

# **Metro**

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



**Metro**

## **Agenda - Final**

**Wednesday, March 15, 2017**

**1:00 PM**

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

### **Finance, Budget and Audit Committee**

*Jacquelyn Dupont-Walker, Chair\**

*Janice Hahn, Vice Chair*

*Robert Garcia*

*Ara Najarian*

*Hilda Solis*

*Carrie Bowen, non-voting member*

*Phillip A. Washington, Chief Executive Officer*

*\*Via Telephone:*

*Renaissance Denver Stapleton*

*3801 Quebec Street*

*Denver, CO 80207*

**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.

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## 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.



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Internet Access to Agendas - [www.metro.net](http://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

- 5 RECEIVE AND FILE report on **FY2018 Program Management Annual Program Evaluation (APE)**. [2017-0047](#)

Attachments: [Attachment A - FY18 Annual Program Evaluation \(APE\) Presentation](#)

### (ALSO ON CONSTRUCTION COMMITTEE)

- 6 APPROVE the Resolution in Attachment A to: [2016-0987](#)

- A. AUTHORIZE the Chief Executive Officer (CEO) or his designee to **claim \$7,750,898 in fiscal year (FY) 2016-17 LCTOP grant funds for one year of Gold Line Foothill Extension Phase 2A operations and one year of Expo Line Phase 2 operations**; and
- B. CERTIFY that Metro will comply with LCTOP Certification and Assurances and the Authorized Agent requirements, and authorize the CEO or his designee to execute all required documents and any amendments with the California Department of Transportation.

Attachments: [Attachment A - Resolution for FY2016-17 LCTOP Funding](#)

### (ALSO ON PLANNING AND PROGRAMMING COMMITTEE)

- 7 CONSIDER: [2016-0807](#)

- A. AUGMENTING the Life-of-Project (LOP) Budget for the **P2000 Light Rail Vehicle Overhaul Program** (CP 206044) by \$30,000,000 adjusting the LOP Budget from \$130,800,000 originally established March 2013, to \$160,800,000;
- B. AUTHORIZING the Chief Executive Officer to award a firm-fixed price Contract No. OPP2000 Light Rail Vehicle Overhaul to Alstom Transportation Inc. in the amount of \$140,079,867, inclusive of taxes for a period of 50 months for the overhaul and delivery of the 52 P2000 LRVs, subject to resolution of protest(s), if any; and
- C. FINDING that the award to Alstom Transportation, Inc. is the proposer providing the best value and is the most advantageous to Metro.

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- Attachments:**      [Attachment A - Procurement Summary](#)  
[Attachment B - P2000 Uses and Sources](#)  
[Attachment C - BR DATED JULY 17, 2014 PURCHASE OF NEW HRVs AND R](#)  
[Attachment D - FTA LTTR RE LOCAL PILOT HIRING PROGRAM DATED SEP](#)  
[Attachment E - DEOD Summary](#)

**25      RECEIVE AND FILE FY18 Budget Development Update.**      [2017-0102](#)

- Attachments:**      [Attachment A - Metro Blue Line FY18 State of Good Repair Projects](#)  
[Presentation - Item 25 Budget](#)

### **Adjournment**

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.

**Board Report**

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**File #:** 2017-0047, **File Type:** Informational Report**Agenda Number:** 5.

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**FINANCE, BUDGET, AND AUDIT COMMITTEE****MARCH 15, 2017****CONSTRUCTION COMMITTEE****MARCH 16, 2017****SUBJECT: FISCAL YEAR 2018 PROGRAM MANAGEMENT ANNUAL PROGRAM EVALUATION  
(APE)****ACTION: RECEIVE AND FILE****RECOMMENDATION**RECEIVE AND FILE report on **FY2018 Program Management Annual Program Evaluation (APE)**.**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 cost and schedules of the program is conducted on an annual basis. This report summarizes the results of the FY2018 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 APE process, staff reviewed and updated project costs and schedule 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 once 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.

**FY2018 APE Results**

For the FY2018 APE, Program Management focused on new and carry-over projects to FY2018 with project cost estimated at \$5 million or greater. Program Management staff evaluated sixty (60) projects, including 28 Transit projects, 25 Highway projects, and 7 Regional Rail projects (see Attachment A for a complete project listing) which total approximately \$13.8 billion. Compared to the FY17 APE review, the FY18 program size has increased 25% or approximately by \$2.8 billion.

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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 to the Metro's capital program in FY18 is reported in the FY2018 Program Management APE presentation (Attachment A, page 41).

### Program Challenge

With the recently approved Measure M program added to the Measure R program, Metro is currently undertaking the largest transportation capital program in the nation, which creates an unprecedented challenge to project delivery. Recognizing staffing is a key factor to project delivery, Program Management is committed to developing strengths in its capacity and capability to ensure the multi-billion dollar capital program can be successfully managed.

### **FINANCIAL IMPACT**

The FY18 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 (Attachment A).

Should any of the potential project risks affecting scope, cost and schedule parameters be realized, the Chief Program Management Officer and affected project staff will return to the Board with separate board report recommendations to address the identified risks and adjust the project element (s) of the Board adopted project parameters.

### **NEXT STEPS**

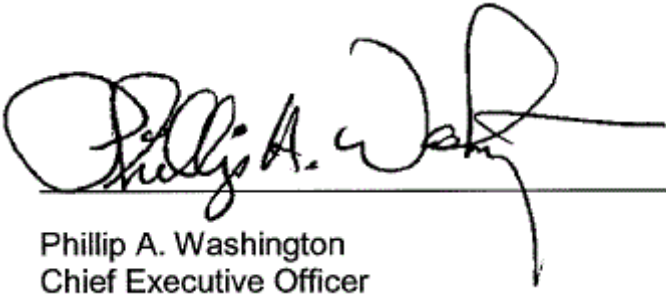
Program Management will request the resources required for project delivery success through the FY18 Budget process for Board approval. Project managers will manage to deliver projects safely, on-time and within the Board-approved budgets. Staff will continue to provide the Board with monthly updates on the project status throughout the year. The next FY2019 Program Management APE report will be presented to the Board in Spring 2018.

### **ATTACHMENTS**

Attachment A - Fiscal Year 2018 Program Management Annual Program Evaluation (APE) presentation

Prepared by: Brian Boudreau, Senior Executive Officer, Program Control (213) 922-2474

Reviewed by: Richard Clarke, Chief Program Management Officer, (213) 922-7557



Phillip A. Washington  
Chief Executive Officer





**Fiscal Year 2018  
Program Management  
Annual Program Evaluation  
(APE)**



# Presentation Overview

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- APE Purpose and Process
- Capital Program Status
- Capital Program Cost
- Adjustments for FY2018 APE
- Summary
- Next Steps



# APE Purpose

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- 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



# APE Process

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- A review of project costs and schedule
- 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

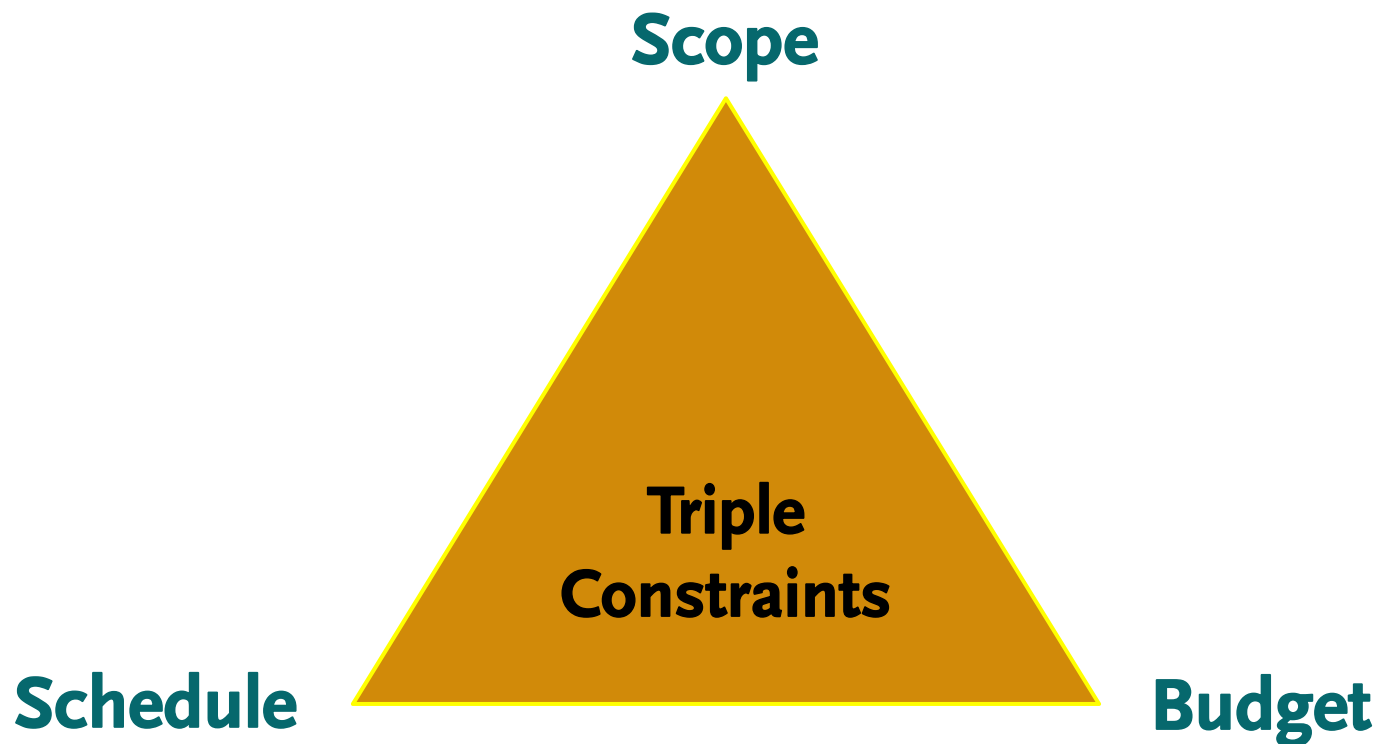


# Project Management

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



# FY18 APE Scope

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- Focus on capital projects with total project cost greater than \$5M being managed by Program Management:
  - Major Transit Construction Projects – 5 projects
  - Other Transit Capital Projects – 23 projects
  - Regional Rail Projects – 7 projects
  - Highway Program – 25 projects
- Project budgets in the APE focus on authorized funding amount



# FY18 APE Scope

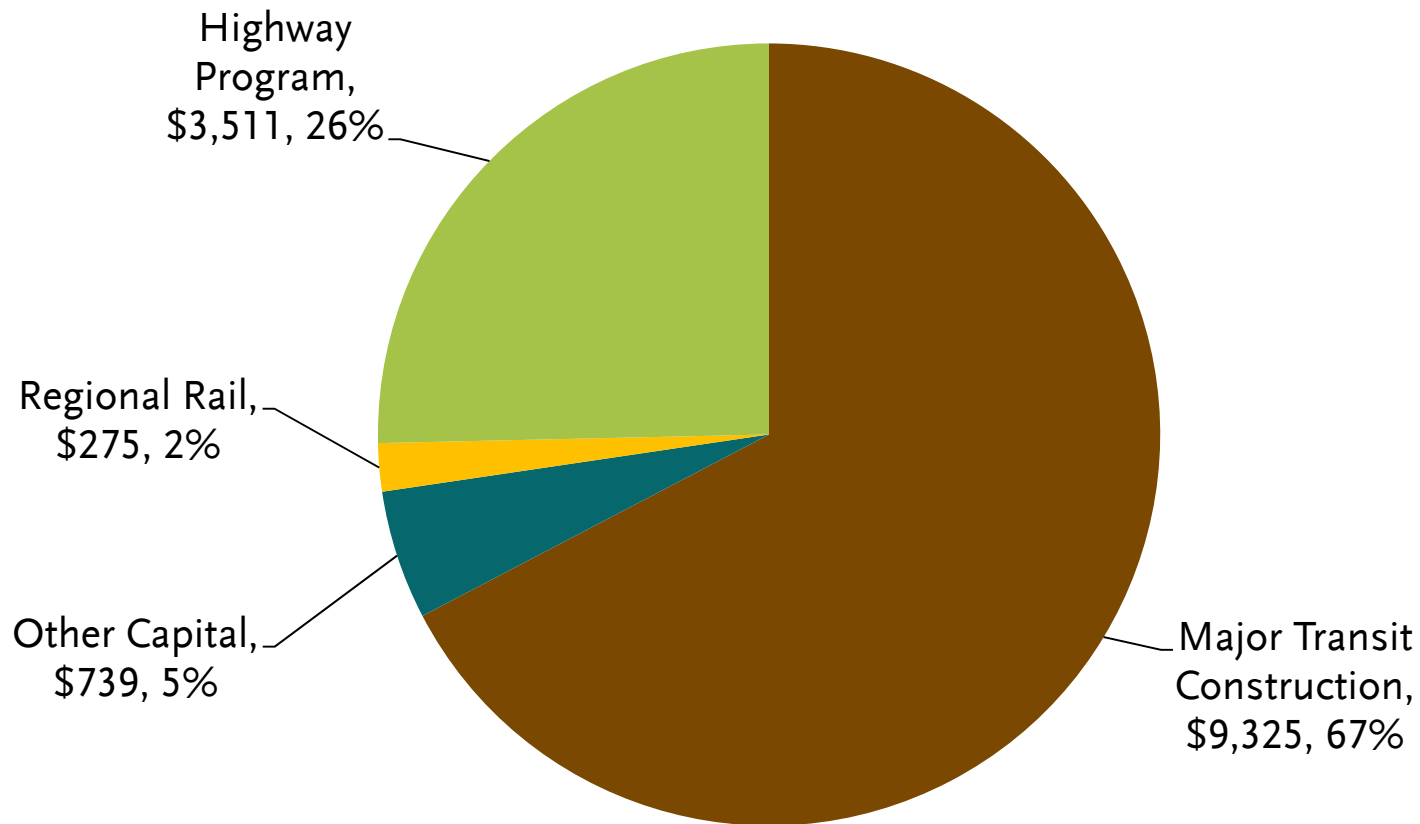
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- In addition to the projects in APE, Program Management also manages/oversees additional 100+ projects, including facilities, Operations improvement, and State of Good Repair projects
- In total, Program Management manages and supports a volume of 160+ projects with a total authorized value at estimated approximately \$15 billion
- Approximately \$13.8 billion projects are included in the FY18 APE review



# FY18 APE Current Program: \$13.8 B

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# Program Highlights

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- Overall Program increased 25% from approximately \$11 billion in FY17, to approximately \$13.8 billion in FY18
- Program dollars committed to Major Transit Construction projects increased approximately \$2.5 billion from FY17 to FY18
- With implementation of the Measure M program, Metro's Capital Program is expected to continually grow



# Program Challenges

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- Secure sufficient resources and staffing in a timely manner needed to manage and support project delivery
- Collaborate with stakeholders to meet community expectations
- Commitment of efficient Third Party review/approval by various external jurisdictions and Caltrans
- Encourage competitive and qualified pool of contractors, small businesses, and workforce on Metro projects
- Deliver multiple large and complex projects on-time and within budget
- Achieve continuous improvement in project delivery through innovation, application of best practices and high standards



# Metro Transit Program



# Metro Transit Capital Projects

Type	Project Budget	# of Projects
Major Transit Construction	\$9,325	5
Other Transit Capital	\$739	23
Rail Facilities Improvements	\$229	6
Bus Facilities Improvements	\$225	10
Wayside System	\$124	2
Security/Safety	\$124	2
Miscellaneous Capital	\$37	3
<b>Total Transit Capital Program</b>	<b>\$10,064</b>	<b>28</b>

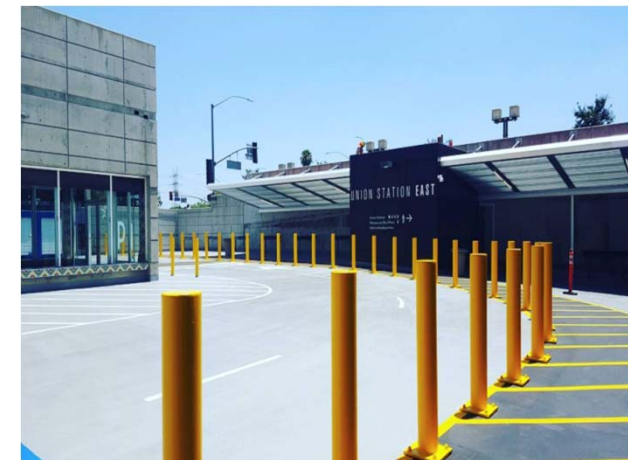


# Metro Transit Capital Program Status

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## 5 Projects Completed in FY2017

- Metro Red Line to Orange Line Underpass at North Hollywood Station – August 2016
- Patsaouras Bus Plaza Paving Reconstruction Project (Initial Phase) – October 2016
- 7th Street/Metro Station Pedestrian Tunnel (BLOC) – January 2017
- Fuel Storage Tank System Enhancements (FY15 – FY17) – March 2017
- Division 3 Master Plan Phase II-IV – June 2017



# Metro Transit Capital Program Status

## 5 Projects Planned to be Completed In FY2018

- Metro Red Line Escalator Replacement/Modernization Project – August 2017
- Metro Blue Line Pedestrian Safety Enhancement at Grade Crossings – October 2017
- Bus Facility Maintenance Improvements & Enhancements Phase I – December 2017
- Metro Silver Line Improvements and Upgrades – December 2017
- El Monte Busway & Transit Center Expansion – December 2017



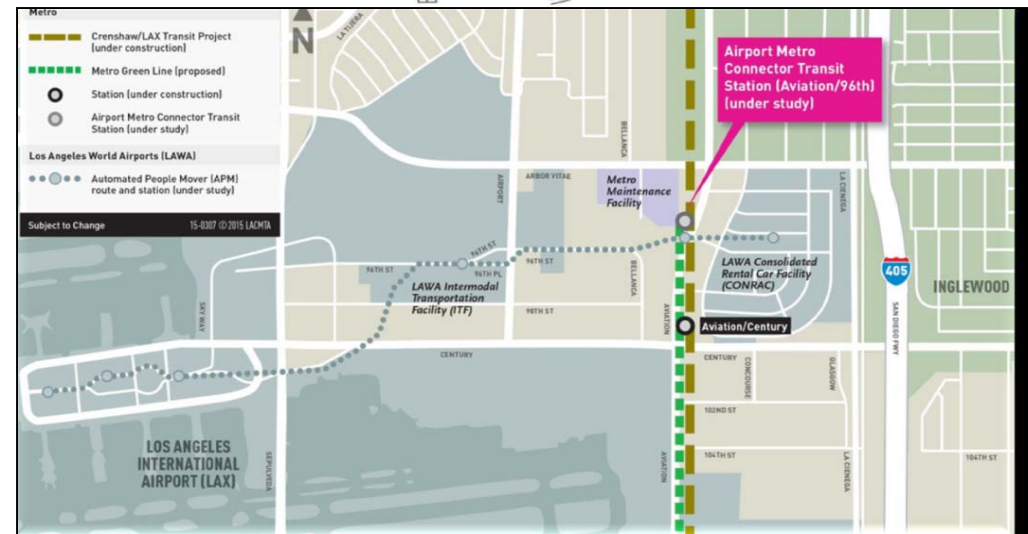
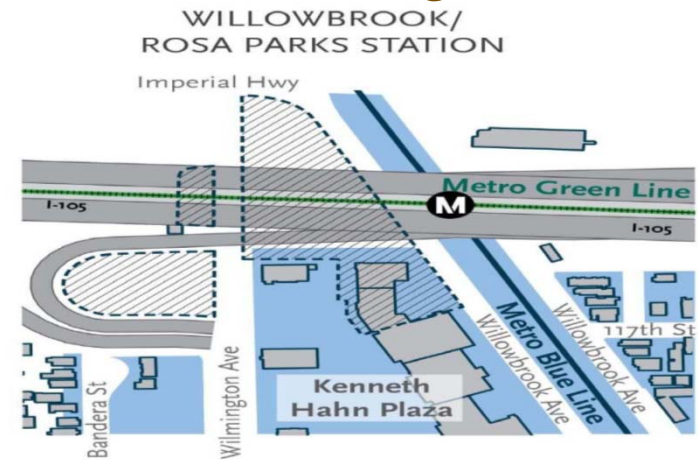
Photos after safety pedestrian improvements at Metro Blue Line's Wardlow Station in Long Beach.



