

**Board Report**

File #: 2019-0151, **File Type:** Contract

Agenda Number: 24.

**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE
JULY 18, 2019**

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

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

- A. 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 \$6,047,723 increasing the total Life-of-Project (LOP) budget from \$99,061,908 to \$105,109,632;
- B. EXECUTE Contract Modification No. 4 to Contract No. A650-2015, with Talgo Inc., for the Heavy Rail Vehicle Overhaul and Critical Component Replacement Program (OCCRP), for the truck frame inspection and repair services in the firm-fixed price amount of \$5,054,030; and
- C. EXECUTE Contract Modifications under this Contract for up to \$1,000,000 per Contract Modification.

ISSUE

During a routine vehicle inspection, cracks were identified on the truck frames of the original Option A650 heavy rail vehicle fleet. This fleet, consisting of 74 heavy rail vehicles and twelve (12) spare truck frames, is currently undergoing a modernization effort. Inspection services are required to identify additional truck frames present with cracks among the fleet. Repair services are required should cracks be identified during the inspection effort.

Inspecting and repairing the vehicle truck frame is a good engineering practice for the foundation of the whole rail vehicle and promotes the safety of the rail vehicle's critical sub-systems. Having a single reliable firm perform this work will streamline the inspection, repairs and warranty process and minimize the impacts to revenue service.

BACKGROUND

The Metro Red Line opened in January 1993. The existing Option Order vehicles have been in

revenue service for an average of twenty-five (25) years.

Metro places the highest priority on the safety of our customers, the public, and our employees. To that extent, there is a constant focus on taking proactive measures to maintain our rail vehicle fleet in a State of Good Repair and seek innovative approaches to prevent accidents on our rail system.

During a routine vehicle inspection, cracks were observed on a number of truck frames used on the A650 Heavy Rail Vehicles. Metro's Rail Vehicle Engineering (RVE) immediately developed an inspection and repair procedure, which included using magnetic particle inspection (MPI) on all mating members, welds and beam surfaces. Two (2) of the truck frames that were found to have cracks were then sent out to a local vendor for additional inspection, then repaired. It was then determined that the entire fleet would require inspection and repair if needed.

Several inspection and repair options were considered to avoid impacting revenue service and the ongoing modernization effort, including using a local vendor to perform this work. However, it was determined that having Talgo perform the inspection and repair on all 74 Option A650 heavy rail vehicles and twelve (12) spare truck frames currently undergoing a modernization effort was the fastest and most economical way forward with the least impact to revenue service and the ongoing modernization effort.

DISCUSSION

To mitigate this issue, staff proposes performing non-destructive testing (NDT) on all 74 Option A650 heavy rail vehicles and twelve (12) spare truck frames currently undergoing a modernization effort. After the testing is complete, truck frames identified with cracks shall be repaired and repainted prior to re-assembly.

If the contract modification is approved, Talgo Inc. shall perform the testing and inspection on the 74 Option A650 heavy rail vehicles currently undergoing a modernization effort and the twelve (12) spare truck frames.

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% DBE goal under the FTA TVM goal.

DETERMINATION OF SAFETY IMPACT

Approval of this item will have a direct and 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 Modernization Project is \$99,061,908. This amount includes funds for the HRV Modernization project and Contract Modification No.1, 2 and

3. There are also funds allocated for Professional Services, Metro Labor, and Project Contingency. The requested LOP increase of \$6,047,723 also includes other technical and program management support services. The LOP will increase from \$99,061,908 to \$105,109,632.

This contract modification action will not impact the FY20 Budget.

Since this is a multi-year contract/project, the Cost Center Manager, Project Manager, and Senior Executive Officer, Vehicle Engineering and Acquisition will be responsible for ensuring that project costs are budgeted in future Fiscal Years.

Impact to Budget

The funding sources for this project may come from Transportation Development Act (TDA) Article 4, Cap and Trade, and other State and Federal funding. Funding will be allocated as funding allocations and opportunities arise. Use of these funding sources will maximize allowable funding mechanisms given approved funding provisions.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Approval of this recommendation supports the following Metro Strategic Plan Goal 5) Provide responsive, accountable, and trustworthy governance within the Metro organization. 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. A catastrophic failure of the vehicle truck frame could cause a major disruption in service, thus directly impacting customer safety and customer service.

