



## Board Report

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File #: 2018-0670, File Type: Contract

Agenda Number: 30.

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**REVISED**  
**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE**  
**JANUARY 17, 2019**

**SUBJECT: A650-2015, HEAVY RAIL VEHICLE OVERHAUL AND CRITICAL COMPONENT REPLACEMENT PROGRAM**

**ACTION: APPROVE RECOMMENDATIONS**

**RECOMMENDATION**

CONSIDER:

- A. AUTHORIZING the Chief Executive Officer to increase the Life-of-Project (LOP) budget to Contract No. A650-2015, for the Heavy Rail Vehicle Overhaul and Critical Component Replacement Program (OCCRP), by \$12,399,908 increasing the total Life-of-Project (LOP) budget from \$86,662,000 to \$99,061,908 as funded per attachment C; and
- B. APPROVING Modification No. 3 to Contract A650-2015, with Talgo Inc., for the design and installation of the Train-To-Wayside Communication (TWC) System in the firm-fixed price amount of \$2,044,908.

**ISSUE**

An on-board, vehicle TWC system is required to permit continued operation through the Division 20 Portal, Turnback and Storage tracks in the event of a TWC system failure at the Rail Operations Center (ROC).

**BACKGROUND**

The Metro Red Line, which opened in January 1993, was designed to the latest standards available in the 1980's and early 1990's. The design included a Wayside Push Button in lieu of a TWC system. In the event of a system failure at the ROC, the Wayside Push Button is used to permit local routing of the vehicles to and from the mainline.

**DISCUSSION**

The Purple Line Extensions (Sections 1, 2 and 3) and Division 20 Portal, Turnback, Storage Project

will have a TWC system installed to permit remote routing of trains from the ROC and ensure compliance with the improved headway requirements. In the event of a system failure at the ROC, an on-board, vehicle TWC system is required to permit local routing of the vehicles to and from the mainline.

The HR4000 HRVs will be delivered with a compatible TWC system. To ensure system and operational reliability, it is recommended that the 74 Option A650 HRVs currently undergoing a midlife modernization effort with Talgo, Inc., be equipped with a compatible on-board, vehicle TWC system.

The Diversity and Economic Opportunity Department (DEOD) did not recommend a Disadvantaged Business Enterprise (DBE) goal for this procurement as it is not applicable. 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. However, Talgo Inc. has established a 6.51% goal under the FTA TVM goal.

### **DETERMINATION OF SAFETY IMPACT**

The approval of the Contractor recommendation will have a direct, positive impact to system safety, service quality, system reliability, maintainability and overall customer satisfaction.

### **FINANCIAL IMPACT**

The approved LOP budget for CP 206038 - A650 HRV Midlife Overhaul Project is \$86,662,000. This amount includes funds for the HRV Overhaul project. The requested increase of \$12,399,908 will increase the LOP amount to \$99,061,908, and shall be funded by eligible Measure R/Measure M Funds, State, Federal and other Operations eligible funds.

Of the \$12,399,908 requested \$10,355,000 is for the addition of the Fire Mist Suppression System and was previously approved by the Board in September 2018 (File ID: 2018-0486). The remaining \$2,044,908 is needed for the addition of the TWC system.

Since this is a multi-year contract, the cost center Manager, Project Manager, and Senior Executive Officer, Vehicle Engineering & Acquisition will be responsible for ensuring that Project costs are budgeted in future fiscal years.

### **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

Approval of this recommendation supports the following Metro Strategic Plan Goal: Deliver outstanding trip experiences for all users of the transportation system. This project will improve safety, service, and reliability in an effort to provide a world-class transportation system that enhances quality of life for all who live, work, and play within LA County.

### **ALTERNATIVES CONSIDERED**

The Board may choose not to approve these contract modifications. However, this alternative is not recommended. In the event of a failure at the ROC, HRVs will not be able to set the operating route

on the new Purple Line Extensions; thus, directly impacting customer service.

