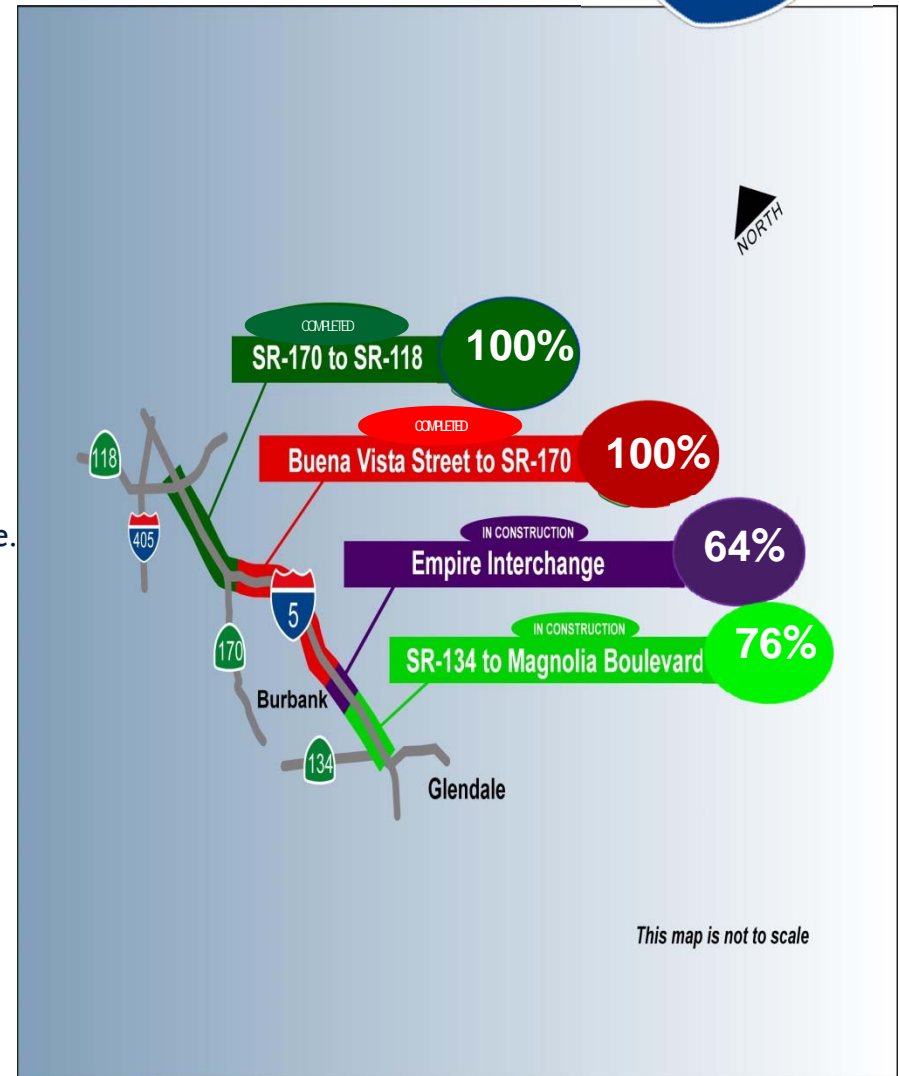
- Approved budget: \$854.0 M
- Estimated Cost to Complete Construction: TBD

Accomplishments:

- SR118 to SR170 - Construction Completed for new HOV Lanes and HOV Direct Connectors, Open to Traffic and Claims have been settled.
- SR170 to North of Buena Vista – HOV Construction Completed and Open to Traffic.
- North of Buena Vista to Magnolia Blvd including Empire Ave. Interchange – Construction in progress.
- Magnolia Blvd to SR 134 – Construction in progress.

Challenges/Risks:

- Adverse field conditions (Seg. 4).
- Utility relocation/ Railroad work changes (Seg. 3).
- Survey work related to roadway and structures (Seg.4).
- LA River Bridge construction requires significant changes to avoid working on the River bed. (Seg. 4).
- Several change orders have consumed significant cost contingency
- High risk level on potential schedule and budget impacts





I-5 South: Orange County Line to I-605



PHASE: CONSTRUCTION

Project Managed by Caltrans :

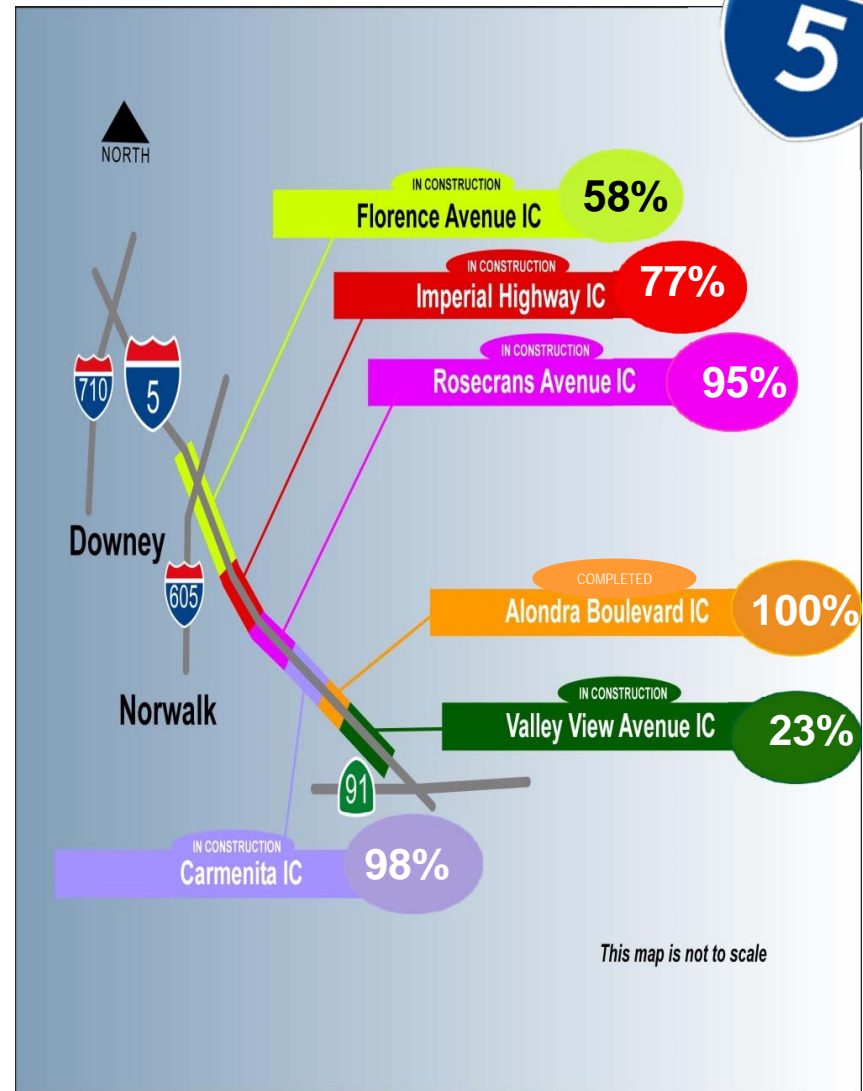
- Approved budget: \$1,888.3 M
- Estimated Cost to Complete Construction: TBD

Accomplishments:

- Alondra Blvd – Started the pre-final Audit process
- Valley View Avenue – Construction in progress
- Rosecrans Avenue – Open to Traffic January 2018, Construction still in Progress
- Imperial Highway – Construction in progress
- Florence Avenue – Construction in progress
- Carmenita Interchange – Interchange open to traffic fall 2016. Construction on local streets in progress

Challenges/Risks:

- Extensive utility and ROW relocation
- Adverse field conditions and railroad work
- Schedule delay and potential budget overrun
- Timely resolution of valid contractors' claims
- Low to medium risk level on potential schedule and budget impacts



I-5 N Capacity Enhancements (SR14 to Parker Road)



PHASE: Plans, Specifications & Estimates

- Approved Budget: \$42.4 M
- Estimated Cost to Complete Design: \$42.4 M

Accomplishments:

- Awarded the PS&E Contract in June 2016
- 65% of PS&E Plans submitted to Caltrans on schedule in December 2017

Challenges/Risks:

- Coordination with Caltrans' ongoing pavement rehabilitation project
- Delays with utility company facility relocations
- Right of Way Acquisition Delays



I-605 “Hot Spots”