# Metro Transit Capital Program Status

## 4 Projects with Planned Transition from Planning to Program Management in FY18:

- Willowbrook/Rosa Parks Station Improvements Project – Spring 2017
- Airport Metro Connector Project (96<sup>th</sup> Street Station) – Fall 2017
- Metro Gold Line Eastside Access Project – Winter 2017
- River to Rail Corridor Active Transportation Connector Project – Spring 2018



# Crenshaw/LAX Transit Project





# Crenshaw/LAX Transit Project

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Project Budget: \$2,058M

Project Completion: October 2019

Project Complete: 60%

## Accomplishments:

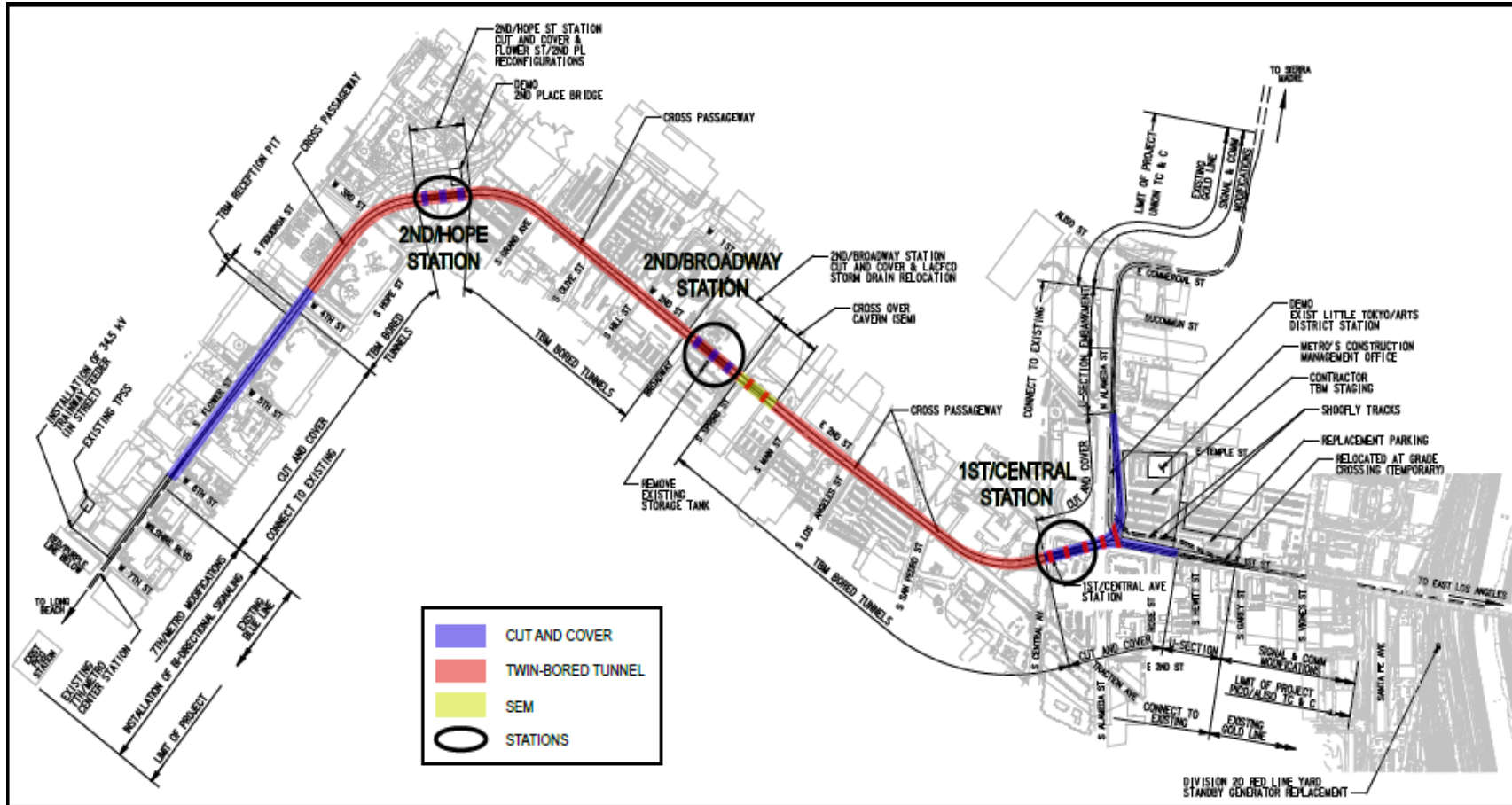
- Nearing the 60% construction completion mark for the project
- Final design of base work is complete with continuing design of change work
- Contractor and Metro agreed on a revised baseline schedule that supports the planned revenue service date of October 2019
- Contractor on schedule per revised baseline schedule

## Challenges / Risks:

- Maintain planned schedule milestones
- Minimal schedule contingency exists in the revised baseline schedule
- Future schedule delays could be mitigated by Metro accelerating planned work but cost of acceleration may add pressure on completing the project on budget
- Heavier than expected winter rains impacting construction work
- Continuous efforts meeting community expectations
- Third party approvals of work in a timely manner



# Regional Connector Transit Project



# Regional Connector Transit Project

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**Project Budget:** \$1,755.8 M

\*Excludes finance costs

**Project Completion:** 2021

**Project Complete:** 31%

## Accomplishments:

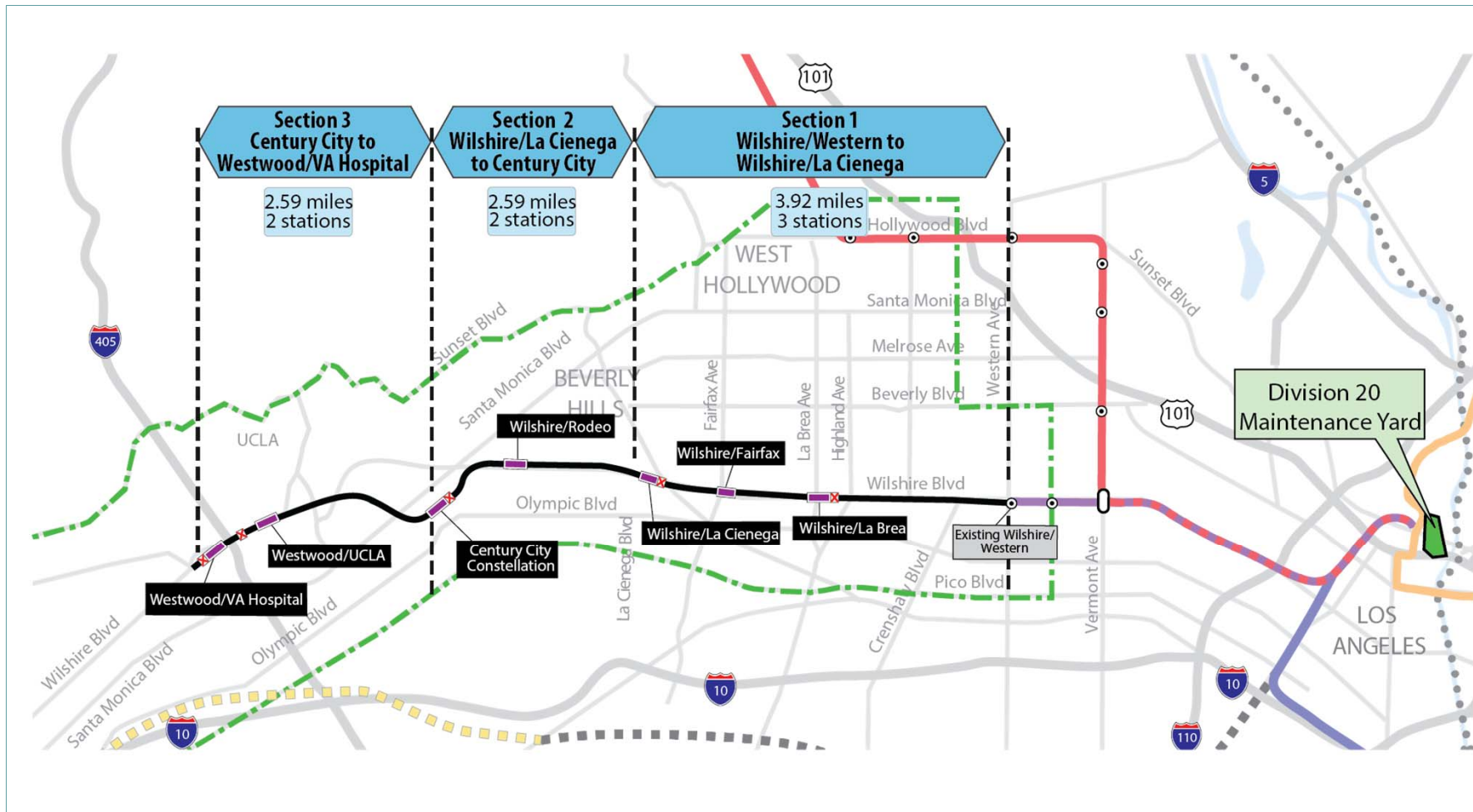
- Successfully launched boring machine “Angeli” for tunneling operations
- Initiated build-out of permanent structural elements at the 1st/Central Station
- Advanced support of excavation (SOE) installations on Flower Street sufficient to facilitate commencement of decking and excavation works
- Safely completed excavation of 2nd/Hope Station Box to an average depth of 100 feet
- Completed 3rd Party utility relocations at 2nd/Broadway Station

## Challenges/Risks:

- Obtaining continued City of LA support for, and approval of, the necessary traffic control and extended work hour permits to effectively work in a dense urban setting
- Safely prosecute the first leg of tunneling operations, and the timely excavation of the related tunnel boring machine recovery shaft on Flower Street
- Relocating LADWP underground power assets around 6th/Flower in support of Flower Street-South SOE and downstream schedule operations



# Westside Purple Line Extension Project



# Westside Purple Line Extension Section 1

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**Project Budget: \$2,778.9M**  
(Excludes finance costs)

**Forecast Completion: November 2023**  
**Project Complete: 15%**

## Accomplishments:

### FY17

- Achieved substantial completion on Wilshire/La Cienega advanced utility relocation (AUR), ahead of schedule and within budget
- Private utility relocations have been completed at the Wilshire/Fairfax Station area
- Private utility relocations on schedule for completion at the Wilshire/La Cienega Station area
- Complete final design on contracts for Tunnels, Stations, Trackwork & Systems and Division 20 Maintenance of Way/Non-Revenue Vehicle Facility
- Begin Wilshire/Fairfax Station decking and excavation operations
- Award contract for heavy rail vehicles procurement

### Planned FY18

- Complete excavation at Wilshire/La Brea Station and Wilshire/Fairfax Station
- Begin Wilshire/La Brea Station concrete operations
- Delivery of tunnel boring machines to project site
- Begin Wilshire/La Cienega Station decking

## Challenge/Risk:

- Third party approvals of design and construction in a timely manner
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# Westside Purple Line Extension Section 2

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**Project Budget: \$ 2,440.9 M**

(Excludes finance costs)

**Forecast Completion: August 2025**

## Accomplishments:

### FY17

- FTA executed the Full Funding Grant Agreement (FFGA)
- U.S. Department of Transportation issued the TIFIA Loan
- Issued Contract Notice-to-Proceed (NTP) for Construction Management Support Services
- Began utility relocations at Century City Constellation Station and Wilshire/Rodeo Station
- Awarded contract and issue NTP for Tunnels, Stations, Trackwork and Systems
- Continue property acquisitions

### Planned FY18

- Begin final design
- Procure tunnel boring machines
- Begin major construction
- Continue third party utility relocations at Century City Constellation and Wilshire/Rodeo Stations
- Continue property acquisitions

## Challenge:

- Seek opportunities to accelerate project delivery by 2024



# Westside Purple Line Extension Section 3

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Projected Budget through FY18: \$291.2M      Forecast Completion: TBD  
Working Project Estimate:                      \$2.9 B

## Accomplishments:

FY17

- Request FTA's approval to Enter into Engineering
- Continue timely submittals required to seek an Early Systems Work Agreement or Letter of No Prejudice with the FTA for the Design/Build Tunnel Contract

## Planned FY18

- Receive FTA's approval to Enter into Engineering (planned for 1<sup>st</sup> Quarter FY18)
- Award contracts and issue NTPs for the Tunnel Contract and Westwood/UCLA Advanced Utility Relocations
- Initiate procurement for Stations, Track and Systems contract

## Challenges/Risks:

- Secure FTA's funding commitment
- Obtain sufficient capacity and capability in a timely manner required to deliver project
- Provide temporary and permanent power



# Patsaouras Plaza Busway Station

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Project Budget: \$ 39.7 M

Project Completion: November 2018

## Accomplishments:

- Completed final design
- Started project construction

## Challenges/Risks:

- Continued Third Party cooperation review/approval, including Caltrans, to be consistent with project schedule
- Potential budget and schedule impacts due to design changes or underground conditions
- Heavier than expected winter rains impacting construction work





# Metro Blue Line Signal Rehabilitation Project

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Project Budget: \$ 93.6 M

Project Completion: August 2020

## Accomplishments:

- Secured additional funding from State Cap & Trade Transit and Intercity Rail Capital Program (TIRCP) for \$38.5 million
- Design-build procurement well underway

## Challenges/Risks:

- Track allocations coordination with other projects/maintenance on Metro Blue Line
- Existing aged ductbank/conduits may require replacement, potential additional scope
- Additional right-of-way needed for new Slauson Interlocking bungalow near 51<sup>st</sup> Street
- Meet Cap & Trade deadline for funding
- Awaiting proposals; may impact project budget



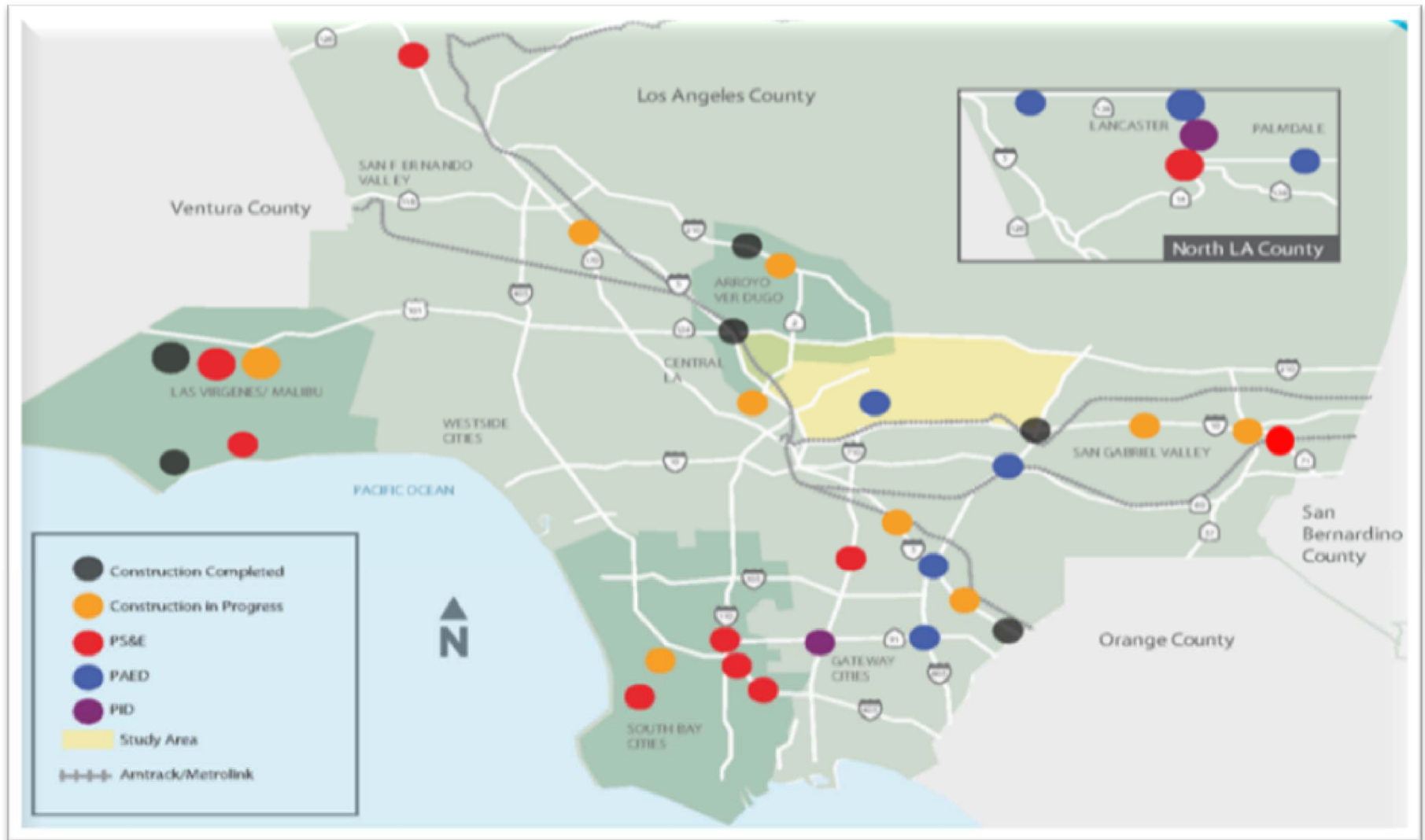
New train control



Project adds 4 Crossovers



# Highway Program





# Highway Program Status Summary (Measure R Funded)

#	Project	Current Phase	Estimated Cost of Current Phase (\$mil.)	Phase Completion
1	I-5 South – Alondra	Construction	\$114.07	Completed
2	I-5 South – Valley View Interchange	Construction	\$631.12	Aug 2022
3	I-5 South – Shoemaker, Rosecrans, Bloomfield	Construction	\$188.22	July 2018
4	I-5 South – San Antonio, Imperial Hwy and Orr Day	Construction	\$323.29	April 2019
5	I-5 South – Florence	Construction	\$211.67	Sep 2019
6	I-5 South - Carmenita Interchange	Construction	\$419.88	Dec 2018
7	I-5 North - HOV from SR 118 to SR 170	Construction	\$219.49	Completed
8	I-5 North - HOV from SR 170 to North of Buena Vista	Construction	\$94.72	Completed
9	I-5 North – North of Buena Vista to South of Magnolia Blvd	Construction	\$402.38	May 2020
10	I-5 North - Magnolia Blvd to SR 134	Construction	\$137.37	Dec 2019



# Highway Program Status Summary (Measure R Funded)

#	Project	Current Phase	Estimated Cost of Current Phase (\$mil.)	Phase Completion
11	I-5 North HOV Project SR 14 to Parker Road	Plan, Specification & Estimate (PS&E)	\$31.0	Dec 2018
12	Interstate 605 Corridor Hot Spots – I-605/I-5 Interchange Improvement	Project Approval / Environmental Document (PAED)	\$20.84	Mar 2019
13	Interstate 605 Corridor Hot Spots – I-605/SR 60 Interchange Improvement	PAED	\$30.0	Feb 2020
14	Interstate 605 Corridor Hot Spots – I-605/SR 91 Interchange Improvement	PAED	\$7.8	May 2019
15	Interstate 605 Corridor Hot Spots – I-710/SR 91 Interchange Improvement	Project Study Report / Project Development Support (PSR/PDS)	\$2.6	June 2017
16	Interstate 405 Crenshaw Blvd On and Off Ramp Improvements	PS&E	\$10.3	Aug 2016
17	Interstate 405 and I-110 Aux Lane from SR 91 to Torrance Blvd	PS&E	\$9.0	Jul 2017
18	SR 138 I-5 to SR 14	PAED	\$25.0	Apr 2017
19	I-710 South	PAED	\$91.0	Sep 2018
20	I-710 South Early Action Projects - Soundwall Projects (3 locations)	PS&E	\$12.7	Feb 2018
<b>Subtotal Measure R Highway Projects</b>			<b>\$2,982.45</b>	



# Highway Program Status Summary (Non-Measure R Funded)

#	Project	Current Phase	Estimated Cost of Current Phase (\$mil.)	Phase Completion
21	I-10 HOV from Citrus Avenue to SR 57	Construction	\$264.4	Nov 2021
22	I-10 HOV from Puente Avenue to Citrus Avenue	Construction	\$195.6	Apr 2019
23	SR 57 and SR 60 Mixed Flow Interchange ** (Eastbound and Westbound flyover off-ramp to Grand Ave, Eastbound on-ramp SR-60)	PS&E	\$13.0*	Sep 2020
24	SR 71: Interstate 10 to Mission Blvd **	PS&E and ROW	\$16.0	Dec 2019
25	SR 71: Mission Blvd to Rio Rancho Road **	PS&E and ROW	\$40.0	Dec 2019
Subtotal Non-Measure R Funded Highway Projects			\$529.0	
Total Highway Program			\$3,511.45	

\* Initial Budget Estimate is through completion of Design

\*\* These are projects with completed PAED and in Approved 2009 LRTP and 2014 SRTP