**NEXT STEPS**

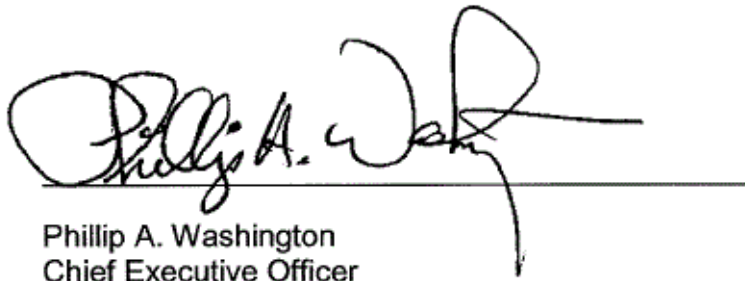
Upon Board approval, the contract modification will be exercised with Talgo, Inc.

**ATTACHMENTS**

- Attachment A - Procurement Summary
- Attachment B - Contract Modification Log
- Attachment C - Funding & Expenditure Plan
- Attachment D - DEOD Summary

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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

## A650-2015 HEAVY RAIL VEHICLE OVERHAUL AND CRITICAL COMPONENT REPLACEMENT PROGRAM / CONTRACT NUMBER A650-2015

1.	<b>Contract Number:</b> A650-2015		
2.	<b>Contractor:</b> Talgo, Inc.		
3.	<b>Mod. Work Description:</b> Add Train-to-Wayside Communication (TWC) System		
4.	<b>Contract Work Description:</b> Overhaul A650 Heavy Rail Vehicles		
5.	<b>The following data is current as of:</b> 12.05.18		
6.	<b>Contract Completion Status</b>		<b>Financial Status</b>
	<b>Contract Awarded:</b>	10.5.16	<b>Contract Award Amount:</b> \$54,698,676
	<b>Notice to Proceed (NTP):</b>	01.16.17	<b>Total of Modifications Approved:</b> \$28,626,818
	<b>Original Complete Date:</b>	11.16.19	<b>Pending Modifications (including this action):</b> \$ 2,044,908
	<b>Current Est. Complete Date:</b>	05.16.22	<b>Current Contract Value (with this action):</b> \$85,370,402
7.	<b>Contract Administrator:</b> Wayne Okubo		<b>Telephone Number:</b> (213)922-7466
8.	<b>Project Manager:</b> Andrew Kimani		<b>Telephone Number:</b> (213)922-3221

**A. Procurement Background**

This Board Action is to approve Contract Modification No. 3 issued in support of the addition of the Train-to-Wayside Communication (TWC) system to the A650 Heavy Rail Vehicle (HRV) as part of the overhaul and critical component replacement program on the Option Buy A650 consisting of 74 vehicles.

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

On September 22, 2016, Metro's Board of Directors approved Board Agenda Item 2016-0538 to Talgo, Inc. in the amount of \$54,698,676 for the overhaul of 38 A650 Heavy Rail Vehicles, with the a contract option to overhaul the remaining 36 vehicles of the newest A650 fleet. On October 26, 2017, Metro's Board of Directors approved Board Agenda Item 2017-0584 for Talgo to overhaul the remaining 36 heavy rail vehicles increasing the contract value to \$72,970,494.

The intent of this overhaul program is to replace vital systems and components and update relevant technology to ensure the continued safety, reliability, availability,

and maintainability of the newest A650 heavy rail fleet for full revenue service and maintain the fleet's State of Good Repair.

This recommended Contract Modification is to add the TWC system to the A650 overhaul program currently underway by Talgo. The addition of the TWC has merit as this system was initially contemplated under the overhaul program but was later removed from the scope of work. The re-inclusion of this updated feature complements the intent of the overhaul program by incorporating current technology on the A650 fleet that is compatible with Metro's expanding heavy rail system.

**B. Cost/Price Analysis**

The recommended price has been determined to be fair and reasonable based upon cost analysis, an independent cost estimate, technical evaluation, fact finding, and negotiations.

<b>Proposal Amount</b>	<b>Metro ICE</b>	<b>Negotiated Amount</b>
\$2,351.848	\$1,020,535	<b>\$2,044,908</b>

The significant difference between Metro's Independent Cost Estimate (ICE) and the Negotiated Amount is attributed to a number of factors not fully considered in the Metro ICE.

The engineering effort required by the Contractor to add the TWC into the A650 overhaul project is significantly greater than originally estimated. That increase in level of effort is due primarily to a full re-engineering necessary to integrate the TWC with other existing vehicle systems that have already completed modernization design by the overhaul Contractor. Systems such as the Communications system now require a re-engineering and re-designing effort to interface with the TWC.