PHASE: Various

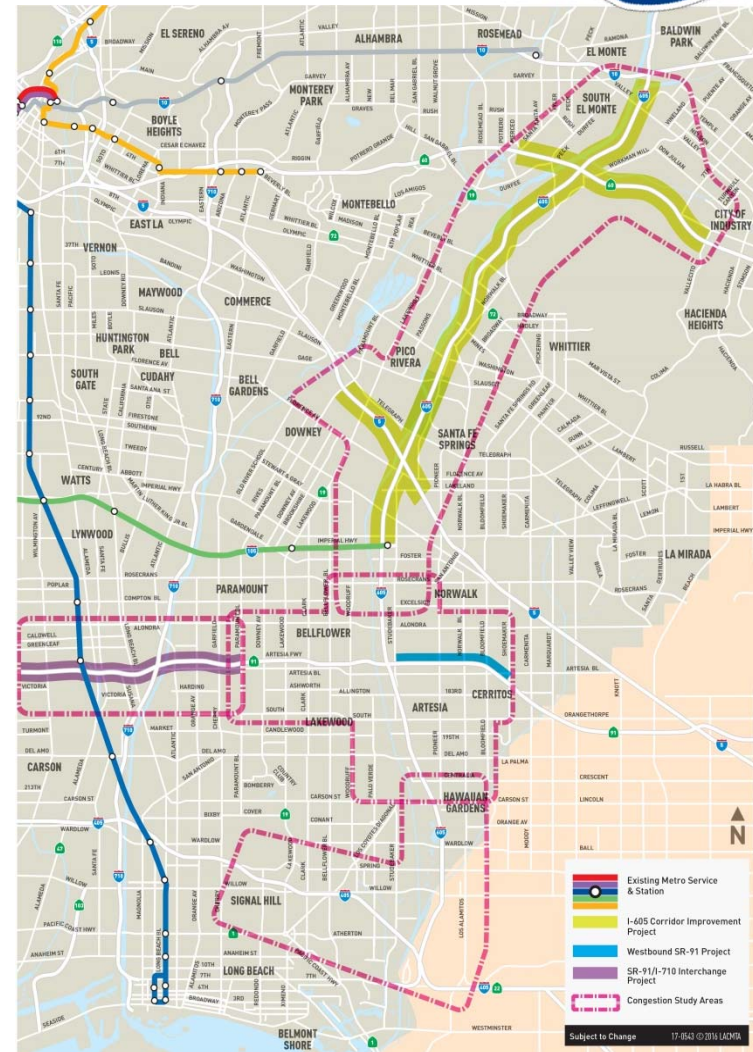
- Approved budget: \$88.7 M
- Estimated Cost to Complete Phase: \$88.7 M

Accomplishments:

- I-605 Corridor Improvement Project (I-605/I-5 and I-605/SR-60) Commenced PAED in 2015 and 2016, respectively
- Completed I-605 Corridor Improvement Project scoping Meetings in Fall 2016
- I-605/SR-91 Westbound PAED expected May 2018
- Pursuing early action projects during the development of the corridor environmental document

Challenges/Risks:

- Funding to advance projects to design and construction
- Strategy to resolve: Considering breaking down the mega projects to smaller fundable projects with independent utility and sustainability



I-710 South Corridor Improvement Projects



Project Phase: Project Approval/Environmental Document

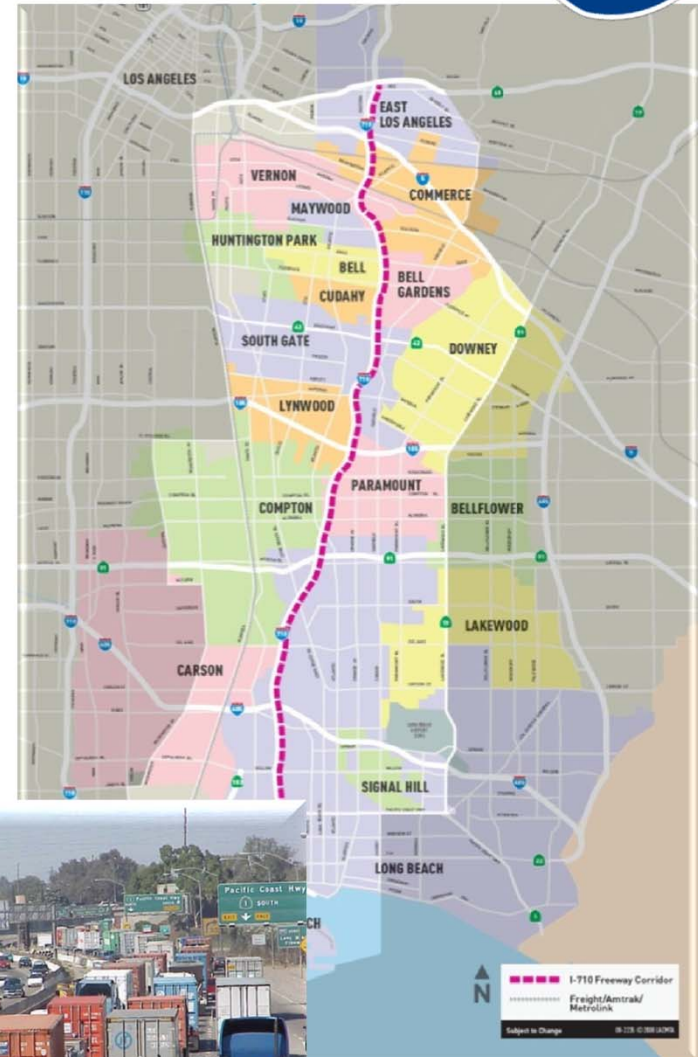
- Approved Budget: \$91.0 M
- Estimated Cost to Complete Phase: \$91.0 M

Accomplishments:

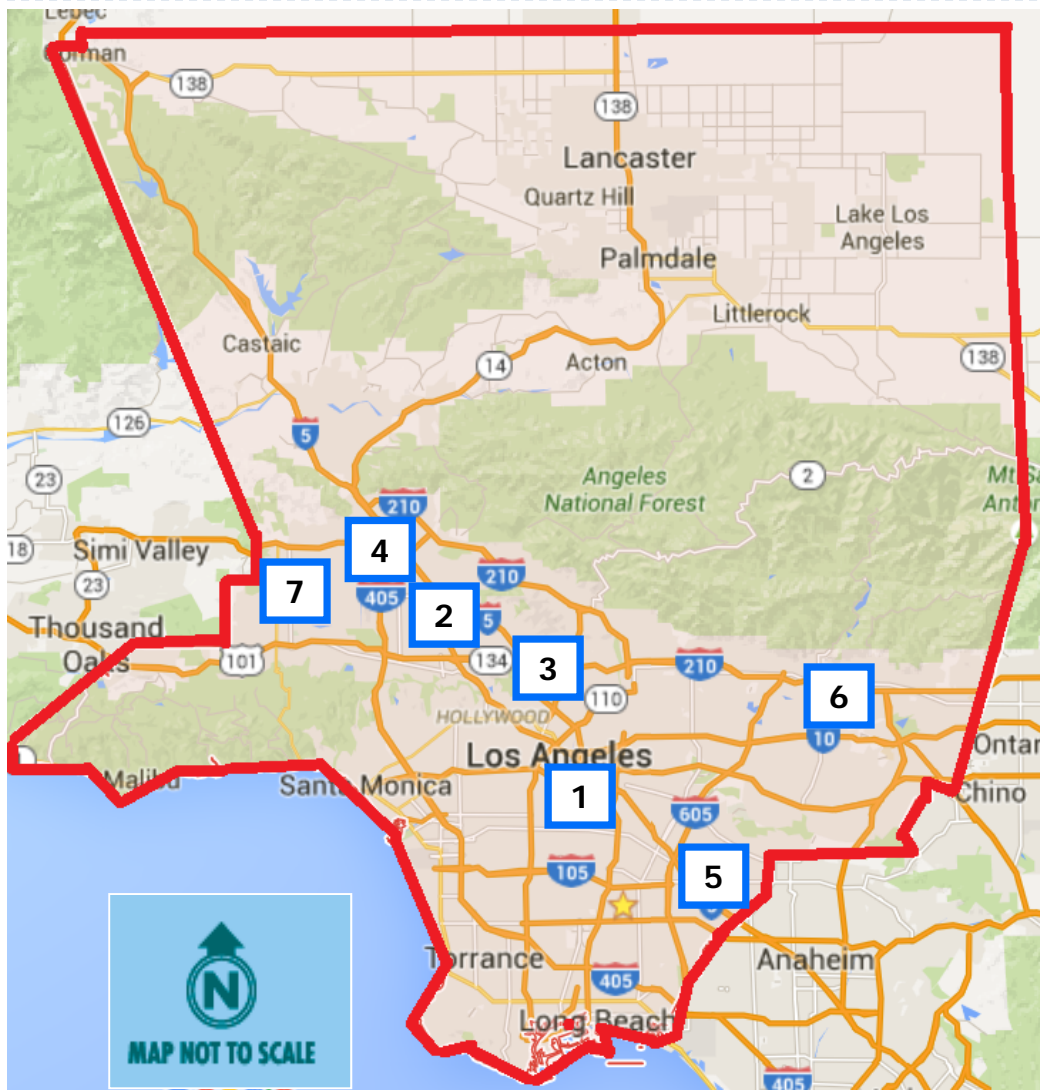
- Released RDEIR/SDEIS for Public Review in Jul 2017.
- Conducted additional studies as directed by the Board
- Strong collaborative work with the local agencies, communities, and Metro Board members in addressing community concerns
- Alternative 5C approved by Metro Board on March 1, 2018 as the Locally Preferred Alternative
- Pursuing early action projects during the development of the corridor environmental documents