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

Project Phase: Plan, Specification & Estimate

Approved Budget: \$31.4 M

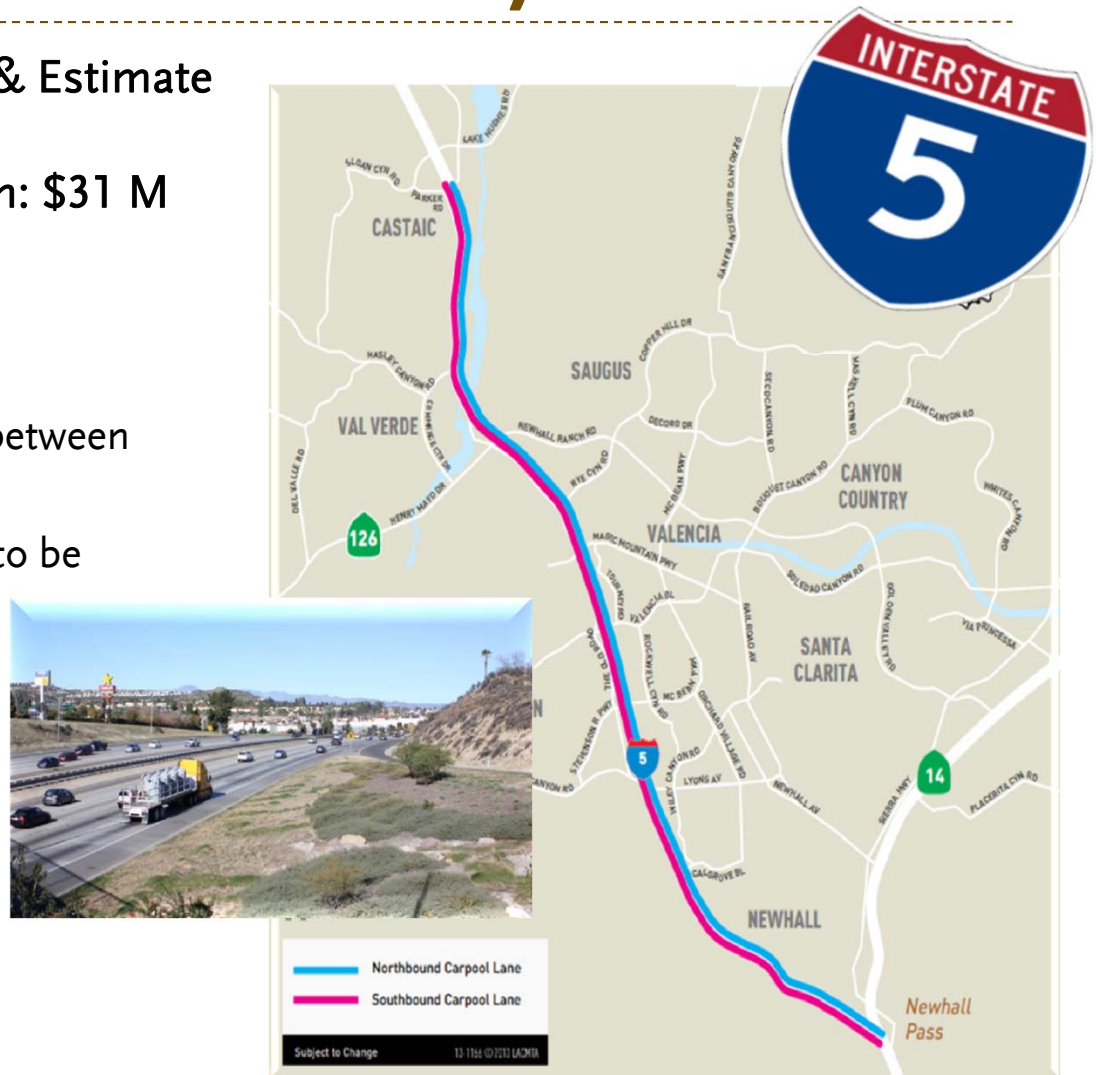
Estimated Cost to Complete Design: \$31 M

## Accomplishments:

- Five (5) community meetings held between October 2016 and January 2017
- Project on schedule for 35% PS&E to be completed by April 2017

## Challenges/Risks:

- Coordination with Caltrans pavement rehabilitation project



# I – 5 Corridor Construction



**I-5 Corridor  
Construction Projects  
Managed by Caltrans  
and Oversight by Metro**





# I-5 North: SR 118 to SR 134



Project Phase: Construction

Project Managed by Caltrans:

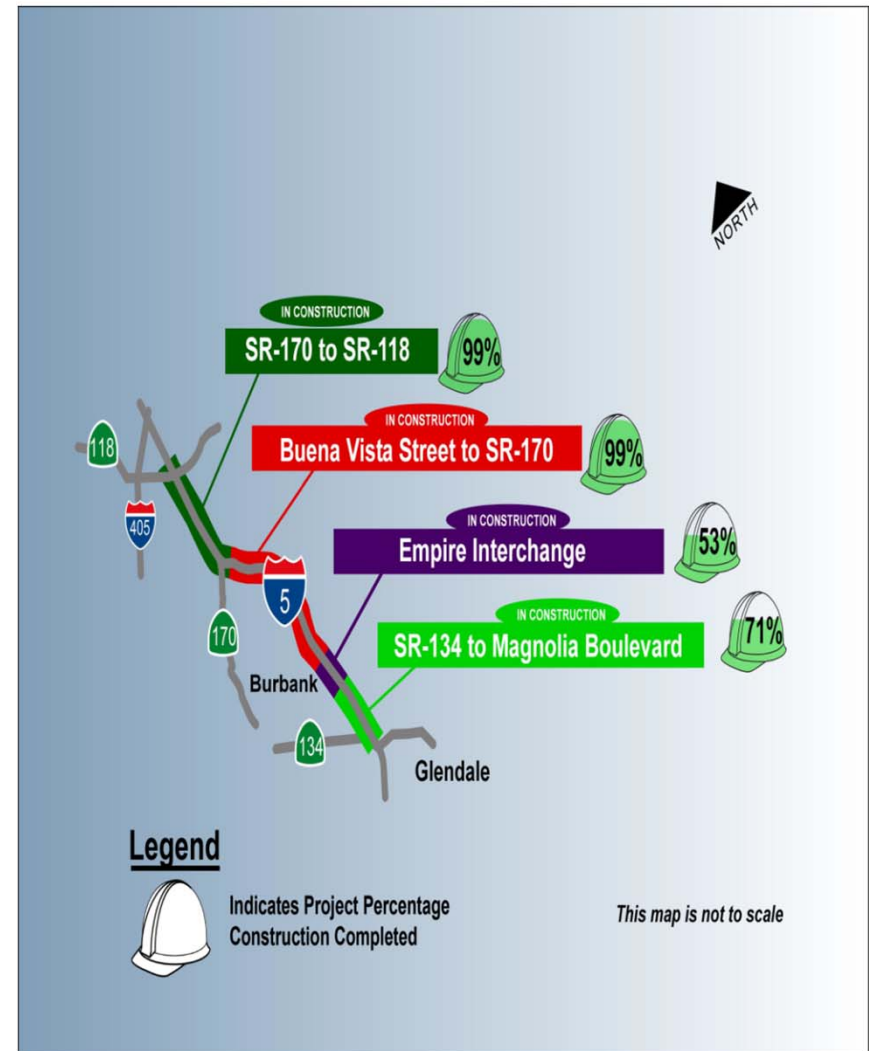
- Approved Budget: \$853.96 M
- Estimated Cost to Complete Construction: TBD

Accomplishments:

- SR170 to SR118 – Open to traffic, plant establishment in progress
- North of Buena Vista to SR170 – Open to traffic, plant establishment in progress
- North of Buena Vista to Magnolia Blvd including Empire Blvd Interchange – Construction in progress
- SR 134 to Magnolia Blvd – Construction in progress

Challenges/Risks:

- Adverse field conditions
- Utility relocation/ Railroad work changes
- Survey work related to roadway and structures
- LA River Bridge construction requires significant changes to avoid working on the River bed
- Potential schedule and budget impacts







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



Project Phase: Construction

Project Managed by Caltrans:

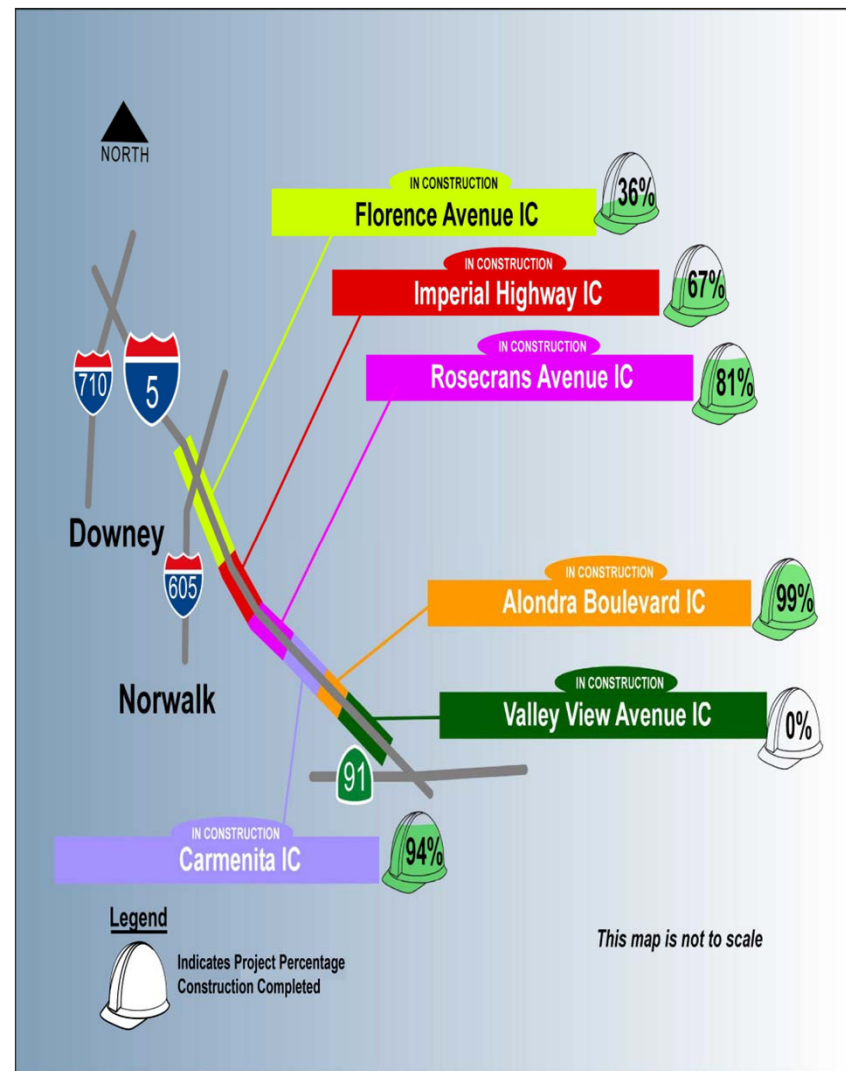
- Approved budget: \$1,888.25 M
- Estimated Cost to Complete Construction: TBD

Accomplishments:

- Alondra Blvd – Open to traffic, plant establishment in progress
- Valley View Avenue – Construction began fall 2016
- Rosecrans Avenue – Construction 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
- Potential schedule and budget impacts
- Timely resolution of valid contractors' claims



# I-605 “Hot Spots”



Project Phase: Various

Approved Budget: \$61.24 M

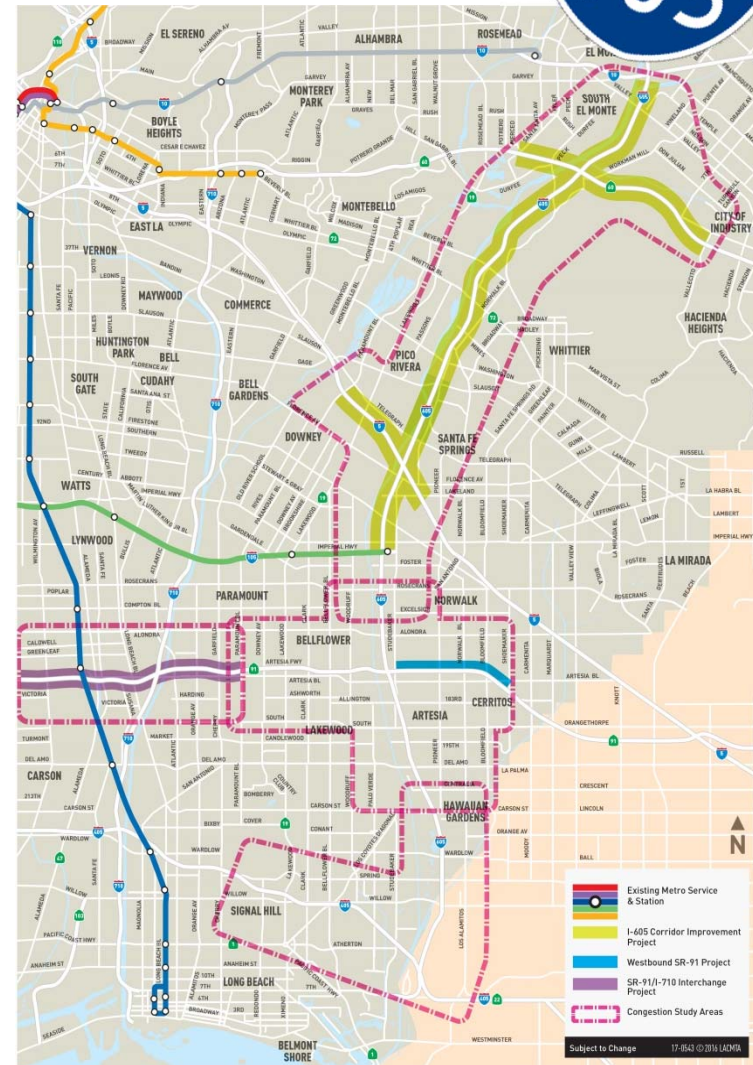
Estimated Cost to Complete Phase: \$61.24 M

## Accomplishments:

- Aggressive contract starts:
  - 605/5 PAED awarded December 2015
  - 710/91 PSR-PDS awarded December 2015
  - 605/91 PAED awarded May 2016
  - 605/60 PAED awarded June 2016
- Effective coordination of all contracts

## Challenges/Risks:

- Availability of funding to advance projects to design and construction
- Strategy to resolve: Consider un-bundling the mega projects to smaller fundable projects with independent utility and sustainability



# I-710 South



Project Phase: Preliminary Engineering & Environmental

Approved Budget: \$91 M

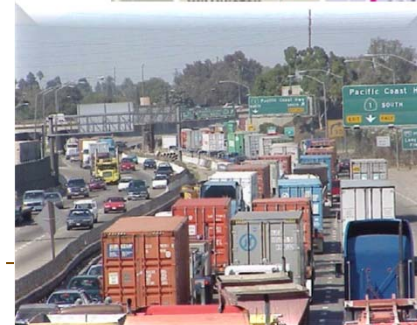
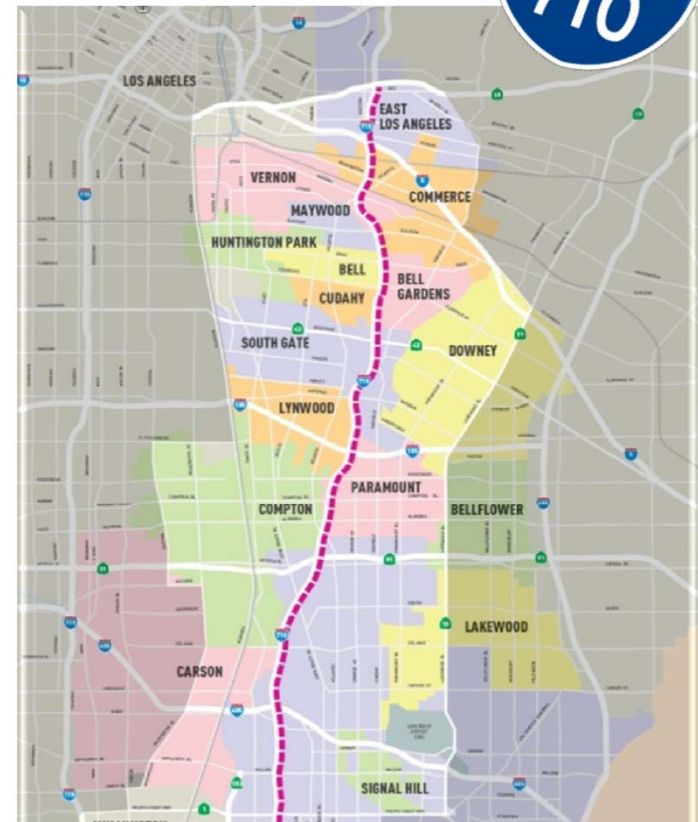
Estimated Cost to Complete Phase: \$91 M

## Accomplishments:

- On schedule
- Conducting additional studies as directed by the Board
- Strong collaborative work with the local agencies, communities, and Metro Board members in addressing community concerns
- Pursuing early action projects during the development of the corridor environmental documents

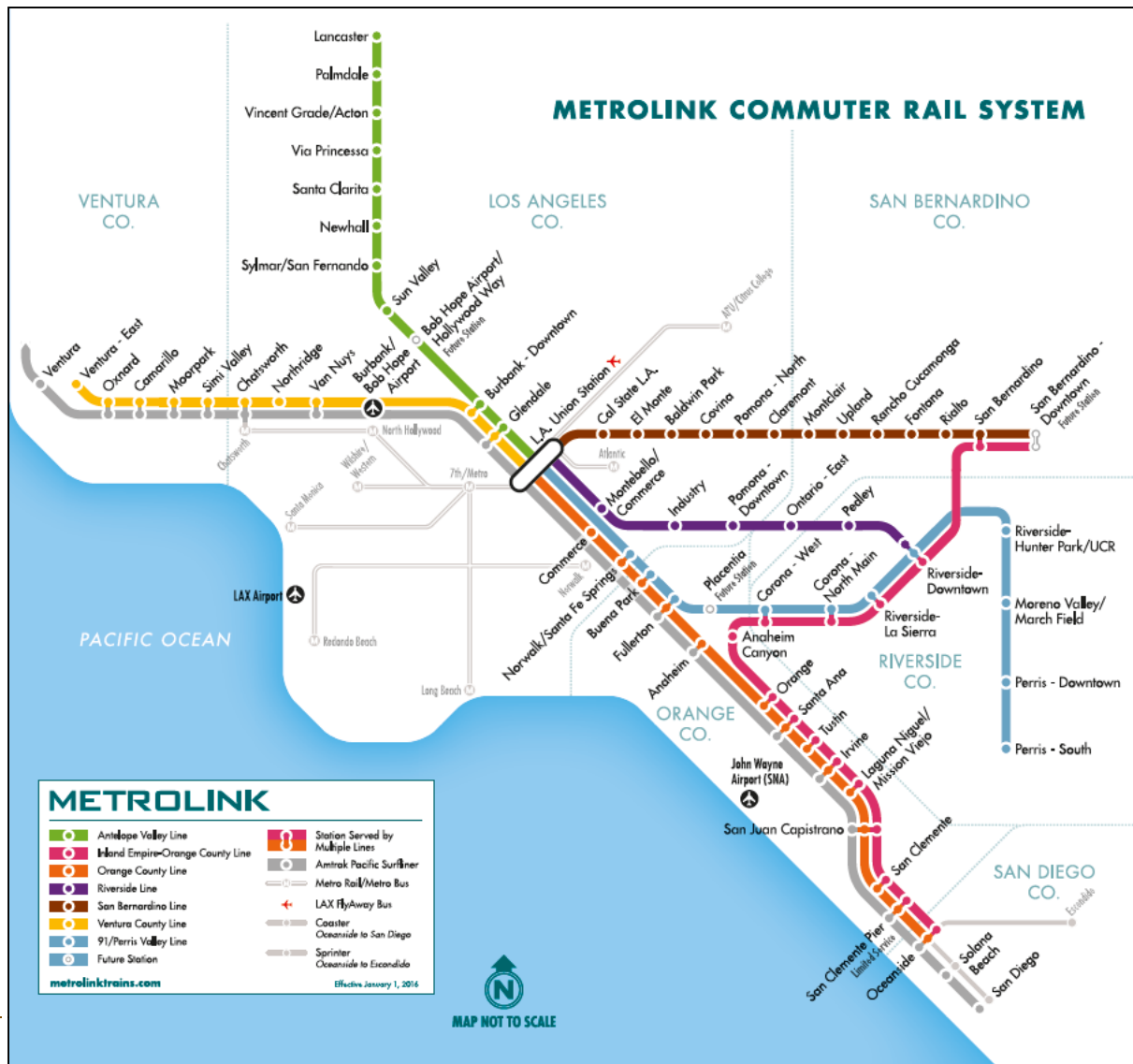
## Challenges/Risks:

- Availability of funding to pursue design and construction of the proposed improvements
- Strategy to resolve: Pursue implementation of early action projects with independent utility and sustainability



FY2018 APE

# Regional Rail Program



# Regional Rail Program Summary

#	Project	Current Phase	Estimated Cost of Current Phase (\$mil.)	Phase Completion
1	LINK Union Station	Environmental & PE	\$71	June 2019
2	Bob Hope Airport Metrolink Station Pedestrian Bridge Project	Environmental & 90% Design	\$4	To Be Determined
3	Bob Hope Airport/Hollywood Way Metrolink Station Project	Construction	\$15	April 2018
4	Doran Street and Broadway/Brazil Safety and Access Project	Environmental/100% Design	\$10	June 2018
5	Brighton to Roxford Double Track Project	Environmental; Plan, Specification & Estimate 100%Design	\$15	October 2018
6	Rosecrans/Marquardt Grade Separation Project	Environmental; Plan, Specification & Estimate 100% Design, Real Estate Acq.	\$155.3 (including construction)	June 2022
7	Lone Hill to CP White Double Track Project	Environmental & 30% PE	\$5	June 2017
<b>Total Regional Rail Program</b>			<b>\$275.3</b>	