Another major factor not considered in the Metro ICE is the current A650 overhaul schedule. The integration of the TWC into the A650 overhaul will require a two month extension to the entire project. The overall program costs associated with the schedule extension were not included in the Metro ICE. Other factors such as travel costs, indirect costs, and profit were also not part of the Metro ICE.

## CONTRACT MODIFICATION/CHANGE ORDER LOG

## NAME OF PROJECT/CONTRACT NUMBER

<b>Mod. no.</b>	<b>Description</b>	<b>Status (approved or pending)</b>	<b>Date</b>	<b>\$ Amount</b>
1	Exercise Option to overhaul 18 additional A650 HRV married pairs	Approved	10.26.17	\$18,271,818
2	Add MFSS to A650 HRV OCCRP	Approved	09.28.18	\$10,355,000
3	<b>Add TWC to A650 HRV OCCRP</b>	<b>Pending</b>	<b>01.24.19</b>	<b>\$ 2,044,908</b>
	<b>Modification Total:</b>			<b>\$30,671,726</b>
	<b>Original Contract:</b>			<b>\$54,698,676</b>
	<b>Total:</b>			<b>\$85,370,402</b>

ATTACHMENT C- Funds Uses and Sources Tables

	From Inception to Date (ITD) thru FY18 Jun	7/1/18 - 6/30/19	7/1/19 - 6/30/20	7/1/20 - 6/30/21	7/1/21 - 6/30/22		
Use of Funds		FY19	FY20	FY21	FY22	Total	% of Project
Overhaul 38 Option-Buy Vehicles	\$9,846,449	\$13,468,252	\$26,706,678	\$3,827,858	\$849,440	\$54,698,676	83.2%
Professional Services	\$2,101,717	\$990,667	\$1,000,667	\$659,645	\$0	\$4,752,695	7.2%
MTA Administration	\$1,300,632	\$475,000	\$542,000	\$310,382	\$0	\$2,628,014	4.0%
Contingency	\$0	\$0	\$0	\$0	\$3,653,754	\$3,653,754	5.6%
<b>38 Option Vehicle Summary</b>	<b>\$13,248,797</b>	<b>\$14,933,918</b>	<b>\$28,249,345</b>	<b>\$4,797,885</b>	<b>\$4,503,194</b>	<b>\$65,733,139</b>	<b>100.0%</b>
	\$0						
Overhaul 36 Option Vehicles	\$4,624,856	\$1,240,633	\$0	\$10,338,548	\$2,067,781	\$18,271,818	87.3%
Professional Services (Increase Requested)	\$0	\$0	\$0	\$498,318	\$98,920	\$597,238	2.9%
MTA Administration (Increase Requested)	\$0	\$0	\$0	\$364,755	\$72,407	\$437,162	2.1%
Contingency (Increase Requested)	\$0	\$0	\$0	\$0	\$1,622,643	\$1,622,643	7.8%
<b>36 Option Vehicle Summary</b>	<b>\$4,624,856</b>	<b>\$1,240,633</b>	<b>\$0</b>	<b>\$11,201,622</b>	<b>\$3,861,750</b>	<b>\$20,928,861</b>	<b>100.0%</b>
Overhaul 74 Option-Buy Vehicles	\$14,471,304	\$14,708,884	\$26,706,678	\$14,166,406	\$2,917,221	\$72,970,494	84%
Professional Services	\$2,101,717	\$990,667	\$1,000,667	\$1,157,963	\$98,920	\$5,349,933	6%
MTA Administration	\$1,300,632	\$475,000	\$542,000	\$675,137	\$72,407	\$3,065,176	4%
Contingency	\$0	\$0	\$0	\$0	\$5,276,397	\$5,276,397	6%
<b>Total Vehicle Summary Total</b>	<b>\$17,873,653</b>	<b>\$16,174,551</b>	<b>\$28,249,345</b>	<b>\$15,999,507</b>	<b>\$8,364,944</b>	<b>\$86,662,000</b>	<b>100.0%</b>
1. Add Fire Mist Suppression System (FMSS)	\$0	\$1,094,013	\$3,003,563	\$3,253,860	\$3,003,563	\$10,355,000	84%
2. Add Train To Wayside Communication (TWC)	\$0	\$221,492	\$591,378	\$640,660	\$591,378	\$2,044,908	16%
<b>Contract Modifications</b>	<b>\$0</b>	<b>\$1,315,505</b>	<b>\$3,594,942</b>	<b>\$3,894,520</b>	<b>\$3,594,941</b>	<b>\$12,399,908</b>	<b>100.0%</b>
<b>Total New Orders Summary Including Contract Modifications</b>	<b>\$17,873,653</b>	<b>\$17,490,056</b>	<b>\$31,844,287</b>	<b>\$19,894,027</b>	<b>\$11,959,886</b>	<b>\$99,061,908</b>	<b>100.0%</b>
<b>Sources of Funds</b>		<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY21</b>	<b>Total Sources</b>	<b>%</b>
Measure R 2% (206038)	\$1,367,460	\$0	\$0	\$0	\$0	\$1,367,460	1.4%
PropA 35% Bonds/Cash	\$8,439,925	\$0	\$0	\$0	\$0	\$8,439,925	8.5%
Transportation Development Act Article 4	\$129,601	<del>\$17,490,056</del> \$10,426,723	\$0	\$0	\$0	<del>\$17,490,056</del> \$10,556,324	<del>17.8%</del> 10.7%
Federal 5337 Funding	\$7,936,667	<del>\$0</del> \$7,063,333	\$0	\$0	\$0	<del>\$0</del> \$15,000,000	<del>-8.0%</del> 15.1%
Cap and Trade: Other State & Federal sources (20	\$0	\$0	\$28,249,345	\$15,999,507	\$8,364,944	\$52,613,796	53.1%
Division 20 Portal, Turnback, and Storage Project	\$0	\$0	\$3,594,942	\$3,894,520	\$3,594,941	\$11,084,403	11.2%
* Future Local, State & Federal Funds to be identified	\$0	\$0					
<b>Total Funding Sources</b>	<b>\$17,873,653</b>	<b>\$17,490,056</b>	<b>\$31,844,287</b>	<b>\$19,894,027</b>	<b>\$11,959,886</b>	<b>\$99,061,908</b>	<b>100.0%</b>