Challenges/Risks:

- Funding to pursue design and construction of the proposed improvements
- Strategy to resolve: Pursuing implementation of early action projects with independent utility and sustainability
- Proper phasing of the project funding



Regional Rail Program



Los Angeles County



1. LINK Union Station
2. Burbank Airport North - Metrolink Station Project
3. Doran Street and Broadway/Brazil Grade Separation Project
4. Brighton to Roxford Double Track Project
5. Rosecrans/Marquardt Grade Separation Project
6. Lone Hill to CP White Double Track Project
7. Raymer to Bernsen Double Track Project

Regional Rail Program Summary

#	Project	Current Phase	Estimated Costs through Current Phase (\$mil)	Current Phase Completion
1	LINK Union Station Project	Environmental & PE	\$71.6	June 2019
2	Burbank Airport – North Metrolink Station Project	Construction	\$15.0	April 2018
3	Doran Street and Broadway/Brazil Grade Separation Project	Environmental/PE	\$11.6	November 2019
4	Brighton to Roxford Double Track Project	Environmental/ Final Design	\$15.0	October 2019
5	Rosecrans/Marquardt Grade Separation Project	Environmental; Plan, Specification & Estimate Final Design, Real Estate Acq.	\$155.3 (including construction)	September 2022
6	Lone Hill to White Double Track Project	Environmental & Final Design	\$10.0	September 2020
7	Raymer to Bernsen Double Track Project	Environmental & Final Design	\$6.0	June 2020
	Total Regional Rail Program		\$284.5	



Link Union Station (LINK US)

Estimated Cost to Complete Environmental/PE:
Current Phase Completion Date:

\$71.6 M
June 2019

Accomplishments:

- Board approved to proceed with staff recommended alternative 2 in March 2017 with six Regional Rail run-through tracks and two High Speed Rail run-through tracks to be carried forward in the NEPA and CEQA as the locally preferred alternative
- New above-grade concourse concepts and various active transportation linkage options was presented to July 2017 Board
- Worked closely with Division 20 Portal Widening Team in November 2017 to collaborate on design modifications to both the Portal project and the Link US run-through tracks to accommodate each project

Challenges/Risks:

- Potential return to the Board in June for additional budget in the amount of \$1.2M to accommodating WSAB Line at LAUS rail yard while the WSAB Line is undergoing potential project redefinition
- Funding commitments from HSR on required number of platforms and run-through track
- Board authorization on the preferred alternative will be sought in Summer 2018



Burbank Airport – North Metrolink Station Project

Project Budget: \$15.0M

Project Completion: April 2018

Accomplishments:

- Construction to be completed on-time and under budget
- Ribbon cutting/Grand opening anticipated in mid May 2018
- Revenue Service in May



Doran Street and Broadway/ Brazil Grade Separation Project

Est. Cost to Complete Environmental/Design: \$11.6 M

Current Phase Completion Date: November 2019

Accomplishments:

- Completion of Alternative Analysis; starting environmental
- Submittal of Petition to Modify from the proposed one-way interim at-grade improvements at Doran Street to a two-way configuration with quiet zone ready improvements and support for all stakeholders

Challenges/Risks:

- Secure funding for construction
- Board approval of active transportation elements to the project



Brighton to Roxford Double Track Project

Estimated Cost to Complete Environmental/PE:

\$15M

Current Phase Completion Date:

October 2019

Accomplishment: Completion of 30% Preliminary Engineering

Challenges/Risks:

- Possibility that East San Fernando Valley Transit Corridor Project could no longer accommodate the second track shown on B&R plans resulting in \$1M increase in design costs and at least \$50M in right-of-way and construction impacts
- If federal funds are applied to the project, a NEPA process would be required; adding significant time to the project schedule
- Secure funding for construction



Rosecrans/Marquardt Grade Separation Project

Working Project Estimate: \$155.3 M

Phase Completion: September 2022

Accomplishments:

- California High-Speed Rail Authority (CHSRA) awarded \$76.7 million towards the costs of the Rosecrans/Marquardt
- Metro's Real Estate acquired 2 of 8 full take properties
- California Public Utilities Commission approved the Grade Separation application (GO-88-B)

Challenges/Risks:

- Project delay of 8 months by CHSRA for execution of the funding agreement (PMFA)
- Funding agreement executions in progress with Caltrans for Section 190 and BNSF Railway



Lone Hill to White Double Track

Estimated to Complete Environmental/Final Design:

\$10.0 M

Current Phase Completion Date:

September 2020

Accomplishment:

- Completion of 30% Preliminary Engineering

Challenges/Risks:

- Return to the Board in Summer to advance the final design
- Secure construction funding



Raymer to Bernsen Double Track

Estimated Cost to Complete Environmental/Final Design:

\$6.0 M

Current Phase Completion Date:

June 2020

Accomplishments:

- Environmental Clearance in October 2014
- Project received \$60.8M in STIP funds and Prop \$11.8M in Prop1B to-date for environmental, design and construction costs

Challenges/Risks:

- Project placed on hold due to community concerns of environmental studies
- Return to the Board in Summer 2018 to request approval for new environmental studies to directly address community concerns



FY19 Summary

- New Projects with Planned Adoption of Life-of-Project Budget
 - Crenshaw/LAX Concurrent Non-Project Activities Project
 - Willowbrook/Rosa Parks Station Improvements Project
 - Rail to Rail Active Transportation Corridor Connector Project
 - Division 20 Portal Widening Turnback Facility Project
 - Westside Purple Line Extension Section 3 Project

- Existing Projects with Potential Adjustments to LOP Budget (separate Board action):
 - Emergency Security Operations Center
 - Close-out of 7th Street/Metro Station Pedestrian Tunnel (BLOC)
 - Division 4 Permeable Pavement and Bioretention Pilot Project
 - I-5 North: SR 118 to SR 134
 - I-5 South: Orange County Line to I-605



Next Steps

- Project Managers to manage project scope, budget, and schedule for quality, on-time and within budget delivery
- To present project-specific Life-of-Project budget for Board review and adoption
- Maintain resources and staffing needed to manage and support project delivery
- Seek additional revenue sources needed to fulfill funding commitment required to build and deliver projects, including the 28 by 2028 Initiative