# Burbank Airport – North Station

Project Budget: \$15M

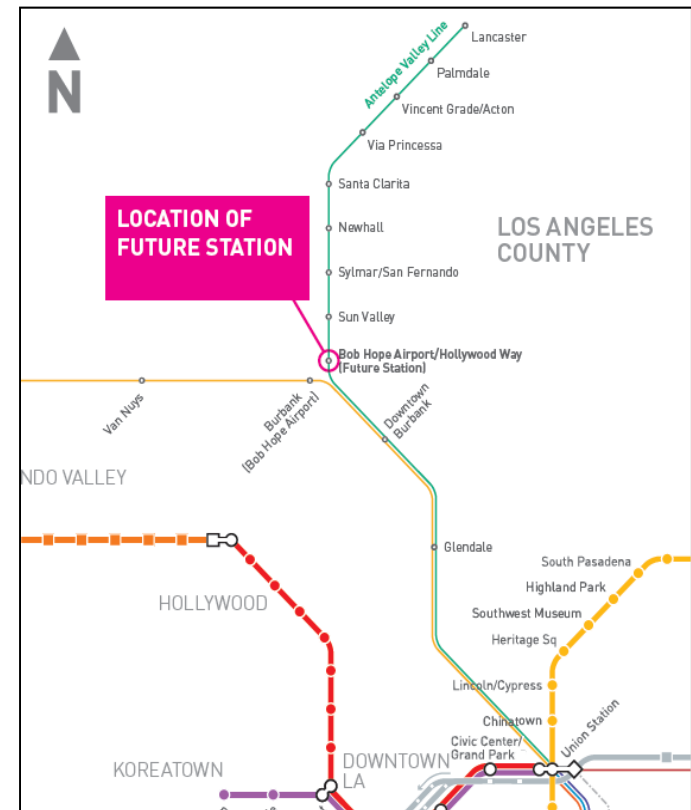
Construction Completion: April 2018

## Accomplishments:

- 100% design complete, including City of Burbank's requested revisions for cost-effective Operating & Maintenance (O&M)
- Airport committed to providing courtesy shuttle service between Station and Airport
- Established O&M Plan with the Burbank Airport, City of Burbank, and City of Los Angeles
- Notice of Award for Construction issued January 2017

## Challenges/Risks:

- To arrange short term, long term parking solution with the City of Burbank
- Potential closure of Sun Valley Station (within 2 miles of Bob Hope Station) to be determined



# Rosecrans/Marquardt Grade Separation Project

Working Project Estimate: \$155.3 M

Phase Completion: June 2022

## Accomplishments:

- Alternative #2 Offset overpass with connector roads was approved by Santa Fe Springs City Council and the Metro Board
- Environmental documentation obtained CEQA clearance
- Completed 65% Design

## Challenges/Risks:

- Multi-agencies cooperation and approval process
- Minimize traffic impacts during construction
- Constraints at Coyote Creek
- Diagonal rail crossing at a busy intersection may be a potential risk
- Securing multi-agency funding for construction



# Link Union Station (US)

Estimated Cost to Complete Environmental/PE: \$71M  
Environmental/PE Completion Date: June 2019

## Accomplishments:

- Commitment of \$15M and \$3.76 M California High Speed Rail funding
- Environmental Design accommodated High Speed Rail and integrated passenger concourse
- 4 Concepts advanced to 10% design level with 1 preferred concept recommended for Environmental Clearance/PE design

## Challenges/Risks:

- Obtain funding for design, right-of-way, and construction
- Secure full funding agreement with California High Speed Rail by June 2017





# FY18 APE Summary

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- New Projects with Planned Adoption of Life-of-Project Budget (separate Board action):
  - Rosecrans/Marquardt Grade Separation Project
  - Airport Metro Connector Project
  - Willowbrook/Rosa Parks Station Improvements Project
- Existing Projects with Potential Adjustments to LOP Budget
  - MBL Signal Rehabilitation Project (separate board action)
  - I-5 South: Orange County Line to I-605
  - I-5 North: SR 118 to SR 134



# Next Steps

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- 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
- Secure 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



# Appendix: Project Listing by Type

	TRANSIT CAPITAL PROJECTS WITH TOTAL PROJECT COSTS > \$5 M	TYPE	LOP BUDGET (\$ MIL.)
1	BRT 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
6	Bus Facility Maintenance Improvements & Enhancements Phase II	Bus Facilities Improvements	\$20.9
7	Bus Facility Maintenance Improvements & Enhancements Phase I	Bus Facilities Improvements	\$21.2
8	Bus Facilities Maintenance & Improvement - Phase III	Bus Facilities Improvements	\$21.7
9	Patsaouras Plaza Bus Station Construction	Bus Facilities Improvements	\$39.8
10	El Monte Busway & Transit Center Expansion	Bus Facilities Improvements	\$60.1
		<b>Bus Facilities Improvements Total</b>	<b>\$225</b>
11	Crenshaw/LAX Light Rail Transit: Construction	Major Construction	\$2,058.0
12	Regional Connector: Construction	Major Construction	\$1,755.8
13	Westside Purple Line Extension Section 1 Project	Major Construction	\$2,778.9
14	Westside Purple Line Extension Section 2 Project	Major Construction	\$2,440.9
15	Westside Purple Line Extension Section 3 Project	Major Construction	\$291.2 (a)
		<b>Major Transit Construction Total</b>	<b>\$9,325</b>
16	Patsaouras Bus Plaza Paver Retrofit	Misc. Capital Projects	\$9.1
17	Division 20 Portal Widening Turnback Facility	Misc. Capital Projects	\$17.2 (b)
18	Division 22 Paint And Body Shop	Misc. Capital Projects	\$11.0
		<b>Misc. Capital Projects Total</b>	<b>\$37</b>
19	Southwestern Maintenance Yard	Rail Facilities Improvements	\$157.0
20	Systemwide Elevator Installations (Vertical Systems)	Rail Facilities Improvements	\$8.0
21	LRT Freeway Stations Sound Enclosures	Rail Facilities Improvements	\$8.6
22	Metro Red Line Civic Center Station Escalator/Elevator Modernization	Rail Facilities Improvements	\$12.0
23	Metro Red Line Escalator Replacement/Modernization	Rail Facilities Improvements	\$20.8
24	Metro Red Line to Orange Line Underpass at North Hollywood Station	Rail Facilities Improvements	\$23.1
		<b>Rail Facilities Improvements Total</b>	<b>\$229</b>
25	Metro Gold Line I-210 Barrier Replacement Phase I	Security/Safety	\$11.1 (c)
26	Metro Emergency Security Operations Center	Security/Safety	\$112.7
		<b>Security/Safety Total</b>	<b>\$124</b>
27	Metro Blue Line Pedestrian Safety Enhancement at Grade Crossings	Wayside Systems	\$30.2
28	Metro Blue Line Signal System Rehabilitation	Wayside Systems	\$93.6
		<b>Wayside Systems Total</b>	<b>\$124</b>
		<b>TRANSIT CAPITAL TOTAL</b>	<b>\$10,064</b>

(a) Based on projected budget through FY18.

(b) This is the approved budget to complete preliminary engineering.

(c) 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	Measure R Highway Capital Project	\$31.0
12	Interstate 605 Corridor Hot Spots – I-605/I-5 Interchange Improvement	Measure R Highway Capital Project	\$20.8
13	Interstate 605 Corridor Hot Spots – I-605/SR 60 Interchange Improvement	Measure R Highway Capital Project	\$30.0
14	Interstate 605 Corridor Hot Spots – I-605/SR 91 Interchange Improvement	Measure R Highway Capital Project	\$7.8
15	Interstate 605 Corridor Hot Spots – I-710/SR 91 Interchange Improvement	Measure R Highway Capital Project	\$2.6
16	Interstate 405 Crenshaw Blvd On and Off Ramp Improvements	Measure R Highway Capital Project	\$10.3
17	Interstate 405 and I-110 Aux Lane from SR 91 to Torrance Blvd	Measure R Highway Capital Project	\$9.0
18	SR 138 I-5 to SR 14	Measure R Highway Capital Project	\$25.0
19	I-710 South	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
		<b>Measure R Highway Total</b>	<b>\$2,982.5</b>
21	I-10 HOV from Citrus Avenue to SR 57	Other Highway Projects	\$264.4
22	I-10 HOV from Puente Avenue to Citrus Avenue	Other Highway Projects	\$195.6
23	SR 57 and SR 60 Mixed Flow Interchange	Other Highway Projects	\$13.0
24	SR 71: Interstate 10 to Mission Blvd	Other Highway Projects	\$16.0
25	SR 71: Mission Blvd to Rio Rancho Road	Other Highway Projects	\$40.0
		<b>Other Highway Total</b>	<b>\$529.0</b>
		<b>HIGHWAY PROGRAM TOTAL</b>	<b>\$3,511</b>
REGIONAL RAIL		TYPE	CURRENT ESTIMATE (\$ MIL.)
1	LINK Union Station	Regional Rail	\$71
2	Bob Hope Airport Metrolink Station Pedestrian Bridge Project	Regional Rail	\$4
3	Bob Hope Airport/Hollywood Way Metrolink Station Project	Regional Rail	\$15
4	Doran Street and Broadway/Brazil Safety and Access Project	Regional Rail	\$10
5	Brighton to Roxford Double Track Project	Regional Rail	\$15
6	Rosecrans/Marquardt Grade Separation Project	Regional Rail	\$155.3
7	Lone Hill to CP White Double Track Project	Regional Rail	\$5
		<b>REGIONAL RAIL PROGRAM TOTAL</b>	<b>\$275</b>

**Board Report**

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**File #:** 2016-0987, **File Type:** Resolution

**Agenda Number:** 6.

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**FINANCE, BUDGET, AND AUDIT COMMITTEE  
PLANNING AND PROGRAMMING COMMITTEE  
MARCH 15, 2017**

**SUBJECT: CAP-AND-TRADE LOW CARBON TRANSIT OPERATIONS PROGRAM (LCTOP)**

**ACTION: APPROVE RESOLUTION FOR FISCAL YEAR 2016-17 LCTOP GRANT FUNDING**

**RECOMMENDATION**

APPROVE the Resolution in Attachment A to:

- A. AUTHORIZE the Chief Executive Officer (CEO) or his designee to **claim \$7,750,898 in fiscal year (FY) 2016-17 LCTOP grant funds for one year of Gold Line Foothill Extension Phase 2A operations and one year of Expo Line Phase 2 operations**; and
- B. CERTIFY that Metro will comply with LCTOP Certification and Assurances and the Authorized Agent requirements, and authorize the CEO or his designee to execute all required documents and any amendments with the California Department of Transportation.

**ISSUE**

The California Department of Transportation (Caltrans) issued the FY 2016-17 guidelines for the LCTOP in December 2016. Agency claims for FY16-17 LCTOP grant funds are due to Caltrans on March 1, 2017. The grant package must include an adopted Board resolution that provides project information, and certifies that Metro will comply will all conditions and requirements set forth in the certifications and assurances, and authorized agent documents. Therefore, staff is seeking Board approval to submit the resolution contained in Attachment A.

**DISCUSSION**

Each year the State makes LCTOP grant funds available through the California Air Resource Board's Cap-and-Trade Program. In February, the State Controller's Office notified eligible agencies of FY 2016-17 fund allocation amounts, including \$7,750,898 apportioned to Metro. To claim the grant award, Metro must prepare a request describing the proposed transit expenditures that will be funded using the LCTOP allocation. The grant application package must include a Board resolution that: 1) authorizes the CEO or his designee to claim \$7,750,898 million in FY 2016-17 LCTOP funds; 2) identifies the projects to be funded with the LCTOP funds; and 3) authorizes the CEO or his designee to execute and amend all required LCTOP documents with Caltrans including the Certifications and

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Assurances and Authorized Agent forms. As in FY 2015-16, staff is proposing to fund the operations of the Gold Line Foothill Extension Phase 2A and Expo Line Phase 2.

### LCTOP Program Funding

The LCTOP was created by California Senate Bill 862 to provide funding, on a formula basis, for operational or capital expansion projects to reduce greenhouse gas emissions and improve mobility, with a priority on serving disadvantaged communities. The grant funds are derived from California's Cap-and-Trade Program and are the result of quarterly auctions of emission credits for greenhouse gas emitters regulated under Assembly Bill AB32. Auction proceeds, known as the Greenhouse Gas Reduction Funds (Fund), are to be reinvested in various projects to further reduce emissions. In FY 2016 -17, \$34 million has been allocated to LCTOP statewide, one of 11 such programs, from the Fund.

Transit agencies receiving funds from the LCTOP shall submit expenditure proposals listing projects that meet any of the following criteria:

- Expenditures that directly enhance or expand transit service by supporting new or expanded bus or rail services, new or expanded water-borne transit or expanded intermodal transit facilities, and may include equipment acquisition, fueling, maintenance, and other costs to operate those services or facilities,
- Operational expenditures that increase transit mode share,
- Expenditures related to the purchase of zero-emission buses, including electric buses and the installation of the necessary equipment and infrastructure to operate and support zero emissions buses, and
- For agencies whose service area includes a Disadvantaged Community as identified in Section 39711 of the Health and Safety Code, 50% of total funds received shall be expended on projects or services that benefit the DAC.

### Project Eligibility Criteria

All projects must be consistent with the project lead's most recently adopted short-range transit plan, regional plan, or publicly-adopted plan. For project leads in a Metropolitan Planning Organization area, projects must also be consistent with the Sustainable Communities Strategy. Additionally, capital projects must have a useful life not less than that typically required for capital assets pursuant to State General Obligation Law, with buses or rail rolling stock considered to have a useful life of two or more years. The LCTOP specifically requires documentation that each proposed project will achieve a reduction in greenhouse gas emissions.

Another significant goal of LCTOP is to maximize benefits to Disadvantaged Communities, requiring that transit agencies whose service areas include one or more such communities expend at least 50% of total funds received on projects that provide direct, meaningful, and assured benefit to them.

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The California Environmental Protection Agency (CalEPA) has used an environmental health screening tool to delineate Disadvantaged Communities through a calculation based on environmental (especially air quality), socio-economic, and public health factors. Disadvantaged Communities, as defined, are disproportionately located in both Los Angeles County and the Central Valley, and notably less prevalent in other major metropolitan areas.

#### Metro-specific Considerations in Selecting LCTOP Projects

Staff developed the FY 2015-16 LCTOP funding recommendation with an eye toward LCTOP-eligible projects targeted to improve the balance between Metro's financial commitments and funding availability and has continued this focus on the FY 2016-17 LCTOP funding recommendation. As stated above, operations of new or expanded rail and bus services that reduce greenhouse gas emissions and provide benefits to disadvantaged communities are eligible for this fund source. Only the first few years of new service operations are eligible to be funded with LCTOP grants because the program goal is to help initiate new service. Therefore staff is recommending using this grant to partially fund another year's operation of Expo Phase 2 and Gold Line Foothill Extension services because these projects best meet the grant eligibility criteria at this point in time. In addition, programming the State grant funds to offset the cost of rail operations allows Metro to free up equal amounts of local funds for other projects.

#### **DETERMINATION OF SAFETY IMPACT**

The requested actions will have no impact on the safety of our customers or employees.

#### **FINANCIAL IMPACT**

Adoption of the LCTOP resolution and authorization of the CEO to execute the required documents to claim LCTOP funds would positively impact the agency's budget by making \$7,750,898 available to support the operation of Metro Rail service.

#### Impact to Budget

Claiming LCTOP funds will have a positive impact on the FY 2017 budget, as LCTOP funds will be disbursed to Metro in June 2017.

#### **ALTERNATIVES CONSIDERED**

The Board may choose not to approve the resolution in Attachment A. Staff does not recommend this alternative because it would risk loss of Metro's FY 2016-17 LCTOP fund allocation amount.

#### **NEXT STEPS**

- March 30, 2017: Metro submits allocation request to Caltrans.
- June 1, 2017: Caltrans and ARB approve list of projects and submit

to State Controller's Office

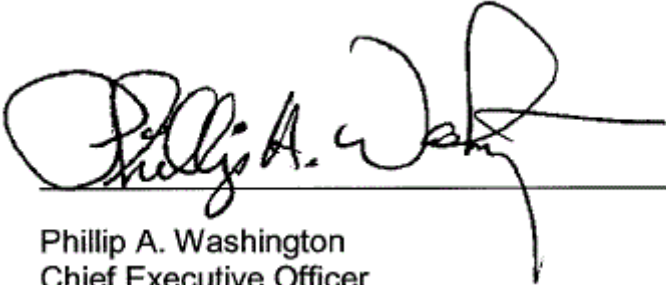
- June 30, 2017: State Controller's Office will release approved project amounts to recipients

**ATTACHMENTS**

Attachment A - Resolution to Execute LCTOP Projects, Certifications and Assurances and, Authorized Agent Forms

Prepared by: Vince Lorenzo, Sr. Mgr., Transportation Planning, (213) 922-4320  
Cosette Stark, DEO, Countywide Planning & Development, (213) 922-2822

Reviewed by: Therese W. McMillan, Chief Planning Officer, (213) 922-7077



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Phillip A. Washington  
Chief Executive Officer



Los Angeles County Metropolitan Transportation Authority

Board Resolution

Authorization for the Execution of the Low Carbon Transit Operations Program  
(LCTOP) Projects:

Metro Gold Line Foothill Extension Phase 2A Operations - \$5,977,936

Metro Expo Line Phase 2 Operations - \$1,772,962

and

LCTOP Certifications and Assurances and Authorized Agent Forms

**WHEREAS**, the Los Angeles County Metropolitan Transportation Authority (Metro) is an eligible project sponsor and may receive state funding from the Low Carbon Transit Operations Program (LCTOP) now or sometime in the future for transit projects; and

**WHEREAS**, the statutes related to state-funded transit projects require a local or regional implementing agency to abide by various regulations; and

**WHEREAS**, Senate Bill 862 (2014) named the Department of Transportation (Department) as the administrative agency for the LCTOP; and

**WHEREAS**, the Department has developed guidelines for the purpose of administering and distributing LCTOP funds to eligible project sponsors (local agencies); and

**WHEREAS**, Metro wishes to implement the LCTOP projects listed above; and

**WHEREAS**, Metro wishes to delegate authorization to execute these documents and any amendments thereto to the Chief Executive Officer (CEO), or his designee; and

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Los Angeles County Metropolitan Transportation Authority that the fund recipient agrees to comply with all conditions and requirements set forth in the Certification and Assurances and the Authorized Agent documents and applicable statutes, regulations and guidelines for all LCTOP funded transit projects.

**NOW THEREFORE, BE IT RESOLVED** that the CEO or his designee is authorized to execute all required documents of the LCTOP program and any Amendments thereto with the California Department of Transportation.



Los Angeles County  
Metropolitan Transportation Authority

**Metro**

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Los Angeles County Metropolitan Transportation Authority that it hereby authorizes the submittal of the following project nominations and allocation requests to the Department in FY 2016-17 LCTOP funds:

Project Name: Metro Gold Line Foothill Extension Phase 2A  
LCTOP Funds Requested: \$5,977,936  
Description: 1 year operations of Gold Line Foothill Extension Phase 2A

Project Name: Metro Expo Light Rail Line Phase 2  
LCTOP Funds Requested: \$1,772,962  
Description: 1 year operations of Expo Light Rail Line Phase 2



Los Angeles County  
Metropolitan Transportation Authority

**Metro**

## CERTIFICATION

The undersigned, duly qualified and acting as the Secretary of the Los Angeles County Metropolitan Transportation Authority, certifies that the foregoing is a true and correct representation of the Resolution adopted at a legally convened meeting of the Board of Directors of the Los Angeles County Metropolitan Transportation Authority held on Thursday, March 23, 2017.

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Michelle Jackson  
LACMTA Secretary

Dated:

(SEAL)



Los Angeles County  
Metropolitan Transportation Authority

**Metro**



## Board Report

File #: 2016-0807, File Type: Contract

Agenda Number: 7.

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**FINANCE, BUDGET AND AUDIT COMMITTEE  
MARCH 15, 2017**

**SUBJECT: P2000 LIGHT RAIL VEHICLE (LRV) OVERHAUL PROGRAM, RAIL VEHICLE CONTRACTOR**

**ACTION: AUGMENT THE LIFE-OF-PROJECT BUDGET AND APPROVE CONTRACT AWARD**

**RECOMMENDATION**

CONSIDER:

- A. AUGMENTING the Life-of-Project (LOP) Budget for the **P2000 Light Rail Vehicle Overhaul Program** (CP 206044) by \$30,000,000 adjusting the LOP Budget from \$130,800,000 originally established March 2013, to \$160,800,000;
- B. AUTHORIZING the Chief Executive Officer to award a firm-fixed price Contract No. OPP2000 Light Rail Vehicle Overhaul to Alstom Transportation Inc. in the amount of \$140,079,867, inclusive of taxes for a period of 50 months for the overhaul and delivery of the 52 P2000 LRVs, subject to resolution of protest(s), if any; and
- C. FINDING that the award to Alstom Transportation, Inc. is the proposer providing the best value and is the most advantageous to Metro.