\* Staff will pursue additional funding sources to supplement Project 206038 budget which may become available through MAP-21 or other federal sources for this project and also utilize other State and Local funding sources as opportunities arise such as Cap and Trade or other new sources.

## DEOD SUMMARY

**A650-2015 HEAVY RAIL VEHICLE OVERHAUL AND CRITICAL COMPONENT  
REPLACEMENT PROGRAM / CONTRACT NUMBER A650-2015**

**A. Small Business Participation**

Talgo Inc. is a Transit Vehicle Manufacturer (TVM) and is on the Federal Transit Administration's (FTA) list of eligible TVMs. Talgo Inc. reported that it submitted its overall Disadvantaged Business Enterprise (DBE) goal of 1.65% to FTA for FY19, in compliance with 49 Code of Federal Regulations (CFR) Section 26.49(a)(1). TVMs submit overall DBE goals and report participation directly to FTA annually.

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

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract. Rolling stock solicitations are not one of the covered contract types in Metro's Living Wage and Service Contract Worker Retention Policy.

**C. Prevailing Wage Applicability**

Prevailing Wage is not applicable to this contract.

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

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract. Project Labor Agreement/Construction Careers Policy is applicable only to construction contracts that have a construction related value in excess of \$2.5 million.

**E. Local Employment Plan Program (LEP)**

Local Employment Plan Program is applicable on this contract. Staff will be monitoring progress on all LEP commitments, including the contractual commitments in creating employment opportunities in Los Angeles County and the 10% commitment to hire disadvantaged workers.

Local Employment Plan Commitment:

LEP Commitment for Base + All Options	\$2,212,675
LEP Actuals to Date	\$0.00
Balance of LEP to be attained	\$2,212,675
Disadvantaged Workers attainment	\$0.00

The manufacturer LEP Plan identifies that the LEP achievements and Disadvantaged Worker participation will commence in the assembly stage of the contract.