Appendix: Project Listing by Type

TRANSIT CAPITAL PROJECTS WITH TOTAL PROJECT COSTS > \$5 M		TYPE	LOP BUDGET (\$ MIL.)
1	Bus Rapid Transit Freeway Station Sound Enclosure	Bus Facilities Improvements	\$5.8
2	Fuel Storage Tank Program (FY18 - FY21)	Bus Facilities Improvements	\$13.2
3	Metro Silver Line Improvements & Upgrades	Bus Facilities Improvements	\$7.8
4	Division 3 Master Plan Phases II-IV	Bus Facilities Improvements	\$13.2
5	Division 1 Improvements	Bus Facilities Improvements	\$20.9
7	Bus Facility Maintenance Improvements & Enhancements Phase II	Bus Facilities Improvements	\$20.9
8	Bus Facility Maintenance Improvements & Enhancements Phase III	Bus Facilities Improvements	\$21.7
9	Patsaouras Plaza Bus Station Construction	Bus Facilities Improvements	\$39.8
		Bus Facilities Improvements Total	\$143
10	Crenshaw/LAX Light Rail Transit: Construction	Major Construction	\$2,058.0
11	Regional Connector: Construction	Major Construction	\$1,755.8
12	Westside Purple Line Extension Section 1 Project	Major Construction	\$2,778.9
13	Westside Purple Line Extension Section 2 Project	Major Construction	\$2,440.9
14	Westside Purple Line Extension Section 3 Project	Major Construction	\$363.6 ^(a)
15	Gold Line Foothill Extension Phase 2B Project	Major Construction	\$1,406.9
		Major Transit Construction Total	\$10,804
16	Patsaouras Bus Plaza Paver Retrofit	Misc. Capital Projects	\$9.1
17	Division 20 Portal Widening Turnback Facility	Misc. Capital Projects	\$188.7 ^(a)
18	Division 22 Paint and Body Shop	Misc. Capital Projects	\$11.0
19	Rail to Rail Corridor Active Transportation Connector Project	Misc. Capital Projects	\$11.4 ^(a)
20	Metro Eastside Access Improvements Project	Misc. Capital Projects	\$20.4 ^(a)
21	Airport Metro Connector Project	Misc. Capital Projects	\$151.1 ^(a)
		Misc. Capital Projects Total	\$392
22	Southwestern Maintenance Yard	Rail Facilities Improvements	\$157.0
23	Systemwide Elevator Installations (Vertical Systems)	Rail Facilities Improvements	\$8.0
24	Light Rail Transit Freeway Stations Sound Enclosures	Rail Facilities Improvements	\$8.6
25	Metro Red Line Civic Center Station Escalator/Elevator Modernization	Rail Facilities Improvements	\$12.0
26	Metro Red Line Escalator Replacement/Modernization	Rail Facilities Improvements	\$20.8
27	Willowbrook/Rosa Parks Station Improvement	Rail Facilities Improvements	\$36.0 ^(a)
		Rail Facilities Improvements Total	\$242
28	Metro Gold Line I-210 Barrier Replacement Phase I	Security/Safety	\$11.1 ^(b)
29	Metro Emergency Security Operations Center	Security/Safety	\$112.7
		Security/Safety Total	\$124
30	Metro Blue Line Pedestrian Safety Enhancement at Grade Crossings	Wayside Systems	\$31.4
31	Metro Blue Line Signal System Rehabilitation	Wayside Systems	\$118.9
		Wayside Systems Total	\$150
		TRANSIT CAPITAL TOTAL	\$11,855

(a) Based on projected budget through FY19, prior to Board adoption of life-of-project budget.

(b) Design LOP budget approved for risk assessment study, environmental clearance and final design.

Appendix: Project Listing by Type

HIGHWAY	TYPE	CURRENT ESTIMATE (\$ MIL.)
1 I-5 South – Alondra	Measure R Highway Capital Project	\$114.1
2 I-5 South – Valley View Interchange	Measure R Highway Capital Project	\$631.1
3 I-5 South – Shoemaker, Rosecrans, Bloomfield	Measure R Highway Capital Project	\$188.2
4 I-5 South – San Antonio, Imperial Hwy and Orr Day	Measure R Highway Capital Project	\$323.3
5 I-5 South – Florence	Measure R Highway Capital Project	\$211.7
6 I-5 South – Carmenita Interchange	Measure R Highway Capital Project	\$419.9
7 I-5 North – HOV from SR 118 to SR 170	Measure R Highway Capital Project	\$219.5
8 I-5 North – HOV from SR 170 to North of Buena Vista	Measure R Highway Capital Project	\$94.7
9 I-5 North – North of Buena Vista to South of Magnolia Blvd	Measure R Highway Capital Project	\$402.4
10 I-5 North – Magnolia Blvd to SR 134	Measure R Highway Capital Project	\$137.4
11 I-5 North HOV Project SR 14 to Parker Road	Measure R Highway Capital Project	\$42.4
12 I-605 Corridor Hot Spots – I-605/I-5 Interchange Improvement	Measure R Highway Capital Project	\$30.3
13 I-605 Corridor Hot Spots – I-605/SR 60 Interchange Improvement	Measure R Highway Capital Project	\$41.6
14 I-605 Corridor Hot Spots – SR-91 Westbound Widening at I-605 Interchange	Measure R Highway Capital Project	\$9.3
15 I-605 – Beverly Interchange Improvement Project	Measure R Highway Capital Project	\$3.5
16 I-605 from SR-91 to South St. Improvements Project	Measure R Highway Capital Project	\$4.5
17 I-405 Crenshaw Blvd On and Off Ramp Improvements	Measure R Highway Capital Project	\$20.0
18 I-405 and I-110 Aux Lane from SR 91 to Torrance Blvd	Measure R Highway Capital Project	\$44.0
19 I-710 (South) Corridor Improvement Projects	Measure R Highway Capital Project	\$91.0
20 I-710 (South) Early Action Projects - Soundwall Projects (3 locations)	Measure R Highway Capital Project	\$12.7
21 I-710 (North) Early Action Projects	Measure R Highway Capital Project	\$47.0
22 Soundwall Package 10	Measure R Highway Capital Project	\$59.4
23 Soundwall Package 11	Measure R Highway Capital Project	\$89.2
	Measure R Highway Total	\$3,237.2
24 I-10 HOV from Puente Avenue to Citrus Avenue (Seg. 2)	Other Highway Projects	\$195.6
25 I-10 HOV from Citrus Avenue to SR 57 (Seg. 3)	Other Highway Projects	\$268.7
26 SR 57 and SR 60 Mixed Flow Interchange	Other Highway Projects	\$54.0
27 SR 71: Interstate 10 to Mission Blvd	Other Highway Projects	\$16.0
28 SR 71: Mission Blvd to Rio Rancho Road	Other Highway Projects	\$40.0
	Other Highway Total	\$574.3
	HIGHWAY PROGRAM TOTAL	\$3,811.5
REGIONAL RAIL	TYPE	CURRENT ESTIMATE (\$ MIL.)
1 LINK Union Station Project	Regional Rail	\$71.6
2 Burbank Airport – North Station Project	Regional Rail	\$15.0
3 Doran Street and Broadway/Brazil Safety and Access Project	Regional Rail	\$11.6
4 Brighton to Roxford Double Track Project	Regional Rail	\$15.0
5 Rosecrans/Marquardt Grade Separation Project	Regional Rail	\$155.3
6 Lone Hill to White Double Track Project	Regional Rail	\$10.0
7 Raymer to Bernsen Double Track Project	Regional Rail	\$6.0
	REGIONAL RAIL PROGRAM TOTAL	\$284.5



Board Report

File #: 2018-0066, File Type: Contract

Agenda Number: 34.

CONSTRUCTION COMMITTEE APRIL 12, 2018

SUBJECT: SYSTEMS ENGINEERING AND SUPPORT SERVICES

ACTION: AWARD PROFESSIONAL SERVICES CONTRACT

RECOMMENDATION

AUTHORIZE:

- A. the Chief Executive Officer to award a Task Order (TO) based seven-year cost plus fixed fee contract plus three one-year options, Contract No. AE47810E0128, to SECOTrans (Joint Venture of LTK Engineering Services, NBA Engineering Inc., Pacific Railway Enterprises Inc., and Ramos Consulting Services, Inc) for systems engineering and support services for design of rail and transit projects;
- B. an initial two year not-to-exceed amount of \$28,932,000 for Task Orders issued through Fiscal Year 2020; and
- C. the Chief Executive Officer to execute individual Task Orders and changes within the Board approved not-to-exceed amount for the contract.

ISSUE

Staff seeks to award a Systems Engineering and Support Services contract to assist Metro in the delivery of voter approved Measures R, M, and other Board approved Capital Improvement projects. The recommended action will provide contracting authority for Task Orders issued during the initial two years, FY's 2019 and 2020. Staff intends to return to the Board every two years to request additional contract funding as conditions and project requirements warrant.

DISCUSSION

With the approval of Measure M, the Twenty-Eight by '28 Plan, the ongoing implementation of the Measure R program, and required State of Good Repair initiatives, staff is seeking to engage a Systems Engineering Consultant (SEC) to provide a broad range of systems engineering design and related support services to supplement current Systems Engineering department resources.

Term

Due to the intensive system integration requirements and length of time needed to deliver major capital improvement projects, it is very inefficient and disruptive to change a systems engineering consultant during project delivery. The recommended Systems Engineering and Support Services term will provide greater continuity, consistency and less disruption by implementing a base seven (7) year contract with three (3) one-year options.

Scope

An experienced SEC provides a singular systems engineering team, and associated sub-specialties, with the necessary resources to assist in the planning, development, and delivery of Metro's aggressive schedule of projects for the next decade. The SEC will be capable of applying and withdrawing resources as the workload of projects fluctuates over time. The SEC has the extensive experience and capability to support the complete project lifecycle; from the conceptual phase to final design and construction.

Other Considerations

The challenge presented by the simultaneous implementation of numerous projects is to ensure the integration and standardization of the systems elements within and across the current Metro system. Consistent development and design is necessary to ensure that the required integration is achieved with respect to civil and electrical infrastructure, vehicles, control systems, communications, operations, maintenance, security, training, etc.