**ISSUE**

The fifty-two Siemens P2000 vehicles are approximately 14-17 years old; having been delivered to Metro between 2000 and 2003. Many of the critical systems and components on the P2000 fleet are experiencing parts obsolescence issues, lack of vendor support and outdated technology. These deficiencies diminish the performance and maintainability of the fleet. A condition based assessment (CBA) was performed to identify the critical systems and components impacting performance. By overhauling and replacing these critical systems and components, this Overhaul Program will maintain the fleet's State of Good Repair (SGR) and ensure the continued safety, reliability, availability, and maintainability of the fleet for revenue service.

In July 2014, the Board authorized staff to issue a federally funded solicitation for a Best Value Request for Proposals (RFPs) as competitive negotiations pursuant to PCC § 20217 and Metro's procurement policies and procedures for the Overhaul Program. Staff's recommendation presents the firm that is most advantageous to Metro. Alstom Transportation Inc.'s offer represents the Best Value to Metro when all technical and price factors are considered in accordance with the approved

evaluation criteria. The recommended price addresses all contract requirements and represents the best overall value when all RFP evaluation factors are considered, including clear advantages in experience, completing the project on time and providing the least amount of risk on Metro track, staff and facilities. The Procurement Summary of this report (Attachment A) further describes the evaluation results and detailed rankings for all Proposers, including the weighted scores associated with each evaluation criteria.

The recommended contract price includes \$3,519,880 of provisional sums for known unknown work that could arise during the term of the contract. The contract terms prohibit the Contractor from expending any portion of that amount until the Contracting Officer issues a written Task Order for that work.

## **DISCUSSION**

The primary objective of the project is to obtain safe, reliable, high quality overhauled LRVs on-time and within budget, and to create new jobs for Los Angeles County that can be tied directly to the Overhaul Program.

The Scope of Work for the P2000 LRV Overhaul Program is based on a CBA used to identify the critical systems and components impacting performance. The Scope includes the following critical systems and components: Vehicle Door Systems, Propulsion System Controllers, Friction Brake System Controllers, Trucks, Automatic Train Control (ATC)/Automatic Train Operation (ATO) System Controllers, Heating and Air Conditioning (HVAC) System, and Communication System Controllers.

Performing the Overhaul Program is in accordance with the Rail Fleet Management Plan FY2015-FY2040 (Draft, May 24, 2016, v.8). The plan outlines the anticipated program to expand rail fleets to accommodate anticipated growth in ridership; line extensions; and to overhaul or replace vehicles reaching mid-life or end of life, as appropriate.

Metro's Source Selection Committee (SSC) reviewed the proposals and evaluated four (4) key factors, weighted in descending levels of relative importance: 1) Experience and Past Performance, 2) Price, 3) Technical Compliance, and 4) Project Management. Metro also applied the US Department of Transportation's (US DOT) pilot Local Employment Program (LEP) as voluntary incentive evaluation criteria. The two proposals received were in compliance with the RFP requirements and determined to be within the Competitive Range.

Upon Board approval and after receipt of Contractor performance bonds and insurance certificates, a Notice-to-Proceed (NTP) will be issued to the vehicle contractor. Completion of the 52 overhauled base order LRVs is scheduled to be completed within 50 months following NTP. The required delivery dates have liquidated damage assessments that may be imposed for late deliveries.

The Diversity and Economic Opportunity Department (DEOD) did not recommend a Disadvantaged Business Enterprise (DBE) goal for this procurement as it is not applicable (please refer to Attachment E). This procurement falls under the Federal Transit Administration's (FTA) Transit Vehicle Manufacturer (TVM) goal in accordance with 49 Code of Federal Regulations (CFR) Part 26.49. Alstom Transportation Inc. reported 9.23% TVM goal and qualifies under the FTA's eligible

list.

Metro's Transit Asset Management Team and Operations partners are currently reviewing draft asset condition reports from our contractor who has evaluated major component wear on all of our light and heavy rail fleets. While the review of the draft report is ongoing, the draft report strongly supports the need for a major recapitalization of P2000 vehicle fleet, particularly propulsion power. According to the draft report, The P2000 overall fleet score is 2.5 out of 5.0 which represents an overall marginal condition. Per the FTA Transit Asset Management rating scale a score below 3.0 indicates an asset has just passed its normal lifecycle and is in need of lifecycle extending components and rehabilitation. A marginal rating does not imply the P2000 fleet is unsafe to use; however, it does imply the need for increased inspections, with expectations of lower levels of fleet availability for daily service. Only 17% of the P2000 fleet achieved an adequate rating, which strongly supports the need for a mid-life overhaul to help ensure that the P2000 rail vehicles can reliably reach the end of their expected 30 year useful life. Our even older fleet, the P865 actually had higher levels of fleet reliability than the P2000 fleet and are scheduled for replacement by the P3010 fleet sometime this Spring. Newer fleet types had significantly better overall Transit Asset Management ratings. Upon completion of the final report, a Board Box will be issued that discusses all of the report's findings in detail.

#### US DOT Contracting Initiative Pilot Program

Metro created a new Local Employment Program (LEP) that was approved for use under the U.S. Department of Transportation's (DOT) Contracting Initiative Pilot Program. This pilot program allows for the use of geographical preferences in the evaluation of Construction and Rolling Stock projects. Metro's LEP was approved for use on the P2000 Light Rail Vehicle Overhaul Program on a voluntary basis, and established evaluation scoring preferences for Proposers that commit to creating new local jobs for Los Angeles County residents.

DOT and FTA determined that using a Los Angeles County geographical preference for a rail car overhaul project would not provide an unfair competitive advantage for any one Proposer. Metro's LEP is limited to new jobs created by the Proposers in Los Angeles County, provided that at least 10 percent of the jobs are targeted for defined disadvantaged populations in Los Angeles County. Metro's LEP incentivized Proposers to create new jobs in Los Angeles County as a function of the Best Value evaluation process, by providing preferential scoring points based on the committed wages and benefits for new Los Angeles County workers.

Staff's goal of creating meaningful new manufacturing jobs that are tied to Metro's Rolling Stock overhaul program was achieved, as evidenced by the fact that the recommended Awardee, Alstom Transportation Inc. has committed to creating new jobs in Los Angeles County totaling \$3,031,184 in wages and benefits

#### **DETERMINATION OF SAFETY IMPACT**

The approval of this Contract award will have a direct and positive impact to system safety, service quality, system reliability, maintainability and overall customer satisfaction. The P2000 Light Rail Vehicle Overhaul Program will permit Metro to maintain the SGR on the LRV fleet.

## **FINANCIAL IMPACT**

If recommendation A is approved, this action augments the LOP Budget for the P2000 Light Rail Vehicle Program (CP 206044) by \$30,000,000, adjusting the LOP budget from \$130,800,000 to \$160,800,000. The total not-to-exceed Contract amount to support the Overhaul Program is \$140,079,867.

The FY17 planned expenditure of \$11,881,000 is included in the FY17 budget for the Overhaul Program in Cost Center 3043, Rail Vehicle Acquisition, Account 50308, Service Contract (Non-Bus) Maintenance, under CP 206044, P2000 Light Rail Vehicle Overhaul Program.

Since this is a multi-year contract, the cost center manager will be responsible for dispersing the cost for subsequent years.

### **Impact to Budget**

The source of funds for this action is Federal Section 5337 State of Good Repair Funds provided under the Transportation Improvement Program (TIP). Other eligible source of funds include Proposition A 35% and Measure R 2% which is eligible for rail capital activities. At this time, staff is developing guidelines for the Measure M (MM) Ordinance which may allow for the utilization of MM 2%-State of Good Repair, MM 5%-Rail Operations and MM 20%-Transit Operations as Rail State of Good Repair efforts are eligible uses for these MM fund sources. These guidelines are planned for adoption approximately midyear 2017. Concurrently, staff is actively pursuing additional State and Federal sources such as FAST Act and other eligible federal sources to further supplement this project. Staff is also pursuing additional State and Local funding sources such as Cap and Trade and similar sources as they become available to meet the project funding needs.

## **ALTERNATIVES CONSIDERED**

Staff considered using in-house Metro resources to perform this work. This approach is not recommended as Metro does not have sufficient resources and Subject Matter Experts available to perform this work.

The Board of Directors may choose not to authorize the Contract award for this project; however, this alternative is not recommended by Metro staff because the Overhaul Program is critical to maintaining a SGR on the 52 Siemens P2000 LRVs and to enable the Maintenance department to effectively plan and schedule its work.

## **NEXT STEPS**

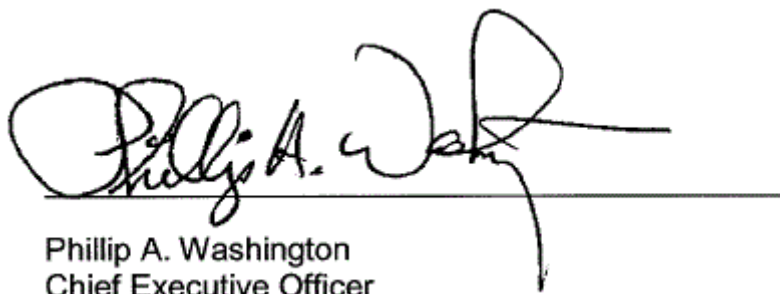
After Contract award and NTP, Metro will meet with Alstom Transportation Inc. for the Contract required Specification Review Meeting. During the same meeting, Metro will establish communication and reporting protocols. Key milestones and deliverables, through the shipment of the first two pilot vehicles and delivery of the production vehicles will be discussed to ensure understanding and agreement of requirements to ensure expedient reviews and approvals.

**ATTACHMENTS**

- Attachment A - Procurement Summary
- Attachment B - Funding/Expenditure Plan
- Attachment C - Metro Board Report July 17, 2014
- Attachment D - FTA Local Hiring Program Ltr Dated 09 30 2015
- Attachment E - DEOD Summary

Prepared by: Annie Yang, Sr. Director, Project Control, Rail Vehicle Acquisition, (213) 922-3254  
Jesus Montes, Sr. Executive Officer, Vehicle Acquisitions, (213) 922-3838

Reviewed by: James T. Gallagher, Chief Operations Officer, (213) 922-4424  
Debra Avila, Chief, Vendor/Contract Management Officer, (213) 418-3051



Phillip A. Washington  
Chief Executive Officer



## PROCUREMENT SUMMARY

P2000 LIGHT RAIL VEHICLE OVERHAUL PROGRAM, RAIL VEHICLE  
CONTRACTOR / OPP2000

1.	<b>Contract Number:</b> OPP2000	
2.	<b>Recommended Vendor:</b> Alstom Transportation, Inc.	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	<b>A. Issued:</b> July 9, 2015	
	<b>B. Advertised/Publicized:</b> July 22, 2015 and July 27, 2015	
	<b>C. Pre-Proposal Conference:</b> August 5, 2015	
	<b>D. Proposals Due:</b> March 18, 2016	
	<b>E. BAFOs Due:</b> October 12, 2016	
	<b>F. Second BAFOs Due:</b> December 23, 2016	
	<b>G. Pre-Qualification Completed:</b> March 3, 2017	
	<b>H. Conflict of Interest Form Submitted to Ethics:</b> Submitted 2/14/17	
	<b>I. Protest Period End Date:</b> March 20, 2017	
5.	<b>Solicitations Picked up/Downloaded:</b> 73	<b>Bids/Proposals Received:</b> 2
6.	<b>Contract Administrator:</b> Nicole Dang	<b>Telephone Number:</b> 213-922-7438
7.	<b>Project Manager:</b> Annie Yang	<b>Telephone Number:</b> 213-922-3254

**A. Procurement Background**

This Board Action is to approve the award of Contract No. **OPP2000** issued to support the overhaul of 52 Siemens P2000 Light Rail Vehicles (LRV). The intent of this solicitation was to procure a LRV overhaul program to achieve and maintain the LRVs state of good repair; where the overhaul and component replacement program prioritizes enhanced safety, availability, and reliability. Board approval of contract awards are subject to resolution of all properly submitted protests.

The RFP was issued in accordance with Metro's Acquisition Policy and the contract type is a firm fixed price contract.

Fifteen amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on August 5, 2015, extended the proposal due date to January 6, 2016, and revised the Compensation and Payment Provisions, Pricing Forms PF 1-7, Proposal Submittal Requirements, Form PS-1, and Technical Specifications (TS-1: Consolidated CDRL List and TS-20: Requirements Management, Design Validation and Verification).
- Amendment No. 2, issued on October 19, 2015, revised Pricing Forms 1-7, Special Provisions, Instructions to Proposers, Submittal Requirements to

clarify the Federal Transit Administration (FTA) approved Local Employment Program.

- Amendment No. 3, issued on October 19, 2015, revised Pricing Forms 1-7 and Technical Specification (TS-13: Communications).
- Amendment No. 4, issued on November 17, 2015, revised Form TF-6 and Technical Specification (TS-12: Braking Equipment).
- Amendment No. 5, issued on December 4, 2015, extended the proposal due date to February 5, 2016, and revised Technical Specifications (TS-1: Introduction, TS-9: Electrical, TS-13: Communications and TS-6: Automatic Train Control).
- Amendment No. 6, issued on January 20, 2016, extended the proposal due date to March 4, 2016, and revised Proposal Forms TF 3-4 and Technical Specifications (TS-2: System, Level Design, Infrastructure, and Performance, TS-6: Passenger Doors, and TS-14: Automatic Train Control).
- Amendment No. 7, issued on February 2, 2016, revised Technical Specifications (TS-6: Passenger Doors and TS-14: Automatic Train Control).
- Amendment No. 8, issued on February 9, 2016, revised Technical Specification (TS-13: Communications).
- Amendment No. 9, issued on February 12, 2016, revised Pricing Forms 1-7 and Technical Specifications (TS-1: Introduction, TS-11: Trucks, and TS-14: Automatic Train Control).
- Amendment No. 10, issued on February 29, 2016, extended the proposal due date to March 18, 2016.
- Amendment No. 11, issued on March 7, 2016, revised Proposal Requirements and Proposal Submittal Checklist Form PS-1.
- Amendment No. 12, issued on September 23, 2016, after receipt of proposals, requested Best and Final Offers.
- Amendment No. 13, issued on December 5, 2016, to request the second Best and Final Offers.
- Amendment No. 14, issued on December 9, 2016, revised Pricing Forms 1-8, Special Provisions, Contract Document Article IV: Compensation, Instructions to Proposers, and Technical Specifications (TS-2: System Level Sign, Infrastructure, and Performance, TS-3: Carbody, TS-11: Trucks, and TS-12: Communications).

- Amendment No. 15, issued on October 19, 2015, revised the Proposal Submittal Requirements, Contract Documents: Statement of Work and Special Provisions.

A Pre-Proposal Conference was held on August 5, 2015, at the Metro Green Line Yard. Vehicle inspections were held for the proposers from August 5, 2015, through August 7, 2015.

Eight sets of questions and answers were issued during the solicitation phase of this RFP. Responses were posted to the project data repository site, accessible to all solicitation plan holders.

A total of two proposals were received on March 18, 2016. Subsequently, Metro received revised proposals on October 12, 2016, and December 3, 2016, in response to changes to program overhaul requirements and requests for Best and Final Offers.

## **B. Evaluation of Proposals**

A Proposal Evaluation Team (PET) consisting of staff from the Metro Rail Vehicle Acquisition department was convened to conduct a comprehensive technical evaluation of the proposals received. Additionally, technical advisors (TAs) from Metro's Rail Fleet Services department, Metro Rail Vehicle Engineering department, and consultants from CH2M Hill, Inc. augmented the PET as subject matter experts.

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

- |  |            |
|--|------------|
| • Past Experience and Past Performance | 350 Points |
| • Price                                | 300 Points |
| • Technical Compliance                 | 250 Points |
| • Project Management Experience        | 100 Points |
| • Incentive Enhanced U.S. Content      | 50 Points  |
| • Incentive Local Employment Plan      | 50 Points  |

The evaluation criteria are appropriate and consistent with criteria developed for similar vehicle acquisition procurements. Several factors were considered when developing these weights, giving the greatest importance to past experience and past performance on rail vehicle overhaul, system integration, and on new rail vehicle acquisition.

Both proposals received were determined to be within the competitive range. The firms are listed below in alphabetical order:

1. Alstom Transportation, Inc. (Alstom)

## 2. Talgo, Inc. (Talgo)

The proposal evaluation kick-off meeting was conducted on March 18, 2016. Request for Clarifications were sent to both Proposers on May 2, 2016. The responses, received on May 27, 2016, sufficiently clarified each proposal and allowed the PET to compile an initial evaluation score.

Oral Presentations and interviews with each firm took place from June 23-28, 2016. Immediately after the Oral Presentations, the PET conducted facility site visits to each of the Proposer's overhaul sites from June 10-16, 2016.

The PET held additional Statement of Work discussions with the Proposers because the Proposer's price proposals exceeded Metro's Independent Cost Estimate (ICE), as well as the overall project budget. Discussions were conducted from September 8-16, 2016, to better understand each price proposal, technical elements, and cost drivers. At the conclusion of those discussions, a Best and Final Offer (BAFO) was requested, with revisions to the Technical Specifications and minor revisions to commercial terms. The BAFO request was issued on September 19, 2016, and responses were received on October 12, 2016. Despite the changes made to the Technical Specifications, both price offers received still exceeded the project budget and ICE. At this point alternatives such as further de-scoping, canceling the overhaul, and procuring new LRVs were given serious consideration. In conclusion, staff determined that further scope revisions and a second Best and Final Offer should be issued.

Before issuing the second BAFO request, the procurement and project team visited both Proposers for face-to-face discussions on price. With only minor changes to technical requirements and commercial terms Metro issued the second request for BAFO on November 18, 2016. Responses from both Proposers were received on December 23, 2016. Metro completed its evaluation of the second BAFO on January 5, 2017.

The RFP provided Proposers with the opportunity to augment their proposal scoring by voluntarily participating in two voluntary Evaluation Criteria elements: 1) Enhanced U.S. Content and 2) Locals Employment Program. These voluntary incentives were weighted at 50 points each.

### Locals Employment Program

The Local Employment Program is a Pilot Program created by the Department of Transportation (DOT) for a voluntary local hiring preference incentive in the evaluation of proposals. This voluntary program provides an opportunity for proposers that participate in the program to submit a qualifying Local Employment Plan, to earn additional points above and beyond all other evaluation criteria in the RFP. All new jobs and facility investments in a proposal, measured in dollars and created within Los Angeles County, would be eligible for the incentive points. Both firms proposed a level of participation in the Local Employment Plan.

	<b>Proposer Name</b>	<b>Local Employment Commitment</b>
1.	Alstom	\$3,031,184.00
2.	Talgo	\$3,254,217.00

Enhanced U.S. Content

The Enhanced U.S. Content awarded additional 50 incentive points to the highest overall percentage above 60% U.S. domestic content by cost in the LRV Overhaul program. Both Firms proposed U.S. content in excess of 60%. A Buy America Pre-Award Audit was conducted during the week of January 30, 2017 with the highest rated proposer, Alstom. The audit was conducted in accordance with FTA guidance stated in 49 CFR 663. Alstom’s proposed Buy America content was found to far exceed the FTA’s Buy America requirements.

	<b>Proposer Name</b>	<b>Proposed Content</b>
1.	Alstom	73.6%
2.	Talgo	75%

**Qualifications Summary of Firms within the Competitive Range:**

Alstom Transportation Inc.

Alstom Transportation, Inc. (Alstom) has proposed to perform this overhaul project out of its Mare Island, California facility. This dedicated manufacturing facility is located approximately 400 miles from Los Angeles and has been performing overhauls for the past six years. The firm proposed to perform the railcar stripping, final assembly, and testing at this facility, while engineering work would be generated out of its Naperville, Illinois site. Alstom has extensive experience in U.S. railcar overhaul work, having overhauled or modernized nearly 5,100 railcars for many of the major transit agencies.

Talgo, Inc.

Talgo, Inc. (Talgo) is headquartered in Seattle, Washington and has proposed to perform this overhaul project out of its Milwaukee, Wisconsin facility. Talgo intends to draw from its global engineering resources and relocate them to its Milwaukee facility for this project. Talgo is one of the world’s leading suppliers of rolling stock, with a particular focus on extended lifecycle and service/reliability. While Talgo is primarily known globally as a railcar manufacturer, its experience also encompasses the U.S. market with new railcars, overhauls and maintenance work for Amtrak, Oregon DOT, and Washington State DOT.