With a singular SEC design team supporting Metro, the standardization of design, construction and functionality of systems elements will keep Metro's long term interest of system interoperability and safety at the forefront. A fully-integrated network requires a consistency of systems design and not a collection of potentially incompatible independent designs arising from separate projects. This approach has been implemented successfully in other transit agencies nationwide and the benefits of full systems standardization include:

- Interoperability and efficient maintainability
- Improved commercial viability
- Reduced spares requirements
- Reduced training requirements
- Flexibility to adapt to changing circumstances

The SEC will provide some or all of the systems engineering services for current/future rail and bus transit projects, and other capital improvement projects, including, but not limited to, the following:

- East San Fernando Valley Transit Corridor
- Gold Line Eastside Phase 2 Extension
- Green Line South Bay Rail Extension
- West Santa Ana Transit Corridor

- Sepulveda Pass Transit Corridor
- Vermont Transit Corridor
- Orange Line BRT Improvements
- Westside Purple Line Extension Section 2 & 3
- Metro Blue Line (MBL) Re-signaling Project
- Metro Blue Line (MBL) Systems Upgrades
- Metro Green Line (MGL) Systems Upgrades
- Operations Control Center
- Gold Line Foothill Extension 2B

DETERMINATION OF SAFETY IMPACT

The use of a consistent systems design process has a positive benefit during the construction and subsequent operations of Metro's Rail and Bus transit network.

FINANCIAL IMPACT

Task Orders (TO) with a detailed scope of work shall be issued for each project or system element that requires systems engineering support. The vast majority of funds will be provided by the respective individual project life of project (LOP) funds for which the support work is required. A portion of the proposed contract workscope will require an annual budget allotment for conceptual and preliminary work to be funded through an annual overhead fund. The FY19 and FY20 allotment under recommendation B will initially require a not to exceed amount of \$1,500,000 dollars. Annual overhead allotments beyond FY20 shall not exceed 5% of actual task orders issued for future fiscal years. Aside from the annual allotment, the recommendations for this item have no financial impacts beyond what the Board authorizes through the annual budget adoption and/or LOP budget approval. Upon approval of Recommendation B, the FY19 budget will be amended to allow for up to \$1,000,000 in overhead funds and engineering support activities.

Staff will return to the Board every two years to request additional contract authorization as project needs arise in order to accurately estimate the anticipated level of required resources. On an annual basis, the Project Managers, Cost Center Managers, and Chief Program Management Officer will be responsible for budgeting costs in future years.

Impact to Budget

Upon approval of this action, up to \$1,000,000 will be funded in FY19 to initiate project support efforts. Any additional funding for TOs issued under this action will be provided by the specific project requiring the services. The source for these funds are projects' funding plans and may consist of federal and/or state grants as well as local funds. Many state-of-good repair and capital improvement projects are funded with local funding sources that are eligible for rail and bus operations.

ALTERNATIVES CONSIDERED

The Board may reject the recommendation, proposed duration, or initial funding authorization. Staff does not recommend these alternatives. The use of a qualified SEC allows the agency to secure highly technical expertise without the necessary increase in Metro long term labor costs. Further, by providing for an overall term of seven years plus up to three additional option years, an integrated and consistent network design serves Metro's interests. Finally, by limiting the initial funding to two years, greater accuracy of project scope and cost requirements can be provided to the Board on a two year basis.

NEXT STEPS

Upon Board approval, staff will complete the process to award and execute the contract. Specific task orders will be subsequently issued on an as needed basis.

ATTACHMENTS

Attachment A - Procurement Summary

Attachment B - DEOD Summary

Prepared by:

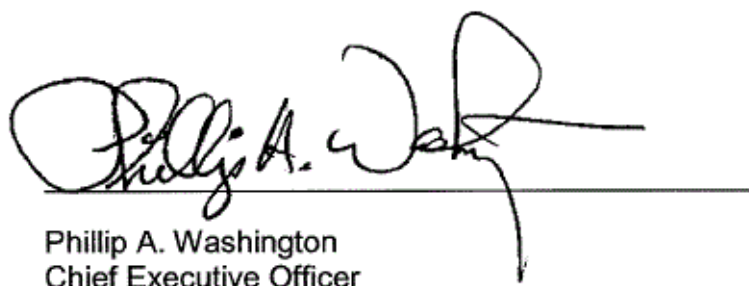
Ron Tien, Director Systems Engineering (213) 922-7263

Michael Ratnasingham, Executive Officer, Systems Engineering (213) 922-7289

Reviewed by:

Richard F. Clarke, Chief Program Management Officer; (213) 922-7557

Debra Avila, Chief Vendor/Contract Management Officer, (213) 418-3051



Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

SYSTEMS ENGINEERING AND SUPPORT SERVICES
AE47810E0128

1.	Contract Number: AE47810E0128	
2.	Recommended Vendor: SECOTrans (Joint Venture of LTK Engineering Services, NBA Engineering Inc., Pacific Railway Enterprises Inc., and Ramos Consulting Services, Inc.).	
3.	Type of Procurement (check one): <input type="checkbox"/> IFB <input type="checkbox"/> RFP <input checked="" type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: November 14, 2017	
	B. Advertised/Publicized: November 16, 2017	
	C. Pre-Proposal Conference: December 7, 2017	
	D. Proposals Due: January 5, 2018	
	E. Pre-Qualification Completed: March 27, 2018	
	F. Organizational Conflict of Interest Review Completed by Ethics: March 27, 2018	
	G. Protest Period End Date: April 23, 2018	
5.	Solicitations Picked up/Downloaded: 120	Proposals Received: 3
6.	Contract Administrator: Diana Sogomonyan	Telephone Number: 213.922.7243
7.	Project Manager: Ron Tien	Telephone Number: 213.922.7263

A. Procurement Background

This Board Action is to approve Contract No. AE47810E0128 Systems Engineering and Support Services, to supplement Metro's Engineering Department resources in providing engineering services for projects in varying stages of conceptual design, preliminary engineering, final design, bidding for construction, and design support during construction (DSDC), including the following: program management, quality, and computer aided design and drafting (CADD); design services concerning train control, communications systems, traction power, and overhead catenary systems (OCS); operational runtime simulation and modeling, corrosion control, system integration, facilities and system-wide electrical, facilities mechanical, facilities plumbing, and facilities fire protection. The consultant will furnish all of the labor, materials, and other related items required to perform the services on a Contract Work Order basis for a project, under which specific Task Orders will be issued for

specific Scopes of Services and Period of Performance. Board approval of contract awards are subject to resolution of any properly submitted protest.

The Request for Proposals (RFP) was an Architectural & Engineering (A&E) qualifications based procurement process performed in accordance with Los Angeles County Metropolitan Transportation Authority (Metro) Procurement Policies and Procedures, and California Government Code §4525-4529.5 for Architectural and Engineering (A&E) services. The contract type is a Cost Plus Fixed Fee (CPFF). The Contract is for a term of seven (7) years with three (3) one-year options.

Three amendments were issued during the solicitation phase of the RFP:

- Amendment No. 1, issued on November 22, 2017, clarified the Submittal Requirements and Evaluation Criteria;
- Amendment No. 2, issued on December 5, 2017, clarified the Cost Reimbursable Contract Scope of Services, Special Provisions, and Labor Compliance Manual;
- Amendment No. 3, issued on December 22, 2017, clarified the Cost Reimbursable Contract Special Provisions, General Conditions, Compensation & Payment Provisions, Scope of Services, Submittal Requirements, and Evaluation Criteria.

A total of three (3) proposals were received on January 5, 2018.

B. Evaluation of Proposals

A Proposal Evaluation Team (PET) consisting of staff from Metro Executive Office, Transit Project Delivery, Systems Engineering, Facilities Engineering Operations, Safety, and Light Rail Wayside Systems was convened and conducted a comprehensive evaluation of the proposals received.

The proposals were evaluated based on the following evaluation criteria and the associated weightings:

- Experience and Capabilities of the Firms on the Consultant’s Project Team.....(30%)
- Key Personnel’s Skills and Experience.....(30%)
- Effectiveness of Management Plan.....(15%)
- Understanding of Work and Appropriateness of Approach for Implementation.....(25%)

The evaluation criteria were appropriate and consistent with criteria developed for other, similar Architect and Engineers (A&E) procurements. Several factors were considered when developing the weightings, giving the greatest importance to the Experience and Capabilities of the Firms on the Consultant's Project Team and Key Personnel's Skills and Experience. Since this is an A&E, qualifications based procurement price could not and cannot be used as an evaluation factor pursuant to state and federal law.

All three proposals received were determined to be within the competitive range and are listed below in alphabetical order:

1. Metro Systems + Partners, a Joint Venture, consisting of Hatch Associates Consultants, Inc. and SENER.
2. SECOTrans, a Joint Venture, consisting of LTK Engineering Services, NBA Engineering Inc., Pacific Railway Enterprises Inc., and Ramos Consulting Services, Inc.
3. Systems Delivery Partners, a Joint Venture, consisting of WSP USA Inc., Mott MacDonald LLC and Auriga Corporation.

During the months of January and February of 2018, the PET reviewed the three written qualification proposals. On January 24, 2018, the PET met with all three Proposers for oral presentations. The firms were given the opportunity to present on 1) Effectiveness of Management Plan, and 2) Understanding of Work and Appropriateness of Approach for Implementation.

The proposing firms' had the opportunity to present their proposed project managers, key personnel and some of their key members, as well as respond to the PET's questions. In general each proposer's presentation addressed the requirements of the RFP, experience with all aspects of the required and anticipated tasks, and stressed each proposer's commitment to the success of the contract. Each proposing team was asked questions relative to each firm's previous experience performing work of a similar nature to the Scope of Services presented in the RFP. Sealed cost proposals were received at the time of oral presentations.

After the recommendation of the most qualified proposer was approved by the Executive Officer of Vendor/Contract Management V/CM, the recommended most qualified proposer's cost proposal was opened. V/CM completed its cost analysis and engaged in negotiations with the recommended proposer.

Qualifications Summary of Recommended Firm:

The Proposal Evaluation Team (PET) ranked the proposals and assessed major strengths, weaknesses and associated risks of each of the Proposers to determine the most qualified firm. The final scoring was based on evaluation of the written proposals as supported by oral presentations and clarifications received from the Proposers. The results of the final scoring are shown below:

1	Firm/Evaluation Factor	Average Score	Factor Weight	Weighted Average Score	Rank
2	SECOTrans, JV				
3	Experience and Capabilities of the Firms on the Consultant's Project Team	95.33	30%	28.60	
4	Key Personnel's Skills and Experience	90.00	30%	27.00	
5	Effectiveness of Management Plan	92.00	15%	13.80	
6	Understanding of Work and Appropriateness of Approach for Implementation	92.80	25%	23.20	
7	Total		100.00%	92.60	1
8	Systems Delivery Partners, JV				
9	Experience and Capabilities of the Firms on the Consultant's Project Team	89.33	30%	26.80	
10	Key Personnel's Skills and Experience	87.33	30%	26.20	
11	Effectiveness of Management Plan	78.67	15%	11.80	
12	Understanding of Work and Appropriateness of Approach for Implementation	83.20	25%	20.80	
13	Total		100.00%	85.60	2
14	Metro Systems + Partners, JV				
15	Experience and Capabilities of the Firms on the Consultant's Project Team	73.33	30%	22.00	
16	Key Personnel's Skills and Experience	63.33	30%	19.00	
17	Effectiveness of Management Plan	77.33	15%	11.60	
18	Understanding of Work and Appropriateness of Approach for Implementation	84.00	25%	21.00	
19	Total		100.00%	73.60	3

Weighted Scores are rounded up to the nearest second decimal point.

The evaluation performed by the PET determined SECOTrans as the most qualified firm and team to provide Systems Engineering and Support Services, as provided in the RFP Scope of Services. What distinguished SECOTrans was they demonstrated, through their written proposal and oral presentation, their extensive technical experience performing Systems Engineering design and significant

expertise in each of the specialty areas identified in the Scope of Services. SECOTrans has also demonstrated an exceptionally thorough and comprehensive understanding in many areas concerning Systems Engineering services. Focus of SECOTrans on the four key elements for success: Safety, Engineering, Construction, and Operations, or “SECO,” showed a clear understanding of construction and Operations. The team is highly experienced in delivering similar task order based contracts; with an excellent record in client satisfaction on Metro projects and similar projects around the U.S.

Members of the team providing services to Metro under other contracts may not be eligible to perform certain tasks under this contract if, in accordance with Metro’s Organizational Conflict of Interest policy, their performance would result in an organizational conflict of interest.

C. Cost/Price Analysis

The recommended price has been determined to be fair and reasonable based upon a cost analysis of labor rates, indirect rates and other direct costs completed in accordance with Metro’s Procurement Policies and Procedures. The analysis includes, among other things, a comparison with similar firms; an analysis of rates and factors for labor, and other direct costs upon which the consultant will base its billings. Metro negotiated and established provisional indirect (overhead) rates, plus a fixed fee based on the total estimated cost for task orders during the contract term to compensate the consultant.

Audits will be completed, where required, for those firms without a current applicable audit of their indirect cost rates, other factors, and exclusion of unallowable costs, in accordance with Federal Acquisition Regulation (FAR) Part 31. In order to prevent any unnecessary delay in contract award, provisional overhead rates have been established subject to Contract adjustments. In accordance with FTA Circular 4220.1.f, if an audit has been performed by any other cognizant agency within the last twelve month period, Metro will receive and accept that audit report for the above purposes rather than perform another audit.

Proposer Name	Proposal Estimate	Metro ICE	Recommended NTE amount
SECOTrans, Joint Venture	N/A ⁽¹⁾	\$28,932,000 ^{(2), (3)}	\$28,932,000 ^{(2), (4)}

- (1) A proposal amount was not applicable. This is a Cost Plus Fixed Fee (CPFF) Task Order Contract with no definable level of effort for the Scope of Work. Hourly labor rates, overhead and fee were negotiated and determined to be fair and reasonable.
- (2) FY '19 starts from July 1, 2018 thru June 30, 2019
FY '20 starts from July 1, 2019 thru June 30, 2020
- (3) The amount \$28,932,000 is V/CM's extraction from the Independent Cost Estimate (ICE) for the first two fiscal year contract base period.

(4) The amount of \$28,932,000 is the Not to Exceed amount for the FY '19 –FY '20 period. Future work will be funded according to an Annual Work Program, on a two year basis. The total contract amount will be the aggregate value of all task orders negotiated with the Consultant through the term of the contract.

The Systems Engineering Services Independent Cost Estimate was developed using the current master schedule and construction estimates available from the Program Management Project Controls department. An estimated cost was determined for each project using past project costs, systems to civil project percentages along with historical rates. Depending on the type of transit project and the complexity, the percentages were derived from the overall construction costs to determine the systems construction and engineering costs. Once the systems engineering costs were estimated, they were distributed across each fiscal year according to the master schedule. Other costs for Maintenance of Way (MOW) support, State of Good Repair and Transit Asset Management, were independently developed with each department.

D. Background on Recommended Contractor

SECOTrans is a Joint Venture of LTK Engineering Services and three Disadvantaged Business Enterprise (DBE) firms, NBA Engineering Inc., Pacific Railway Enterprises Inc., and Ramos Consulting Services, Inc.

The team members have provided systems engineering efforts in North America, including Los Angeles, Denver, Seattle and Portland, as well as internationally. Collectively, SECOTrans brings extensive capabilities in various systems disciplines and deep experience in their associated light rail, heavy rail, and bus rapid transit (BRT) applications, involving a broad range of project delivery methods. The Program Manager holds a Bachelor of Science in Electrical/Electronic Engineering. Offering 17-years of Systems Engineering experience, he has been employed with LTK Engineering Services since 1998. The Program Manager's experience highlights include: Project Manager for Metro's current Supplemental Engineering Services (SES) Contract (for Rail Systems Engineering); Systems Manager for Denver Regional Transportation District (RTD) T-REX and FasTracks projects; and Deputy Systems Project Manager for Seattle East Link Light Rail Project.

LTK Engineering Services (LTK) is a rail consulting firm with more than 80 years of experience in rail systems and vehicle design. LTK's staff of over 400 includes more than 290 professionals with expertise in all areas of rail systems and rail vehicle planning, engineering, and economic analysis. LTK has provided systems engineering efforts on a current Metro Supplemental Engineering Services (SES) contract and other recent major systems engineering assignments undertaken on behalf of agencies in Denver, Seattle, Minneapolis and Portland.

NBA Engineering, Inc. (NBA) is a certified DBE firm and has been in operations since 1994. The firm provides MEP services including electrical and emergency power, lighting, LEED and sustainability, HVAC (dry and wet sites), plumbing and

fire protection design. NBA developed the system-wide raceway design and construction cost estimate for BART's 8.2-mile extension to San Francisco International Airport, and provided plumbing, fire protection, electrical power, lighting distribution, fire alarm, cost estimating and construction staging services for BART's Concord, CA, maintenance shop extension. In LA, they are providing mechanical and systems design, and tunnel ventilation for two underground stations for the Purple Line Section 2, as well as MEP for train control and communications rooms at four above ground stations on the Crenshaw Line.