	<b>Firm</b>	<b>Average Score</b>	<b>Factor Weight</b>	<b>Weighted Average Score</b>	<b>Rank</b>
1	Alstom Transportation, Inc.				1

3	Past Experience and Past Performance	94.33	350.00	330.17	
4	Price (Base and Options)	89.84	300.00	269.52	
5	Technical Compliance	92.52	250.00	231.30	
6	Project Management Experience	93.83	100.00	93.83	
7	Incentive Enhanced U.S. Content	98.14	50.00	49.07	
8	Incentive Local Employment Plan	93.14	50.00	46.57	
9	Total		1,100.00	1020.46	
10	<b>Talgo, Inc.</b>				<b>2</b>
11	Past Experience and Past Performance	72.19	350	252.67	
12	Price (Base and Options)	100	300	300.00	
13	Technical Compliance	64.69	250	161.72	
14	Project Management Experience	62.00	100	62.00	
15	Incentive Enhanced U.S. Content	100	50	50.00	
16	Incentive Local Employment Plan	100	50	50.00	
17	Total		1,100	876.39	

### C. Cost/Price Analysis

The recommended price has been determined to be fair and reasonable based upon adequate price competition, technical evaluation, price analysis, Independent Cost Estimate, fact finding, and negotiations. Alstom's proposed price of \$140,079,867.00, inclusive of taxes, is (10%) higher than Talgo's proposed price of \$125,848,056.77. The PET determined that Alstom's proposal provides the best value and is most advantageous to Metro when considering all evaluation factors. Alstom's proposal provided clear advantages in past experience on LRV overhauls as well as a more comprehensive understanding of the level of effort involved in an extensive mid-life overhaul program. The LRV overhaul experience presented a clear benefit when evaluating project schedule risk, especially when considering the high level of vehicle float on this project. Alstom proposed a better systems qualification testing program, and Alstom also proposed a more experienced and qualified integration engineer. This gave Alstom a clear advantage in technical compliance. In addition, the recommended price is \$4,932,016.36 (3.4%) lower than Metro Independent Cost Estimate.

	<b>Proposer Name</b>	<b>Proposal Amount</b>	<b>Metro ICE</b>	<b>Negotiated or NTE amount</b>
1.	Alstom	\$191,986,779.32	\$145,011,883.36	\$140,079,867.00

2.	Talgo	\$166,973,954.57	\$145,011,883.36	\$125,848,056.77
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**D. Background on Recommended Contractor**

The recommended firm, Alstom, located in Naperville, Illinois, has been in business for 150 years and is a leader in manufacturing and servicing trains. Over the past 28 years, Alstom has overhauled or modernized nearly 5,100 passenger rail vehicles for customers including New York City Transit, Chicago Transit Authority, Metro-North Commuter Rail Road, New Jersey Transit, Chicago Metra, Southeast Pennsylvania Transit Authority, Massachusetts Bay Transit Authority, City of San Francisco, Northern Virginia Transportation Commission, Maryland Transit Administration, California Department of Transportation, Amtrak, O'Hare Airport Transit System, Rocky Mountaineer (Vancouver, Canada) and the Port Authority Transit Corporation. In 2012, Alstom was awarded a contract with MBTA to overhaul 86 LRVs. In 2013, Alstom was again awarded the midlife overhaul of 53 LRVs covering similar systems as this project. A reference check with MBTA regarding both LRV overhaul projects was satisfactory for Alstom.

**CP 206044 SIEMENS P2000 LIGHT RAIL VEHICLES OVERHAUL  
FUNDING/EXPENDITURE PLAN**

	ITD thru FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total	% of Total
<b>Uses of Funds</b>									
Midlife Overhaul 52 Siemens LRVs	\$0	\$7,003,993	\$14,007,987	\$27,503,993	\$45,000,000	\$40,000,000	\$6,563,894	\$140,079,867	87.11%
Professional Services	\$838,961	\$84,120	\$1,387,200	\$1,956,133	\$1,974,333	\$1,460,933	\$268,000	\$7,969,680	4.96%
MTA Administration	\$999,379	\$265,000	\$420,000	\$450,000	\$450,000	\$450,000	\$390,000	\$3,424,379	2.13%
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$9,326,074	\$9,326,074	5.80%
<b>Total Project Cost</b>	<b>\$1,838,340</b>	<b>\$7,353,113</b>	<b>\$15,815,187</b>	<b>\$29,910,126</b>	<b>\$47,424,333</b>	<b>\$41,910,933</b>	<b>\$16,547,968</b>	<b>\$160,800,000</b>	<b>100%</b>
<b>Sources of Funds</b>									
Federal 5337 SGR		\$7,353,113	\$15,815,187	\$29,910,126	\$18,173,034			\$71,251,460	44.31%
State / Local (PA Rail 35%) / Meas M **	\$1,838,340				\$29,251,299	\$41,910,933	\$16,547,968	\$89,548,540	55.69%
<b>Total Project Funding</b>	<b>\$1,838,340</b>	<b>\$7,353,113</b>	<b>\$15,815,187</b>	<b>\$29,910,126</b>	<b>\$47,424,333</b>	<b>\$41,910,933</b>	<b>\$16,547,968</b>	<b>\$160,800,000</b>	<b>100%</b>

\*\* Staff will pursue additional federal funds that may become available through FAST Act or other federal sources for this project to maximize availability of local fund sources for Operations use. Staff will also utilize other State and Local funding sources as opportunities arise such as Cap and Trade or other new sources. Measure M 2%, 5% and 20% fund source guidelines currently under development may also allow for future use of Measure M funds to support this effort.





Los Angeles County  
Metropolitan Transportation Authority

One Gateway Plaza  
Los Angeles, CA 90012-2952

213.922.2000 Tel  
metro.net

**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE  
JULY 17, 2014**

**SUBJECT: PURCHASE OF NEW HEAVY RAIL VEHICLES AND REFURBISHMENT  
OF A650 HEAVY RAIL VEHICLES & P2000 LIGHT RAIL VEHICLES**

**ACTION: AUTHORIZE REQUEST FOR PROPOSAL SOLICITATIONS FOR RAIL  
CAR PROCUREMENTS**

**RECOMMENDATION**

A. The Board finds that rail vehicle procurements in compliance with Public Utilities Code (PUC) §130232 low bid requirement, does not constitute an adequate procurement method for LACMTA needs. Pursuant to Public Contracts Code (PCC) §20217, authorize procurement by competitive negotiation for the following: 1) Procurement of new heavy rail vehicles; 2) Refurbishment of existing A650 heavy rail vehicles; and 3) Refurbishment of existing P2000 light rail vehicles.

Requires Two-Thirds Vote

B. Authorize the Chief Executive Officer (CEO) to solicit Best Value Requests for Proposals (RFPs) as competitive negotiations pursuant to PCC § 20217 and Metro's procurement policies and procedures, for contracts to purchase new rail vehicles and to refurbish existing rail vehicles.

**ISSUE**

Staff is developing the technical and quantity requirements for the new rail car procurement and the rail car refurbishment procurements. It has been determined that they constitute specialized rail transit equipment purchases. This determination renders it appropriate that the new heavy rail vehicles and the refurbishment of existing light and heavy rail vehicles, be procured by a competitively negotiated process in accordance with PCC § 20217. PCC § 20217 states that the Board, upon a finding by two-thirds vote of all members, may find that the competitive low bid procurement method is not adequate for the agency's needs and direct that the procurements be conducted through competitive negotiation.

## **DISCUSSION**

It is in the public's interest to utilize competitive negotiation rather than a sealed bid process to consider factors other than price in the award of contracts for vehicles and refurbishment of vehicles as allowed under PCC § 20217. The competitive negotiation process allows consideration of factors other than price that could not be adequately quantified or considered in a strictly low bid procurement.

Staff recommends the use of Best Value solicitations for all three rail car programs to allow for the consideration of technical and commercial factors, as well as price, in the contract award selection process.

By establishing explicit factors that identify Metro's definition of best value, the solicitation can use important evaluation criteria to augment price considerations; such as past performance related to schedule adherence, quality, reliability and vehicle performance.

In addition to the ability to evaluate key technical and schedule factors, the Best Value Request for Proposal process permits direct discussions and negotiations with proposers to clarify requirements and cost prior to an award recommendation. This process minimizes the risks associated with a complex specification and scope of work by allowing the parties to clarify ambiguities and correct deficiencies.

## **FINANCIAL IMPACT**

The requested action has no financial impact at this time. However, future activities associated with the respective procurements will be charged against the adopted Life of Project budgets for the affected heavy rail and light rail vehicle projects. Upon completion of the Request for Proposals, staff will present more detailed plan addressing financial impacts and impact to budget.

## **ALTERNATIVES CONSIDERED**

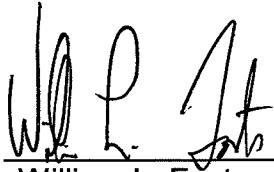
Procurement by a low bid process was considered but is not recommended. The sealed bid process does not adequately account for any technical superiority of performance, reliability, or system life cycle costs that on firm's equipment or solution may have over another since the process must award to the lowest responsive and responsible bidder. For these reasons, staff does not recommend this alternative. The competitively negotiated procurement process will provide for evaluation of critical non-price related factors in the selection process.

## **NEXT STEPS**

If this action is approved, staff would proceed with competitively negotiated best value solicitations for the new heavy rail vehicle and the refurbishment of the P2000 and A650 vehicles.

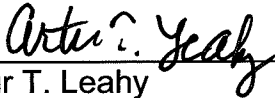
Prepared by: Richard Hunt, General Manager Strategic Vehicle &  
Infrastructure Delivery

Questions: Carolyn Kreslake, Transportation Planning Manager IV  
213-922-7420



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William L. Foster  
Interim Chief Operations Officer



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Arthur T. Leahy  
Chief Executive Officer



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

REGION IX  
Arizona, California,  
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**SEP 30 2015**

Stephanie Wiggins  
Deputy Chief Executive Officer  
Los Angeles County Metropolitan  
Transportation Authority  
One Gateway Plaza  
Los Angeles, CA90012-2952

Re: Application for Inclusion in  
U.S. Department of Transportation's  
Contracting Initiative Pilot Program

Dear Ms. *Stephanie* Wiggins:

Thank you for the application submitted by the Los Angeles County Metropolitan Transportation Authority (LACMTA) to the United States Department of Transportation (DOT) Contracting Initiative Pilot Program.<sup>1</sup> The Federal Transit Administration (FTA) accepts LACMTA's proposals for inclusion in the program with certain modifications, as described more fully below.

FTA understands that LACMTA has four contracting opportunities involving rolling stock that it would like to include in the Pilot Program. These contracting opportunities include contracts for (1) the purchase of 282 heavy rail vehicles; (2) the purchase of up to 600 new buses; (3) the mid-life overhaul of 74 heavy rail vehicles; and (4) the mid-life overhaul of 82 light rail vehicles. In support of its application, LACMTA submitted the following documents: April 13, 2015 Submittal to FTA for Admission into Local Hiring Pilot Program; Local Employment Program (Mandatory) & Local Employment Program (Voluntary); P3010 US Employment Value Summary Trade-off Analysis – Attachment 1; and May 8, 2015 Response to Supplemental Questions Regarding Application for Local Hiring Pilot Program.

LACMTA proposes a mandatory Local Employment Plan (LEP) for the heavy rail contract and voluntary LEPs for the bus purchase and overhaul contracts. The LEP in both circumstances would target new and existing jobs in Los Angeles County and would provide that at least 10 percent of the jobs be targeted at disadvantaged populations. The proposed mandatory LEP would make the inclusion of an LEP a requirement of responsiveness, and would constitute 10 percent of the total points available for all RFP evaluation factors. The proposed voluntary LEP would provide the bidder with additional "bonus" points that could be awarded if the bidder includes an LEP with its bid.

<sup>1</sup> The DOT Contracting Initiative is described in more detail in 80 FR 12257 (March 6, 2015).

In considering whether to approve a proposed contract requirement under the Pilot Program, FTA is guided by an August 2013 opinion of the Office of Legal Counsel (OLC) of the U.S. Department of Justice.<sup>2</sup> Under that opinion, FTA may approve a proposed contract requirement that is likely to have only an incidental effect on the pool of potential bidders, or that imposes reasonable requirements related to the performance of the necessary work. Or, if a proposed specification is likely to have more than an incidental effect on the pool of potential bidders and is unrelated to the work's performance, FTA still may approve the requirement if it "promotes the efficient and effective use of federal funds in the short or long run" or "safeguards the integrity of the competitive bidding process." The OLC decision leaves to FTA discretion the determination of what constitutes the "efficient and effective use of federal funds."

FTA is concerned that the proposed voluntary and involuntary programs both may have more than an incidental effect on the pool of potential bidders – at least with respect to the heavy rail car buy and the bus buy – because they could put at a disadvantage any manufacturer who does not already have a facility in the defined geographic area, and this competitive disadvantage is not relieved by the voluntary or involuntary nature of the program. However, an appropriate modification of LACMTA's proposed requirements will address our concerns.

Generally, FTA proposes modifications to the following provisions: the voluntary versus mandatory nature of the LEP requirement; credit given for new versus existing jobs; and the geographic area eligible for LEP participation. FTA is concerned with making the LEP mandatory, as well as awarding credit for existing jobs within Los Angeles County because both terms could give an undue advantage to potential bidders already located within Los Angeles County. Additionally, FTA examined the competitive markets within LACMTA's proposed geographic focus of Los Angeles County, and determined that for two of the contracts such a geographic limitation could afford an unfair competitive advantage.

FTA evaluated each proposed program and contracting opportunity and requests the following modifications.

#### **Purchase of 282 Heavy Rail Vehicles (Estimated Contract Cost: \$1.0558B)**

The LACMTA proposal is a mandatory LEP that includes as part of the bid evaluation criteria credit for new and existing jobs in Los Angeles County. The proposal also includes a requirement that 10% of the jobs be targeted for disadvantaged persons. The LEP would constitute 10% of the available points.

Currently, there is one rail vehicle manufacturer in Los Angeles County, Kinkisharyo. Limiting the LEP to Los Angeles County and including existing jobs could provide Kinkisharyo with an unfair competitive advantage and could be an exclusionary or discriminatory specification prohibited by 49 U.S.C. § 5334(h). FTA requests that LACMTA modify the LEP for the heavy rail vehicles to make it a voluntary program, expand the geographic market to the state of California, and provide credit only for new jobs created, with 10% of the jobs targeted for disadvantaged persons.

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<sup>2</sup> See *Competitive Bidding Requirements Under The Federal-Aid Highway Program*, 23 U.S.C. § 112 (August 23, 2013). The 2013 opinion is available at <http://www.justice.gov/olc/opinions>.

**Purchase of up to 600 new buses (Estimated Contract Cost: \$325M)**

The LACMTA proposal is a voluntary LEP that provides supplemental points for any proposer who includes an LEP. Bidders would receive credit for new and existing jobs in Los Angeles County. The proposal also includes a requirement that 10% of the jobs be targeted for disadvantaged persons.

Currently, there only is one bus manufacturer with a facility in Los Angeles County -- New Flyer. Accordingly, an LEP limited to the county could provide an unfair competitive advantage for that manufacturer, even if the program is voluntary. FTA requests that LACMTA modify the LEP for the 600 bus buy to expand the geographic market to the state of California, and provide credit only for new jobs created, and 10% of the jobs targeted for disadvantaged persons.

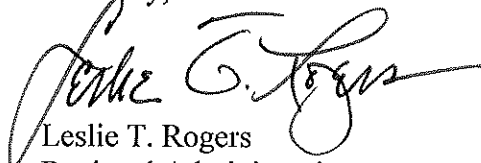
**Mid-life overhaul of 82 light rail vehicles (Contract Value \$100M) and mid-life overhaul of 74 heavy rail vehicles (Contract Value \$46M)**

The LACMTA proposal for the two mid-life overhaul contracts is the same: a voluntary LEP giving credit for new and existing jobs in Los Angeles County, and a requirement that 10% of the jobs be targeted for disadvantaged persons.

For overhaul contracts, the original vehicle manufacturer has an advantage for doing mid-life overhauls of its own vehicles. The original manufacturers for the vehicles subject to the contracts are not located in Los Angeles County, resulting in all potential bidders being similarly situated. Under these circumstances, limiting the geographic market to Los Angeles County does not provide an unfair competitive advantage for any one bidder. As with the other contracts, FTA requests that this LEP be limited to new jobs created and provide that 10% of the jobs be targeted for disadvantaged persons.

With the above modifications to LACMTA's proposed LEPs, FTA believes that inclusion of the four contracting opportunities in the Pilot Program would likely better promote the efficient and effective use of federal funds and safeguard the integrity of the competitive bidding process. Please let us know whether LACMTA is interested in participating in the Pilot Program under the proposed terms. If you have any questions, please contact Deputy Chief Counsel Dana Nifosi at 202-366-1643 or [Dana.Nifosi@dot.gov](mailto:Dana.Nifosi@dot.gov).

Sincerely,

  
Leslie T. Rogers  
Regional Administration

**DEOD SUMMARY****P2000 LIGHT RAIL VEHICLE OVERHAUL PROGRAM, RAIL VEHICLE  
CONTRACTOR / OPP2000****A. Small Business Participation**

The Diversity and Economic Opportunity Department did not recommend a Disadvantaged Business Enterprise (DBE) participation goal for this FTA-assisted rolling stock procurement. In compliance with the requirements of 49 Code of Federal Regulations (CFR) Part 26.49(a), only Transit Vehicle Manufacturers (TVMs) included in FTA's certified TVMs list are eligible to bid. Alstom Transportation, Inc. submitted an FY17 TVM Certification with their proposal, and is currently on FTA's list of eligible TVMs.

**Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Contract.

**B. Prevailing Wage Applicability**

Prevailing wage is not applicable to this Contract.

**C. Project Labor Agreement/Construction Careers Policy**

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





## Board Report

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**File #:** 2017-0102, **File Type:** Informational Report

**Agenda Number:** 25

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### FINANCE, BUDGET, AND AUDIT COMMITTEE MARCH 15, 2017

**SUBJECT: FY18 BUDGET DEVELOPMENT UPDATE**

**ACTION: RECEIVE AND FILE**

**RECOMMENDATION**

RECEIVE AND FILE **FY18 Budget Development Update.**

**ISSUE**

Metro is continuing the development of its FY18 Budget. This is the second in a series of monthly updates to the Board on this process. This report will present and describe projects and programs that will account for more than half of Metro's FY18 budget. Further, these elements demonstrate the incorporation of Measure M priorities, which put additional requirements on existing staff and will require the creation of new projects and addition of new staff in FY18.

This report provides a budget development update on the following topics:

- Public outreach efforts
- Fare revenue projections, based on preliminary assumptions for ridership
- Projections for service levels for directly-operated Metro bus and rail services
- Budget and descriptive information on efforts to maintain a state of good repair for our bus and rail fleet and facilities, as well as for regional transit facilities, like Union Station.
- Transit construction projects, which are funded through Measures R and M

**DISCUSSION**

**Public Outreach Update**

The prior FY18 Budget update report provided a comprehensive overview of the public and key stakeholder outreach efforts that are being included as part of the FY18 Budget development process.

An interactive Online Budgeting Tool, which engages the public in the budgeting process by walking users through a series of questions to garner input on their individual transportation priorities, was made available on February 12, 2017. The first round of stakeholder Budget workshops will be completed in March at the regularly scheduled Service Council Meetings, as well as at internal stakeholder meetings for the Technical Advisory Committee, Streets & Freeways Subcommittee, Bus Operations Subcommittee, Citizens Advisory Council, and Local Transit Systems Subcommittee. These workshops will outline the framework for the budget development process, including agency goals and how resource allocation will align with those goals. The presentations will also include sales tax assumptions and inflation projections to help shape expectations for each of the jurisdictions in the region. Finally, a review of bus and rail service levels, Metro's plans for maintaining assets, and the Measure R and Measure M projects underway will show the foundation for what is planned for LA County. The next round of Budget presentations is scheduled for May.

To date, staff has promoted outreach efforts in print ads run in community publications across the County and brochures placed on Metro vehicles. Owned channels, including the rotating banners on [metro.net](http://metro.net), Metro's blog and email subscriber list of more than 300,000 have also been utilized to drive engagement with the FY18 budget. In coming weeks, paid social media posts will also be used to notify the public of opportunities to engage with the budget process.

An interactive Telephone Town Hall on FY18 Budget development is also being put together, as requested by the Board of Directors. An automated telephone system will randomly call LA County residents to invite them to participate in a telephone meeting. Individuals will also be able to call into the meeting directly and that information will be added to the webpage [metro.net/budgetcomments](http://metro.net/budgetcomments). The meetings will be simulcast in both English and Spanish. Additional details on the Telephone Town Hall meeting will be included in a Board Box item delivered separately.

## **Fare Revenues**

### Fare per Boarding

Annual fare revenues are estimated by multiplying the fare per boarding by the estimated annual number of boardings. Since the latest fare restructuring took effect at the end of the first quarter of FY15, fare per boarding has remained stable at \$0.78. Therefore, FY18 fare per boarding is proposed at \$0.78.

### Projected Boardings

In 2016, systemwide boardings were 6% below the previous year. Accordingly, Metro is taking on various initiatives to increase ridership, with the goal of stopping the decline in boardings in FY18. As a result, projected boardings remain at 2016 levels of 415 million annually, with an increase in BRT/rail ridership offset by a slight decrease in bus ridership.