Pacific Railway Enterprises, Inc. (PRE) is a certified DBE and has been in operations since 1994. The firm specializes in train control and communications systems. Headquartered in Riverside, CA, PRE's staff of 30 provides comprehensive services at all project stages from design to commissioning. PRE completed the final design package for Metro's microwave radio replacement project, developed train control loop designs for the Gold, Blue and Green Lines, and developed drawings and specifications for the Gold Line UPS system upgrade.

Ramos Consulting Services, Inc. (Ramos CS) is a certified DBE firm. The firm provides project controls, third-party engineering and construction support. Ramos CS has worked on various projects in the LA region including the current Metro projects Advanced Utility Relocation for the Expo Line Phase 2 and Purple Line Section 1.

DEOD SUMMARY

**SYSTEMS ENGINEERING AND SUPPORT SERVICES/
AE47810E0128**

A. Small Business Participation

The Diversity and Economic Opportunity Department (DEOD) established a 15% Disadvantaged Business Enterprise (DBE) goal for this solicitation. SECOTrans, a joint venture of LTK Engineering Services, NBA Engineering, Inc., Pacific Railway Enterprises, Inc., and Ramos Consulting Services, Inc. formed a team that included DBE firms without schedules or specific dollar commitments prior to the establishment of this on-call Contract. SECOTrans committed to meeting the 15% DBE goal through the joint venture partnership, which includes three DBE joint venture partners, as well as utilization of eight additional DBE subcontractors. Overall DBE participation for the on-call Contract will be determined based on the aggregate of all Task Orders awarded.

SMALL BUSINESS GOAL		15% DBE	SMALL BUSINESS COMMITMENT		15% DBE
	DBE Contractors	Scope of Work	NAICS Codes	Ethnicity	% Committed
1.	NBA Engineering, Inc. (JV Partner / DBE Prime)	MEP Engineering	541330 - Engineering Services	Caucasian Female	TBD
2.	Pacific Railway Enterprises, Inc. (JV Partner / DBE Prime)	Railroad Signal and Communications System Design and Engineering	541330 - Engineering Services 541340 - Drafting Service 541512 - Computer System Design Services	Caucasian Female	TBD
3.	Ramos Consulting Services (JV Partner / DBE Prime)	Systems Engineering and Support Services	541330 - Engineering Services 541611 - Administrative Management and General Management Consulting Services	Hispanic American	TBD
4.	Arakelyan Drafting Services, Inc.	Computer Aided Drafting and Design	541340 - Drafting Services	Other Female	TBD
5.	Destination Enterprises, Inc.	Systems Construction Management, Project	236220 - Commercial and Institutional Building Construction	Caucasian Female	TBD

		Management, Inspection Estimating and Scheduling	237990 - Other Heavy and Civil Engineering Construction 541990 - All Other Professional, Scientific, and Technical Services 541611 - Administrative Management and General Management Consulting Services		
6.	Enabled Enterprises LLC	IT Infrastructure Systems and Network Architecture, Design, Engineering, and Project Management, Application Development	541511 - Custom Computer Programming Services 541512 - Computer Systems Design Services 541519 - Other Computer Related Services	Asian Pacific American	TBD
7.	Fariba Nation Consulting	Systems Engineering Design	541614 - Process, Physical Distribution, and Logistics Consulting Services 541611 - Administrative Management and General Management Consulting Services	Other Female	TBD
8.	Intueor Consulting, Inc.	Systems Engineering CM/DSDC	541614 - Process, Physical Distribution, and Logistics Consulting Services 541611 - Administrative Management and General Management Consulting Services	Asian Sub-continent American	TBD
9.	PK Electrical Inc.	Electrical Engineering	541330 - Engineering Services	Caucasian Female	TBD
10.	ROMAR7 LLC	Computer Aided Drafting and Design	541340 - Drafting Services 541512 - Computer System Design Services 561110 - Office Admin Services	Asian Pacific Female	TBD

11.	Triunity Engineering and Management, Inc.	Communications Design, System Integration and Analysis	541330 - Engineering Services	African American	TBD
Total Commitment					15%

B. Contracting Outreach and Mentoring Plan (COMP)

To be responsive, Proposers were required to submit a Contracting Outreach and Mentoring Plan (COMP) including strategies to mentor four (4) firms for protégé development. SECOTrans selected to mentor the following DBE firms: 1) Fariba Nation Consulting, 2) NBA Engineering, Inc., 3) Pacific Railway Enterprises, Inc. and 4) Ramos Consulting Services, Inc.

C. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy (LW/SCWRP) is not applicable on this Contract.

D. Prevailing Wage Applicability

Prevailing wage is not applicable to this Contract.

E. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.



Board Report

File #: 2018-0094, File Type: Project

Agenda Number: 35.

REVISED
CONSTRUCTION COMMITTEE
APRIL 12, 2018

**SUBJECT: PERMEABLE PAVEMENT AND BIORETENTION
PILOT PROJECT, DIVISION 4 MAINTENANCE
FACILITY**

ACTION: AUTHORIZATION FOR LIFE OF PROJECT BUDGET

RECOMMENDATION

APPROVE an increase in the Life of Project Budget (LOP) for Permeable Pavement and Bioretention Pilot Project (Project) in the amount of \$1.16 million increasing the LOP from \$940,000 to \$2.1 million to complete construction of the Project.

ISSUE

In 2014, Metro applied for a Proposition 84 Grant Opportunity to implement a permeable pavement project at Division 4. In May 2014, the State Water Resource's Control Board (SWRCB) awarded Metro with a grant of \$752,000 to implement its proposed permeable pavement and bioretention project with a local commitment from Metro of \$188,000 for a total LOP of \$940,000. This report recommends adopting a LOP budget with the necessary additional funding of \$1.16 million to complete the Project.

The competitive low-bid prices for the construction component of the Project have been received and the winning bid would result in this higher forecast for the LOP. Staff believes the bids are representative of current market conditions and that a rebid would not result in lower pricing. Furthermore, without additional funds, Metro will have to relinquish grant funding back to the SWRCB and terminate current efforts related to a much needed pilot.

DISCUSSION

Project Description

The Permeable Pavement and Bioretention Pilot Project, Division 4 Maintenance Facility will replace approximately 40,000 square feet of hardscape with low-impact development (LID) stormwater infiltration features. Located in the City of Downey, Division 4 is directly adjacent to the Rio Hondo River. All stormwater from Division 4 currently drains directly into the Rio Hondo River. To address

this runoff, Metro will install 39,140 square feet of permeable concrete pavement and 1,680 square feet of plant material in a bioretention area at Division 4. Permeable concrete pavement is designed to be porous for rainwater to infiltrate and recharge groundwater. Permeable pavement is also strong enough for vehicles to drive over it. The adjacent bioretention area will capture additional rainwater and any overflows from the permeable concrete pavement area. This project will ensure that Metro complies with the Los Angeles River Trash Total Maximum Daily Load (TMDL). Infiltration technology is required to be considered in all Metro projects throughout the City and County of Los Angeles.

This Project would serve as a pilot demonstration model to implement at other sites in accordance with Proposition 84 goals and intentions, which are in part to reduce "... contamination by dangerous bacteria, polluted runoff, toxic chemicals, damage from catastrophic floods and the demands of a growing population..." (§75002.5), while also providing "... careful planning and thorough improvements in land use and water management ... better integration of water supply, water quality, flood control and ecosystem protection..." (§75003.5). Furthermore, as a pilot project, this Project serves as a template for similar uses and applications at other Metro facilities.

Background

In 2014, Metro applied for and was awarded by the SWRCB a Proposition 84 technology grant for this Project. In July 2014, the Board approved the grant award and provided a local match of \$188,000. The anticipated total project costs in the year of award was \$940,000. The initial LOP was developed based on a conceptual design of the permeable pavement project and a feasibility study completed using available technology and information at the time of grant application. The LOP was internally developed and was an order of magnitude cost before any final design was done.

The Project was proposed to be implemented at Division 4 but because of land use constraints that surfaced at the time including the potential to reuse Division 4 for other purposes, staff looked for another location to implement the pilot project. In consultation with the Metro Operations Department, the Central Maintenance Facility (CMF) adjacent to Division 13 was selected as the next best location for this project; and geotechnical as well as environmental investigations were initiated to determine site project conditions that may inhibit effectiveness of the approved conceptual design. During the geotechnical and environmental investigation, unknown contamination at the potential CMF location was discovered. There was an attempt to determine whether the original conceptual design can still be implemented. The chemical data showed that the project would be infeasible at the CMF.

Greater certainty on the future of Division 4 prompted staff to reconsider doing the pilot at the location. Staff was also able to use many of the information already developed during the application process. However, newer regulations on low impact development as well as the reconfiguration of some of the elements of the original conceptual design to accommodate optimum use of Division 4 for Metro Operations prompted the redesign of a number of project pilot elements.

Costs have been incurred considering all of the above circumstances. To date, Metro has spent

approximately \$250,000 on project management, administration and design. Considering the time of this pilot's grant award to the time the design of the project was completed and the bids were received, the award value for Contract C1160, combined with other project costs such as engineering, contract administration, and construction management costs, is \$2.1 million.

Construction costs alone have increased from \$580,780 to \$1.234 million, an increase of more than 110% since the Project was originally budgeted. With the change in statutory and regulatory requirements, the Project also now requires more extensive monitoring and public outreach components. The cost of these components has increased from \$120,000 to \$180,000, an increase of 50%.

DETERMINATION OF SAFETY IMPACT

This Board action will not have an impact on established safety standards.

FINANCIAL IMPACT

Upon approval of the recommendation, the project LOP will be increased from \$940,000 to a new cumulative LOP of \$2,100,000 under Project 202809: Division 4 Concrete Pavement. Funds from the Metro Green Fund (Fund 2113, Account 40799) will be used to fund the project and absorb the LOP increase. The funds will be allocated to various accounts in Cost Center 8510 (Construction Contract Procurements). Since this is a multi-year capital project, the Chief, Program Management and Executive Officer, Environmental Compliance and Sustainability will be responsible for budgeting in future years.

Impact to Budget

The sources of funds for this project is the Metro Green Fund. This fund is eligible for sustainable capital efforts such as this project.

ALTERNATIVES CONSIDERED

With the low bid price significantly higher than the independent cost estimate, staff evaluated the two options of rebidding and significantly de-scoping the project. With a continually recovering economy and rising construction cost indices, there would be no assurance of receiving a better price given the competitiveness of the bids received. The independent cost estimate prepared internally by Metro Staff provides an indication that any bid received would require an increase in LOP. Significant de-scoping of the project would necessitate negotiating the project with the SWRCB and potentially reducing their financial contribution. Rebidding or postponing an award will introduce additional cost and schedule risks to this project. Given these factors, it is recommended that the Board proceed with the increase of the LOP.

NEXT STEPS

Upon approval, Metro will award the Contract to the lowest bidder and issue a notice to proceed once bonds and insurance requirements are submitted and administrative paperwork, including a job plan, have been received from the contractor. Meetings will be held with the contractor to ensure early submittals such as quality assurance and safety plans are submitted on time. Progress of the project will be monitored per the project monitoring plan already developed by Metro staff for the State Water Resources Water Quality Control Board.

ATTACHMENTS

Attachment A - Procurement Summary

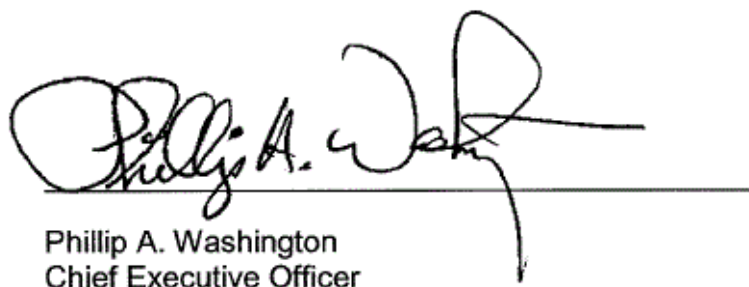
Attachment B - DEOD Summary

Prepared by:

Cris Liban, Executive Officer, Environmental Compliance and Sustainability,
(213) 922-2471

Reviewed by:

Richard F. Clarke, Chief Program Management Officer (213) 922-7557



Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

**Low Impact Development Pilot Project
C48255C116000**

1.	Contract Number: C48255C116000	
2.	Recommended Vendor: AP Construction Inc.	
3.	Type of Procurement (check one): <input checked="" type="checkbox"/> IFB <input type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: November 06, 2017	
	B. Advertised/Publicized: November 06, 2017	
	C. Pre-Bid Conference: November 16, 2017	
	D. Bids Due: December 11, 2017	
	E. Pre-Qualification Completed: January 10, 2018	
	F. Organizational Conflict of Interest Review Completed by Ethics: December 13, 2017 (Preliminary)	
	G. Protest Period End Date: NOIA Not yet issued	
5.	Solicitations Picked up/Downloaded: 10	Proposals Received: 3
6.	Contract Administrator: Alyssa Garcia	Telephone Number: 213.922.7574
7.	Project Manager: Andrew Quinn	Telephone Number: 213.418.3207

A. Procurement Background

Contract No. C48255C116000 is for a design/bid/build delivery to implement a low impact development pilot project that will improve water quality by promoting on-site infiltration and removing runoff pollutants that are currently impairing the Rio Hondo and downstream receiving waters. This contract will include the demolition of a parking lot area and the construction of Permeable Concrete Pavement (PCP) and the installation of a bio-retention area. As a pilot project, once completed, this project may serve as a template for similar uses and applications at other Metro facilities. Board approval of contract awards are subject to resolution of any properly submitted protest.

The Invitation for Bids (IFB) procurement process, in accordance with Los Angeles County Metropolitan Transportation Authority (Metro) Procurement Policies and Procedures, was selected because the detailed specifications were sufficient for competitive bids to construct the project, by multiple potential bidders available to perform the work. The contract type is firm fixed price (FFP). The Contract duration is one hundred and twenty (120) calendar days.

One amendment was issued during the solicitation phase of the IFB:

Amendment No. 1, issued on November 30, 2017, to modify the drawings, technical specifications, and contract documents.

A total of three (3) bids were received on December 11, 2017.

B. Evaluation of Bids

All bids were evaluated for responsiveness and responsibility. Each bidder holds all necessary licenses and have satisfactory past performance reviews. Additionally, each bidder had qualified safety personal and quality assurance and quality control submittals.

All three bids received were determined to be responsive and responsible. The bidders are listed below in alphabetical order:

1. Access Pacific, Inc.
2. Alameda Construction Services, Inc.
3. AP Construction, Inc.

C. Price Analysis

The recommended contractor's price has been determined to be fair and reasonable based upon a price analysis of line item comparisons completed in accordance with Metro's Procurement Policies and Procedures. The analysis includes, among other things, a comparison of each firms' price; an analysis of each line item bid, and a comparison with Metro's Independent Cost Estimate (ICE).

	Bidder Name	Base Bid Amount	*Bids Price Including Option
1.	AP Construction, Inc.	\$1,215,000.00	\$1,234,000.00
2.	Alameda Construction Services, Inc.	\$1,316,496.00	\$1,322,348.000
3.	Access Pacific, Inc.	\$1,367,050.00	\$1,387,050.0
4.	Metro Estimating (ICE)	\$1,094,122.00	\$1,097,919.00

D. Background on Recommended Contractor

AP Construction, Inc. is located in Gardena, California and holds active license classifications A, B, and C13. AP Construction has a long history of work in the community, founded in 1989. AP Construction, Inc. is properly registered with the California Department of Industrial Relations for the award of this contract.

AP Construction, Inc., is a Small Business Enterprise firm that commits to providing 66.91% of the work with its own workforce at time of bid due date.

DEOD SUMMARY

**LOW IMPACT DEVELOPMENT PILOT PROJECT
C48255C116000**

A. Small Business Participation

Pursuant to Metro's Board-approved policy, competitive acquisitions with three or more Small Business Enterprise (SBE) certified firms within the specified North American Industry Classification System (NAICS) as identified for the project scope shall constitute a Small Business Set-Aside procurement. Accordingly, the Contract Administrator advanced the solicitation, including posting the solicitation on Metro's website, advertising, and notifying certified small businesses as identified by NAICS code(s) that this solicitation was open to **SBE Certified Small Businesses Only**.

AP Construction, Inc., an SBE Prime, is performing 66.91% with its own workforce and made a total SBE commitment of 66.91%. The prime also listed two (2) non-SBE firms, Beeson Pervious Concrete and Marina Landscape, Inc. as subcontractors on this project.

SMALL BUSINESS PRIME (SET-ASIDE)

	SBE Primes	SBE % Committed
1.	AP Construction, Inc.	66.91%
	Total Commitment	66.91%

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy (LW/SCWRP) is applicable to this contract. Metro staff will monitor and enforce the policy guidelines to ensure that applicable workers are paid at minimum, the current Living Wage rate of \$17.26 per hour (\$12.08 base + \$5.18 health benefits), including yearly increases. In addition, contractors will be responsible for submitting the required reports for the Living Wage and Service Contract Worker Retention Policy and other related documentation to staff to determine overall compliance with the policy.

C. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this project. DEOD will monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA).

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this contract.