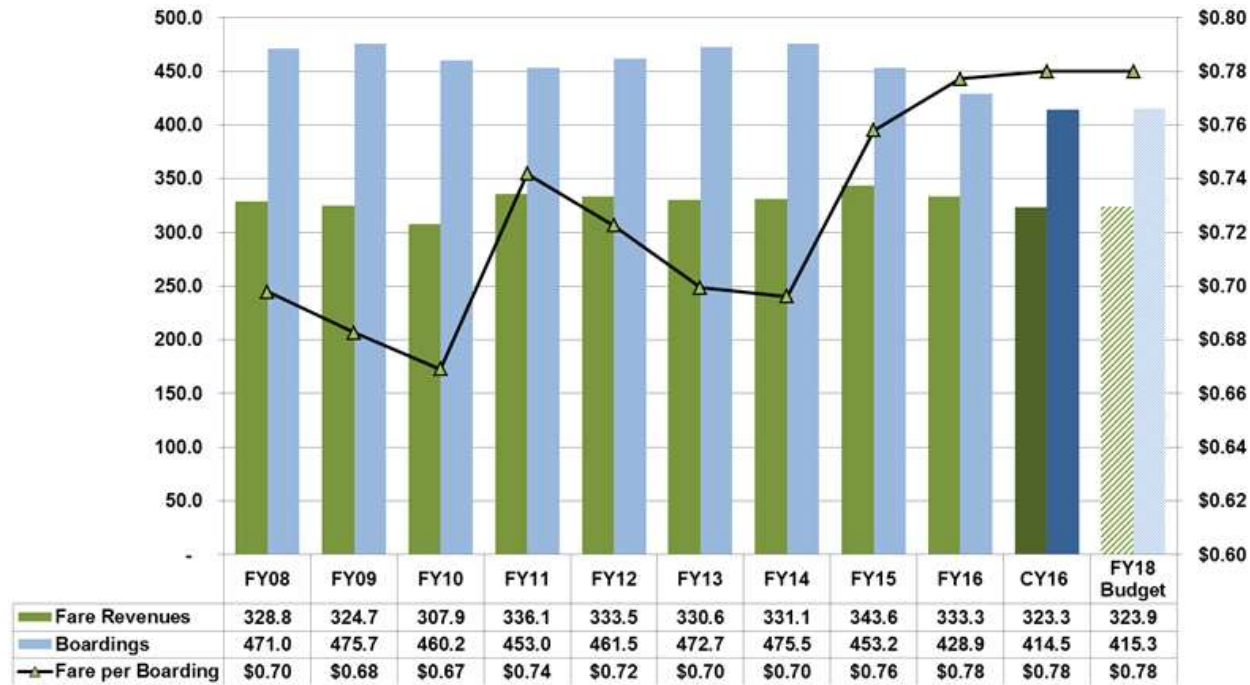
### Ridership Initiatives

Immediate near term ridership initiatives for FY18 are focused in three areas. First, the new multi-agency policing contract will provide the vehicle for increased security throughout the system, and an immediate systemwide security surge will be implemented to encourage increased ridership through safety and security improvements. In addition, system speed improvements will be pursued on both the bus and rail systems.

Past successes in this area, such as All-Door Boarding, will be considered in development of future pilot programs. Finally, the Regional Ridership Task Force convened in FY17 will work to address ridership impacts at the local level as well as countywide.

Figure 1 shows total boardings, fare revenues, and fare per boarding for the past 10 years, including a projection for FY18.

Figure 1:



Based on the projected \$0.78 fare per boarding and retaining the current ridership level, Metro is estimating FY18 fare revenue to be \$323.9 million.

**Bus & Rail Service Levels**

Bus service is projected to remain at FY17 budgeted services levels of 7 million revenue service hours. However, Operations anticipates right-sizing service levels along bus lines that parallel the Expo Line and reallocating those resources to improve the Owl Network and to increase peak-hour frequencies on select bus lines.

In FY17, rail scheduled service levels on the Expo and Gold Lines were limited by vehicle availability. FY18 marks the first year when sufficient rail cars will be available to meet the growing demand on the two lines. As a result, revenue vehicle service hours for rail are anticipated to increase 9% over the currently scheduled base rail service levels. In addition, rail special event service is proposed to increase by 60% to meet the growing demand for rail service to sports venues and special events.

Figure 2 below shows the changes in rail services that are projected for FY18 as a result of sufficient rail car availability for both the Expo and Gold Lines and their extensions.

Figure 2:

Rail Line	Weekdays	Weekend
Gold Line	• Increase all trains to 3 car consists	• No change
Expo Line	• Increase all trains to 3 car consists	• 3 car/6 min headway for 8 months of the year • 2 car/6 min headway for 4 months of the year
Green Line	• Increase peak period headway to 6 min	• No change
Blue Line	• No change	• No change
Red/Purple Line	• No change	• No change

### State of Good Repair

In support of our continued operation of a transit system with nearly 1.4 million daily boardings, Metro continues to maintain its fleet, rail lines, bus and rail stations, and facilities in a State of Good Repair. Major expenses in FY18 include the acquisition of light rail vehicles, heavy rail vehicles, and buses, plus midlife and component overhaul of buses and light rail vehicles. The FY18 budget also includes rehabilitation of bus and rail facilities, stations, and Maintenance of Way, as well as installation of systems on our regional transit centers. Figure 3 below shows total State of Good Repair expenses planned in FY18. Figure 3 is followed with additional details regarding each of the categories and budgeted expenses.

For a separate table showing State of Good Repair efforts on the Blue Line, our oldest rail line, refer to Attachment A. Blue Line State of Good Repair expenses are currently estimated at \$173.6 million, with an additional \$4.9 million pending approval.

Figure 3:

		(\$ IN MILLIONS)			
SGR Category		FY17 Budget	FY18 Proposed	% of Total FY18 SGR	Year Over Year Change
1	Bus Acquisition	\$ 57.94	\$ 59.77	14%	3%
2	Bus Maintenance	25.95	31.92	7%	23%
3	Bus Facilities Improvements	17.83	20.98	5%	18%
4	<b>Bus Subtotal</b>	<b>101.72</b>	<b>112.67</b>	<b>26%</b>	<b>11%</b>
5	Rail Vehicle Acquisition	55.61	134.20	31%	141%
6	Rail Vehicle Maintenance	55.06	42.02	10%	-24%
7	Rail Facilities Improvements	26.81	9.15	2%	-66%
8	Wayside Systems	53.80	47.18	11%	-12%
9	<b>Rail Subtotal</b>	<b>191.28</b>	<b>232.55</b>	<b>54%</b>	<b>22%</b>
10	Non-Revenue Vehicles	8.68	8.06	2%	-7%
11	IT/Communications	13.13	17.08	4%	30%
12	Regional Transit Center, Station & Fare Collection	38.85	56.52	13%	45%
13	<b>Other Subtotal</b>	<b>60.66</b>	<b>81.66</b>	<b>19%</b>	<b>35%</b>
14	<b>Total Proposed SGR Budget</b>	<b>\$ 353.66</b>	<b>\$ 426.88</b>		<b>21%</b>

### Bus Acquisition

Metro will spend \$59.8 million on bus acquisition activities. This effort includes procurement of two types of buses: fifty three (53) new Compressed Natural Gas (CNG) buses will replace existing CNG buses scheduled for retirement, and ten (10) new electrical buses will be received and tested on the Metro Orange and Silver Lines. Buses delivered in FY18 will reduce average fleet age in FY19 and beyond, as well as reduce our fleet maintenance costs.

### Bus Maintenance

Bus maintenance focuses on midlife maintenance and engine replacement for \$31.9 million in FY18. This work maximizes utilization of our buses through a total refurbishment, including structural integrity checks, corrective repairs, component change-outs, and performance and repair campaigns based on conditional fleet assessments. Performing these tasks increases bus reliability, reduces parts replacement costs, and reduces other preventative maintenance expenses once a bus is deployed back into revenue service.

### Bus Facilities Improvements

Bus facilities improvement activities total \$21 million and will address State of Good Repair maintenance requirements for bus divisions. Metro is developing master plans for facility upgrades, refurbishment, and site reconfigurations to upgrade critical facilities. Other safety initiatives include upgrades to fire and life safety equipment, ventilation, and emergency generators. To ensure regulatory compliance, we are also conducting underground fuel storage tank replacement.

### Rail Vehicle Acquisition

The FY18 budget includes \$134.2 million for rail vehicle delivery. Two major rail vehicle procurements are underway, for both light rail and heavy rail vehicles. In FY18, delivery of light rail vehicles continues, with another 48 vehicles - four per month - anticipated to arrive in the fiscal year. By the conclusion of FY18, we will have received 138 of the total 235 vehicles being purchased through the light rail vehicle contract. These new vehicles are going toward line extensions (e.g. Expo 2 and Gold Line Foothill 2A), new lines (e.g. Crenshaw/LAX), and vehicle replacement (e.g. Blue Line). Also in FY18, we are ramping up the heavy rail vehicle procurement approved by the Board in FY17 for the Purple Line Extension and for the replacement of aging fleet. The heavy rail vehicle procurement contract is in initial design and engineering phases, with the new cars scheduled to arrive in FY21.

### Rail Vehicle Maintenance

Starting in FY18, Metro is initiating two major rail vehicle overhauls, in order to maximize the usefulness of existing light and heavy rail fleet that are halfway into their anticipated 30-year lifespans. In our light rail fleet, Metro will be overhauling 52 vehicles that currently serve the Blue, Green and Expo Lines. The light rail vehicle overhaul is scheduled to complete in FY21. In our heavy rail fleet, Metro will be overhauling the 74 AC-powered vehicles that serve both the Red and Purple Lines. The heavy rail fleet overhaul is scheduled to complete in FY22, before the Purple Line Segment 1 to La Cienega is scheduled to open for revenue service.

### Rail Facilities and Wayside Systems Improvements

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Rail Facilities and Wayside Systems State of Good Repair efforts are directed toward rehabilitating the oldest lines in the rail network, such as the Blue Line. In the coming months, Metro plans to award a contract to address Blue Line State of Good Repair for Overhead Catenary System (OCS) replacements, signalization improvements, added interlocks, and other needed improvements. Continuing efforts to improve safety on our rail system, the Blue Line Pedestrian Safety at Grade Crossing project remains ongoing in FY18. Green Line improvements are also in progress as track circuits and control systems are upgraded to provide seamless travel to LAX and beyond upon completion of the Crenshaw LAX Transit project.

#### Non-Revenue Vehicles

Eight million dollars is slated for non-revenue vehicle and equipment purchases. Non-revenue vehicles consist of sedans, trucks, and other vehicles that allow Metro staff to get to locations to operate service and maintain system infrastructure across the agency's eleven bus divisions and six rail divisions. Non-revenue equipment includes bus lifts, utility vans, forklifts scrubbers, emergency generators, and high-rail response vehicles. These assets need to be replaced as they age, when mileage and condition standards are surpassed.

#### Information Technology & Communications

Metro remains steadfast in ensuring that our data is protected and secured from cyber-attacks by maintaining our equipment and infrastructure at industry standards. Upgrades and improvements will begin on our obsolete telephone system to a unified digital communication system with voice, email, and video conferencing capabilities. Wi-Fi continues to be installed at more rail lines and new buses for improved customer experience and security. These technology efforts will expend around \$17 million in FY18.

#### Regional Transit Centers, Stations & Fare Collection

Regional Transit Centers include Union Station, Patsaouras Plaza Bus Station, El Monte Transit Center, and Willowbrook/Rosa Parks Station. The FY18 Budget includes \$26.3 million, with \$18.0 million going to design and construction costs for Willowbrook/Rosa Parks Station and \$8.3 million going to the Patsaouras Plaza Bus Station. Regional projects, budgeted for \$21.9 million in FY18, provide benefits that span multiple regions and/or operators. These projects include TAP, Ticket Vending Machines (TVMs), regional signage improvements, bicycle projects at rail locations, and parking guidance system installations at Metro-owned Park and Ride lots.

#### Metro Blue Line State of Good Repair

Since opening in 1990, the Blue Line remains Metro's oldest rail line, and the FY18 budget includes \$173.6 million to enhance safety and improve service reliability. These efforts represent a fiscal year slice of a \$1.1 billion Life of Project total budget across all State of Good Repair projects benefiting the Blue Line. Planned expenses in FY18 include light rail vehicle fleet replacements and vehicle maintenance projects. The table in Attachment A shows a detailed list of projects occurring within the Blue Line Corridor as well as systemwide projects that provide a tangible benefit for Blue Line interoperability.

### **Transit Construction Projects**

#### Planning Phase

Many Measure R projects are currently in an active planning phase, which has been further supplemented by Measure M funding and accelerated for select projects. As shown on lines 4-6 of Figure 4 below, some near-term Measure M transit projects will incur planning-related expenses in FY18, such as EIR/EIS, preliminary engineering, and public outreach. These projects include Orange Line Improvements, the BRT Connector between Orange/Red Line and the Gold Line, and the Vermont Transit Corridor. The projects are anticipated to start the planning phases and will kick start about \$23.6 billion (Figure 4) of the total Measure M transit construction and highway projects. These projects are required by the Measure M Ordinance and are valued at \$40.6 billion (in 2015 dollars) over the next 40 years. These planning activities and expenses are incurred for at least 4 years in advance of the target construction groundbreaking dates.

Figure 4:

	<b>Major Transit Planning Projects anticipated in FY18 (\$ in millions)</b>	<b>Ordinance</b>	<b>Sub Region</b>	<b>Ground breaking</b>	<b>Total Project Cost Est in 2015 \$</b>
1	Crenshaw/LAX Light Rail Transit: Planning	R	sb		2,058.0
2	Eastside Light Rail Access	R	sg		30.0
3	Regional Connector: Planning	R	sc		1,750.8
4	Orange Line Improvements	M	sf	2019	286.0
5	BRT Connector Orange/Red Line to Gold Line	M	av / sf	2020	267.0
6	Vermont Transit Corridor	M	cc	2024	425.0
7	Westside Subway Extension Section 3: Planning	M / R	w	2018	1,980.4
8	Airport Metro Connector (Accomodations)	M / R	sc	2018	581.0
9	Gold Line Foothill Extension 2B: Planning (JPA)	M / R	sg	2019	1,097.0
10	San Fernando Valley East North/South Rapidways	M / R	sf	2021	1,331.0
11	West Santa Ana Branch Corridor	M / R	gc	2022	4,000.0
12	Sepulveda Pass Transit Corridor	M / R	sf / w	2024	5,934.0
13	Green Line Extension: to Crenshaw Blvd Torrance	M / R	sb	2026	891.0
14	Eastside Extension Phase II: Planning	M / R	gc / sg	2029	3,000.0
15	<b>Total</b>				<b>\$ 23,631.23</b>

Construction Phase

The FY18 budget continues to focus on the big three Measure R and M transit construction projects: (a) Crenshaw/LAX, (b) Regional Connector, and (c) Purple Line Extension (Sections 1, 2, and 3). The FY18 Budget includes \$1.55 billion in construction expenses for these three projects, including (a) \$432 million for Crenshaw/LAX, (b) \$202 million for Regional Connector, and (c) \$906 million for Purple Line Extension. As shown in Figure 5, this funding will bring the construction status to 88% complete for Crenshaw/LAX, with revenue operations anticipated in FY20. The Regional Connector is forecast to finish FY18 with 43% of construction complete, with revenue operations anticipated for the start of FY22. Purple Line Segment 1 construction is forecast to achieve 35% completion by the end of FY18, with an opening planned for Nov 2023.

Measure M mandates the groundbreaking for the Airport Metro Connector in FY18 and groundbreaking for the Gold Line Foothill Extension 2B from Azusa to Montclair in FY19. As a result, \$93 million in planning and construction expenses for these two projects is budgeted in FY18, including \$71 million for the Airport Metro Connector and \$22 million for Gold Line Foothill 2B.

Figure 5:

	Measure R Projects (\$ in millions)	Board Auth LOP	Est ITD \$ thru FY17	Est % ITD thru FY17	Proposed FY18	Est ITD % thru FY18	Est Prog % thru FY18	Target Rev Svc Date
1	Crenshaw/LAX Light Rail Transit	2,058.0	1,313.9		380.0			
2	Southwestern Maintenance Yard	157.0	78.9		46.4			
3	<b>Crenshaw Projects</b>	<b>2,215.0</b>	<b>1,392.9</b>	<b>63%</b>	<b>426.3</b>	<b>82%</b>	<b>88%</b>	<b>Oct 2019</b>
4	Regional Connector: Construction	1,750.8	805.5		201.0			
5	Regional Connector: Construction: Non-FFGA	40.0	33.0		0.8			
6	<b>Regional Connector Projects</b>	<b>1,790.8</b>	<b>838.6</b>	<b>47%</b>	<b>201.9</b>	<b>58%</b>	<b>43%</b>	<b>Jul 2021</b>
7	Westside Subway Purple Line Ext. Sect 1	2,773.9	1,112.0	40%	378.8	54%	35%	Nov 2023
8	Westside Subway PLE Sect 2	2,441.0	309.1	13%	267.5	24%		Aug 2025
9	Westside Subway PLE Sect 3 (est LOP)	2,500.0	63.8	3%	245.9	12%		TBD
10	WSE PLE Core Cap Enhanc @ Div 20	17.2	3.5		13.7			TBD
11	<b>Westside Purple Line Projects</b>	<b>7,732.0</b>	<b>1,488.4</b>		<b>905.9</b>			
12	Expo 1: Washington Siding	13.0	1.5		3.0			
13	Metro Orange Line Ext to Canoga: Closeout	215.6	144.2		0.2			
14	Gold Line Foothill Ext to Azusa 2A: Closeout	741.0	651.6		1.5			Mar 2016
15	Expo 2: Closeout	0.0	36.0		7.9			May 2016
16	<b>Closeouts</b>	<b>969.6</b>	<b>833.3</b>		<b>12.6</b>			
17	<b>Grand Total Measure R</b>	<b>\$12,707.5</b>	<b>\$4,553.1</b>		<b>\$1,546.7</b>			
	Measure M Projects (\$ in millions)	Bd Auth LOP			Proposed FY18			
18	Airport Metro Connector (New in FY18)	TBD	0.0	0	70.6			TBD
19	Foothill Extension 2B	TBD			22.0			TBD
20	<b>Grand Total Measure M</b>	<b>TBD</b>	<b>0.0</b>	<b>0.0</b>	<b>92.6</b>	<b>TBD</b>	<b>TBD</b>	

**FINANCIAL IMPACT**

Forecast ridership and bus and rail service levels will continue to guide the development of the FY18 Budget, and they may be adjusted as more specific information and guidance becomes available. Transit construction, state of good repair, bus and rail transit service levels, and project planning costs will account for three-fourths of the total FY18 budget.

**ALTERNATIVES CONSIDERED**

The annual budget serves as the legal authority to obligate and spend funds. Failure to adopt the budget would severely impact Metro’s stated goal of improving transportation in Los Angeles County.

**NEXT STEPS**

As stated previously, this report is the second in a series of monthly updates to the Board regarding the FY18 Budget development process. The remaining reports - and their expected content - are shown below, culminating in Final Board Approval in May 2017 for the FY18 Budget year that begins July 1, 2017.



- April 2017:
  - Preliminary FY18 Budget proposal, including Federal, State, and Local Revenues, and non-labor expenses
  - Agencywide labor expenses, including contract and non-contract positions
  - Outreach status update
- May 2017:
  - Public Hearing - May 17, 2017
  - Final Board Adoption - May 25, 2017

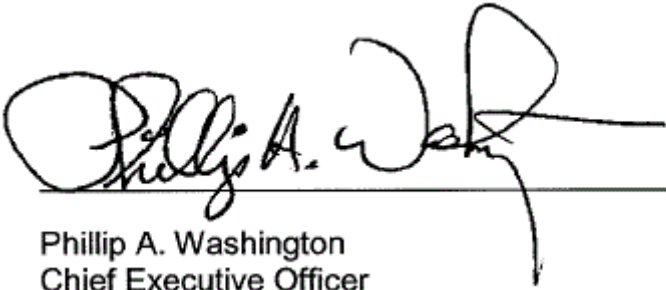
(in accordance with State Public Utilities Code Section 130051.12)

**ATTACHMENTS**

A. Metro Blue Line FY18 State of Good Repair Projects

Prepared by: Office of Management and Budget (OMB) Team  
Luke H. Klipp, Principal Transportation Planner, (213) 922-7412

Reviewed by: Nalini Ahuja, Chief Financial Officer, (213) 922-3088



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Phillip A. Washington  
Chief Executive Officer

## ATTACHMENT A

Project Description		Estimated Expenditure thru FY17	FY18	Future Forecast	Life of Project
<b>Blue Line only Projects</b>					
1	Metro Blue Line Pedestrian Safety Enhancement at Grade Crossings	17,823,531	6,498,370	5,853,098	30,175,000
2	Light Rail Vehicle (P865/P2020) Midlife Overhaul	21,953,246	4,527,325	3,519,429	30,000,000
3	Washington Siding	9,014,865	2,985,135	-	12,000,000
4	Metro Blue Line Signal System Rehabilitation	10,773,786	18,372,065	34,854,149	64,000,000
5	Metro Blue Line Yard Signal System Rehabilitation	2,345,426	1,543,855	710,718	4,600,000
6	Metro Blue Line Overhead Catenary System Rehabilitation	2,720,385	2,166,561	8,113,054	13,000,000
7	Metro Blue Line Rail Replacement & Booting	6,154,661	545,833	6,299,506	13,000,000
8	Long Beach Duct Bank Upgrade Phase II	2,625,120	465,156	4,909,724	8,000,000
9	Metro Blue Line Station Refurbishments	27,401,912	-	5,550,888	32,952,800
10	Metro Blue Line Wheel True Machine	1,096,920	-	1,103,080	2,200,000
11	Pre FY18 Completed / Closeout Blue Line Projects	101,249,095	-	13,091,003	120,919,309
12	<b>Blue Line only Projects Subtotal</b>	<b>\$ 203,158,949</b>	<b>\$ 37,104,302</b>	<b>\$ 84,004,648</b>	<b>\$ 330,847,109</b>
<b>Multiple Line Rail Projects - Blue Line (only Blue Line portion shown)</b>					
14	Light Rail Vehicle Fleet Replacement	286,520,537	124,151,220	178,987,342	589,659,099
15	Professional Services to Support P3010 LRV Procurement Project	19,055,186	3,014,400	7,930,414	30,000,000
16	P2000 Vehicle Component Replacement	8,791,390	1,991,237	2,397,423	13,180,050
17	Metro Blue Line & Green Line Transit Passenger Info System	4,171,843	743,013	-	4,914,857
18	Light Rail Vehicle (P2000) Midlife Overhaul	15,479,818	886,597	49,033,585	65,400,000
19	Fire Control Panel Upgrade	296,665	327,395	275,940	900,000
20	Systemwide Corrosion Protection System Replacement	2,469,278	244,917	1,575,805	4,290,000
21	Digital Rail Radio System	\$ 3,906,981	\$ 200,626	\$ 2,142,393	\$ 6,250,000
22	Regional Rail Signage System Improvements	612,905	123,325	-	736,230
23	Metro Security Kiosks at Rail Stations	1,223,356	64,144	-	1,287,500
24	Public Plug-In Charge Station	127,737	54,980	11,883	194,600
25	Fiber Optic Main Loop Upgrade	72,483	49,999	90,018	212,500
26	Heavy Rail SCADA System Replacement	550,961	49,999	193,165	794,125
27	Rail Facilities Lighting Retrofit	849,177	25,000	177,098	1,051,275
28	FY14-FY15 Rail Facility Sub-Metering Project - Div 11, 22, and 60	61,620	17,613	-	79,233
29	Non-Revenue Vehicle for Rail	2,364,083	934,760	300,905	3,603,790
30	Pre FY18 Completed / Closeout Blue Line Projects	5,507,783	-	1,823,109	10,767,048
31	<b>Multiple Line Rail Projects Blue Line portion Subtotal</b>	<b>\$ 352,061,803</b>	<b>\$ 132,879,225</b>	<b>\$ 244,939,080</b>	<b>\$ 733,320,307</b>
<b>System-wide Projects benefiting Blue Line (only Blue Line portion shown)</b>					
33	Metro Emergency Operations Center	1,565,555	1,911,350	7,793,095	11,270,000
34	Other System Projects	12,218,371	648,258	312,592	13,179,221
35	Ticket Vending Machine Installations	676,261	130,509	35,230	842,000
36	GIRO HASTUS Upgrade & Enhancement	300,253	100,787	(0)	401,040
37	Internet-based Customer Help Desk	68,719	48,882	25,150	142,750
38	HASTUS Infrastructure Upgrade	99,338	18,770	50,592	168,700
39	Fare Gate Project	172,861	1,200	27,170	201,230
40	Non-Revenue Vehicle Procurement	2,057,841	771,964	53,779	2,883,585
41	Pre FY18 Completed / Closeout Blue Line Projects	45,302,870	-	2,178,553	47,632,870
42	<b>System-Wide Projects Blue Line Portion Subtotal</b>	<b>\$ 62,462,068</b>	<b>\$ 3,631,720</b>	<b>\$ 10,476,161</b>	<b>\$ 76,721,396</b>
43	<b>Grand Total</b>	<b>\$ 617,682,820</b>	<b>\$ 173,615,248</b>	<b>\$ 339,419,888</b>	<b>\$ 1,140,888,811</b>
Note: Include projects active since 2010 only.					
<b>FY18 New Proposals (pending approval)</b>					
45	Blue Line only Projects		3,072,311	16,735,426	19,807,737
46	Multiple Line Rail Projects - Blue Line (only Blue Line portion shown)		1,073,109	5,638,076	6,711,185
47	System-wide Projects benefiting Blue Line (only Blue Line portion shown)		786,073	5,957,698	6,743,771
48	<b>Total FY18 New Proposals</b>		<b>\$ 4,931,494</b>	<b>\$ 28,331,200</b>	<b>\$ 33,262,694</b>

# **FY18 Budget Development Status Update**

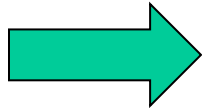
**March 15, 2017**

**Finance, Budget & Audit Committee**

# Monthly Board Report – Receive & File

- February 2017:

- Budget Development Process and Schedule
- Outreach
- Sales Tax Revenue and CPI Assumptions



- March 2017:

- **Public Outreach addition: Telephone Town Hall on 3/28/2017**
- Fare Revenue Projections
- Metro Bus and Rail Service Levels
- Transit Projects and State of Good Repair (SGR)

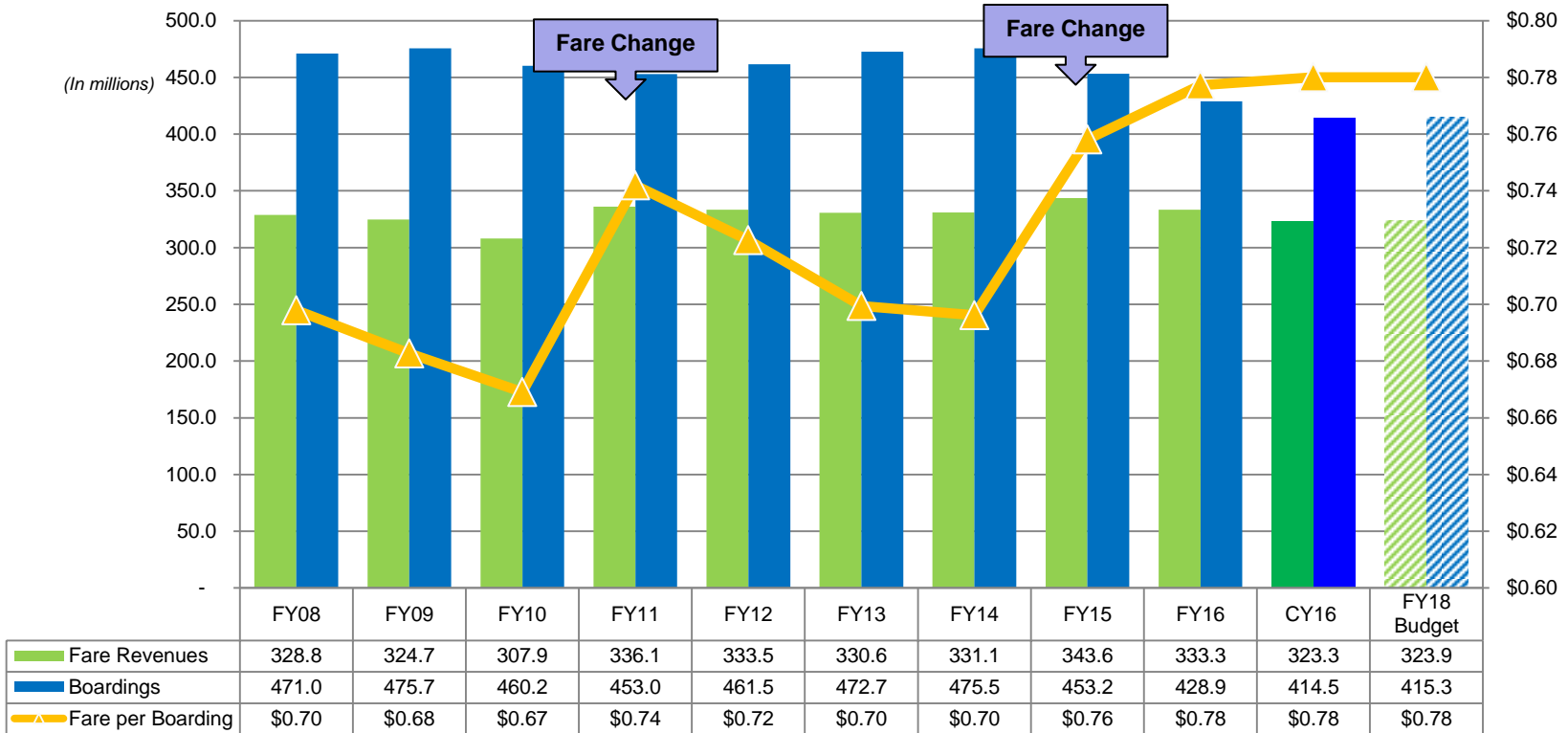
- April 2017:

- Preliminary FY18 Budget proposal, Revenue Update, Labor and Expense
- Outreach status update

- May 2017:

- Public Hearing: May 17
- Final Board Adoption: May 25

# Fare Revenue and Boarding Trends



- Fare Revenue Budget = Fare Per Boarding \* Boarding Estimate
- Fare per Boarding has stayed at \$0.78 since the last Fare Change in FY15 Q3
- Systemwide boardings are targeted to remain around CY 2016 levels with a 2% decrease in bus and 2% increase in rail compared to the 2016 calendar year.
- FY18 Fare Revenue Budget is estimated at targeted Budget \$323.9 million

# Bus & Rail Service Levels

## Bus Revenue Service Hours (RSH):

- No change in overall RSH from FY17 Budget of 7,005,960 RSH
- Right-size service, improve reliability in the Owl Network

## Rail Revenue Vehicle Service Hours (RVSH):

- FY18 first year in which we can meet rail demand with new and existing rail vehicles on all rail lines since opening of Expo 2 and Foothill 2A extensions
- FY18 increases in service levels to accommodate rider demand and special events
- 9% increase in RVSH over currently-scheduled base service and 60% increase in special event service
- Continue to maximize revenue service while performing state of good repair work on the main lines

Rail Line	Weekdays	Weekend
Gold Line	<ul style="list-style-type: none"> <li>• Increase all trains to 3 car consists</li> <li>• <b>Currently 2/3 car consists</b></li> </ul>	<ul style="list-style-type: none"> <li>• No change</li> <li>• <b>Currently 2 car 12 min</b></li> </ul>
Expo Line	<ul style="list-style-type: none"> <li>• Increase all trains to 3 car consists</li> <li>• <b>Currently 2/3 car 6 min (Peak) and 3 car consists 12 min (Midday)</b></li> </ul>	<ul style="list-style-type: none"> <li>• 3 car/6 min headway for 8 months of the year</li> <li>• 2 car/6 min headway for 4 months of the year</li> </ul>
Green Line	<ul style="list-style-type: none"> <li>• Increase peak period headway to 6 min</li> <li>• <b>Currently only peak of the peak hour is 6 min with rest of peak period at 7.5 min</b></li> </ul>	<ul style="list-style-type: none"> <li>• No change</li> </ul>
Blue Line	<ul style="list-style-type: none"> <li>• No change</li> </ul>	<ul style="list-style-type: none"> <li>• No change</li> </ul>
Red/Purple Line	<ul style="list-style-type: none"> <li>• No change</li> </ul>	<ul style="list-style-type: none"> <li>• No change</li> </ul>

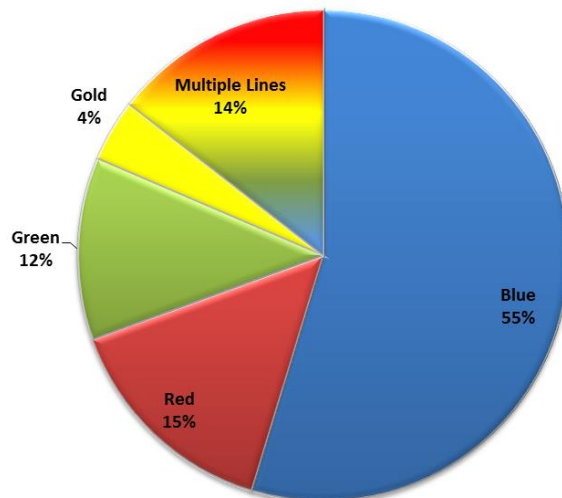
# State of Good Repair (SGR)

(\$ IN MILLIONS)

SGR Category	FY17 Budget	FY18 Proposed	% of Total FY18 SGR	Year Over Year Change
Bus Acquisition	\$ 57.94	\$ 59.77	14%	3%
Bus Maintenance	25.95	31.92	7%	23%
Bus Facilities Improvements	17.83	20.98	5%	18%
<b>Bus Subtotal</b>	<b>101.72</b>	<b>112.67</b>	<b>26%</b>	<b>11%</b>
Rail Vehicle Acquisition	55.61	134.20	31%	141%
Rail Vehicle Maintenance	55.06	42.02	10%	-24%
Rail Facilities Improvements	26.81	9.15	2%	-66%
Wayside Systems	53.80	47.18	11%	-12%
<b>Rail Subtotal</b>	<b>191.28</b>	<b>232.55</b>	<b>54%</b>	<b>22%</b>
Non-Revenue Vehicles	8.68	8.06	2%	-7%
IT/Communications	13.13	17.08	4%	30%
Regional Transit Center, Station & Fare Collection	38.85	56.52	13%	45%
<b>Other Subtotal</b>	<b>60.66</b>	<b>81.66</b>	<b>19%</b>	<b>35%</b>
<b>Total Proposed SGR Budget</b>	<b>\$ 353.66</b>	<b>\$ 426.88</b>	<b>21%</b>	

- Total SGR FY18 Budget is 21% greater than FY17 Budget, with major increases in rail vehicle delivery
- 54% is allocated to Rail. Excluding Rail Vehicles, most budget goes to the oldest system, Blue Line
- Safety and security capital projects (\$40.5M) embedded throughout Bus and Rail Projects, including projects such as Blue Line pedestrian crossings improvements, bus safety barriers, and bus video monitors
- Regional Transit Center Enhancement includes the design phase of Rosa Park/Willowbrook Station, as well as Transit Passenger Information System (TPIS) on Silver Line Stops from El Monte Transit Center to Harbor Transit Center

Non Vehicle Rail SGR by Line



# Metro Blue Line SGR

1	Description	Est Expd thru FY17	Proposed FY18	Future Forecast	Life of Project
2	<b>Blue Line Corridor only Projects</b>				
3	Metro Blue Line (MBL) Vehicle Maintenance	21,953,246	4,527,325	3,519,429	30,000,000
4	MBL Trackwork / Wayside Maintenance (incl safety efforts)	49,112,348	31,033,121	60,029,530	140,175,000
5	MBL Station Projects	27,401,912	-	5,550,888	32,952,800
6	MBL Division Projects	2,345,426	1,543,855	710,718	4,600,000
7	MBL Shop Equipment	1,096,920	-	1,103,080	2,200,000
8	PRE FY18 Completed / Closeout projects	101,249,095	-	13,091,003	120,919,309
9	<b>Blue Line only Projects Subtotal</b>	<b>\$ 203,158,948</b>	<b>\$ 37,104,302</b>	<b>\$ 84,004,647</b>	<b>\$ 330,847,109</b>
10	<b>Multiple Line Rail Projects Blue Line portion Subtotal</b>	<b>\$ 352,061,803</b>	<b>\$ 132,879,225</b>	<b>\$ 244,939,080</b>	<b>\$ 733,320,307</b>
11	<b>System-Wide Projects Blue Line Portion Subtotal</b>	<b>\$ 62,462,068</b>	<b>\$ 3,631,720</b>	<b>\$ 10,476,161</b>	<b>\$ 76,721,396</b>
12	<b>Grand Total</b>	<b>\$ 617,682,820</b>	<b>\$ 173,615,247</b>	<b>\$ 339,419,888</b>	<b>\$ 1,140,888,811</b>
	Note: Include projects active since 2010 only.				

- Since 2010, Metro has been actively maintaining SGR on the Blue Line by funding over \$1.14B total LOP
- At the conclusion of FY17, over \$617M will be invested on the Blue Line with \$203M directly within the corridor and \$414M on Blue Line related system improvements
- FY18 budget plans for an investment of \$173.6M for direct and indirect Blue Line SGR
  - Delivery of Light Rail Vehicles, Pedestrian Safety Enhancements
  - Over Head Catenary Replacement, Signal System Rehabilitation, Rail Track Replacements
  - Various Systemwide and Multi-Rail line projects to increase system reliability and safety
  - Digital Rail Radio Communications system, Fire Control Panel Upgrade and Transit Passenger Info System



# Measure R/M Projects in EIR/EIS/PE

	Major Transit Planning Projects anticipated in FY18 (\$ in millions)	Ordinance	Sub Region	Ground breaking	Cost Est in 2015 \$
1	Eastside Light Rail Access	R	sg	2008	30.0
2	Crenshaw/LAX Light Rail Transit	R	sb	2011	2,058.0
3	Regional Connector:	R	sc	2012	1,750.8
4	Orange Line Improvements	M	sf	2019	286.0
5	BRT Connector Orange/Red Line to Gold Line	M	av / sf	2020	267.0
6	Vermont Transit Corridor	M	cc	2024	425.0
7	Westside Subway Extension Section 3	M / R	w	2018	1,980.4
8	Airport Metro Connector (& Accomodations)	M / R	sc	2018	581.0
9	Gold Line Foothill Extension 2B: (JPA)	M / R	sg	2019	1,097.0
10	San Fernando Valley East North/South Rapidways	M / R	sf	2021	1,331.0
11	West Santa Ana Branch Corridor	M / R	gc	2022	4,000.0
12	Sepulveda Pass Transit Corridor	M / R	sf / w	2024	5,934.0
13	Green Line Extension: to Crenshaw Blvd Torrance	M / R	sb	2026	891.0
14	Eastside Extension Phase II	M / R	gc / sg	2029	3,000.0
15	<b>Total</b>				<b>\$ 23,601.23</b>

- FY18 budget will include the EIR/EIS/PE planning stage of the above Measure R/M projects
- Planning expenditures through EIR/EIS/PE phase are generally in the range of 2% or less of a project cost estimate and typically take a few years ahead of final design and construction phase
- Measure M cost estimates are in 2015 dollars and will be updated to current dollars as project FFGA's or designs are refined for procurement



# Transit Construction Projects

	Measure R Projects (\$ in millions)	Board Auth LOP	Est ITD \$ thru FY17	Est %ITD thru FY17	Proposed FY18	Est ITD % thru FY18	Est Prog % thru FY18	Target Rev Svc Date
1	Crenshaw/LAX Light Rail Transit	2,058.0	1,313.9		380.0			
2	Southwestern Maintenance Yard	157.0	78.9		46.4			
3	<b>Crenshaw Projects</b>	<b>2,215.0</b>	<b>1,392.9</b>	<b>63%</b>	<b>426.3</b>	<b>82%</b>	<b>88%</b>	<b>Oct 2019</b>
4	Regional Connector: Construction	1,750.8	805.5		201.0			
5	Regional Connector: Construction: Non-FFGA	40.0	33.0		0.8			
6	<b>Regional Connector Projects</b>	<b>1,790.8</b>	<b>838.6</b>	<b>47%</b>	<b>201.9</b>	<b>58%</b>	<b>43%</b>	<b>Jul 2021</b>
7	Westside Subway Purple Line Ext. Sect 1	2,773.9	1,112.0	40%	378.8	54%	35%	Nov 2023
8	Westside Subway PLE Sect 2	2,441.0	309.1	13%	267.5	24%		Aug 2025
9	Westside Subway PLE Sect 3 (est LOP)	2,500.0	63.8	3%	245.9	12%		TBD
10	WSE PLE Core Cap Enhanc @ Div 20	17.2	3.5		13.7			TBD
11	<b>Westside Purple Line Projects</b>	<b>7,732.0</b>	<b>1,488.4</b>		<b>905.9</b>			
12	Expo 1: Washington Siding	13.0	1.5		3.0			
13	Metro Orange Line Ext to Canoga: Closeout	215.6	144.2		0.2			Mar 2016
14	Gold Line Foothill Ext to Azusa 2A: Closeout	741.0	651.6		1.5			May 2016
15	Expo 2: Closeout	0.0	36.0		7.9			
16	<b>Closeouts</b>	<b>969.6</b>	<b>833.3</b>		<b>12.6</b>			
17	<b>Grand Total Measure R</b>	<b>\$12,707.5</b>	<b>\$4,553.1</b>		<b>\$1,546.7</b>			
	<b>Measure M Projects (\$ in millions)</b>	<b>Bd Auth LOP</b>			<b>Proposed FY18</b>			
18	Airport Metro Connector (New in FY18)	TBD	0.0	0	70.6			TBD
19	Foothill Extension 2B	TBD			22.0			TBD
20	<b>Grand Total Measure M</b>	<b>TBD</b>	<b>0.0</b>	<b>0.0</b>	<b>92.6</b>	<b>TBD</b>	<b>TBD</b>	

- Crenshaw/LAX plans for 88% Construction progress thru FY18 with an Oct-2019 Revenue Service Date
- Regional Connector recently increased its LOP to \$1,751M and is working to improve its reported 43% construction progress plan thru FY18
- Westside Purple Line Projects account for 58% (\$905.9M) of all Transit Construction in FY18 (\$1,546.7M)
- Airport Metro Connector begins design and construction work in FY18