NEXT STEPS

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

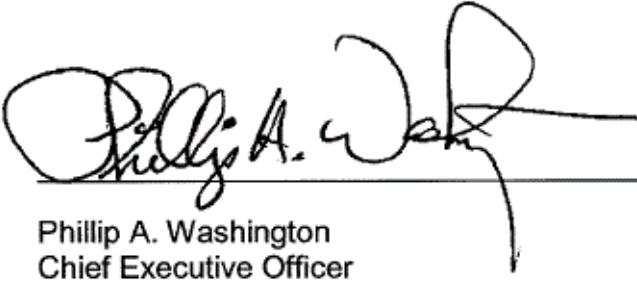
ATTACHMENTS

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

Prepared by: Andrew Kimani, Sr. Manager, Project Manager, (213) 922-3221
Jesus Montes, Sr. EO, Vehicle Engineering & Acquisition, (213) 418-3277

Reviewed by: James T. Gallagher, Chief Operations Officer, (213) 418-3108

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



Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

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

1.	Contract Number: A650-2015		
2.	Contractor: Talgo, Inc.		
3.	Mod. Work Description: Add truck frame inspection and repairs to Overhaul Program		
4.	Contract Work Description: Overhaul A650 Heavy Rail Vehicles		
5.	The following data is current as of: 06.10.19		
6.	Contract Completion Status		Financial Status
	Contract Awarded:	10.5.16	Contract Award Amount: \$54,698,676
	Notice to Proceed (NTP):	01.16.17	Total of Modifications Approved: \$30,671,726
	Original Complete Date:	11.16.19	Pending Modifications (including this action): \$ 5,054,030
	Current Est. Complete Date:	05.16.22	Current Contract Value (with this action): \$90,424,432
7.	Contract Administrator: Wayne Okubo		Telephone Number: (213)922-7466
8.	Project Manager: Andrew Kimani		Telephone Number: (213)922-3221

A. Procurement Background

This Board Action is to approve Contract Modification No. 4 issued in support of the addition of truck frame repairs 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 option to overhaul the remaining 36 vehicles of the newest A650 fleet. On October 26, 2017, Metro's Board of Directors approved the exercise of a Contract Option 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 inspection, testing, and repair of cracks discovered in the vehicle truck frame to the scope of the A650 overhaul program currently underway by Talgo. This change has merit because the work fulfills the intent of the overhaul program to ensure the safety, reliability and availability of the A650 HRVs.

B. Cost/Price Analysis

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

Proposal Amount	Metro ICE	Negotiated Amount
\$5,136.812	\$1,732,350	\$5,054,030

The difference between the Metro ICE and the Negotiated Amount is attributed to a number of factors that were not fully considered in the Metro ICE.

The Metro ICE was developed using direct labor rate estimates only and did not address labor or manufacturing overheads. The correct application of fully burdened labor rates would have significantly increased the ICE amount.

The Metro ICE also underestimated transportation costs. Due to the specialized nature of the work, the non-destructive testing and the repairs will be performed at a subcontractor's facility and this will require specialized transportation.

Another major factor not considered in the Metro ICE is the schedule impact. The inclusion of this work into the A650 overhaul program will require an extension of the project by 2 months. The costs associated with the schedule extension were not included in the Metro ICE. Other factors such as travel costs and profit were also not part of the Metro ICE.

DEOD SUMMARY

**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.

CONTRACT MODIFICATION/CHANGE ORDER LOG

NAME OF PROJECT/CONTRACT NUMBER

Mod. no.	Description	Status (approved or pending)	Date	\$ Amount
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	Add TWC to A650 HRV OCCRP	Approved	01.24.19	\$ 2,044,908
4	Add truck frame inspection and repair	Pending	07.25.19	\$ 5,054,030
	Modification Total:			\$35,725,756
	Original Contract:			\$54,698,676
	Total:			\$90,424,432

ATTACHMENT D - 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	7/1/22 - 6/30/23	Total	% of Project
		FY19	FY20	FY21	FY22	FY23		
Use of Funds								
Overhaul 38 Option-Buy Vehicles	\$9,846,449	\$13,468,252	\$15,985,361	\$15,398,614	\$0	\$0	\$54,698,676	83.2%
Professional Services	\$2,179,051	\$913,333	\$1,000,667	\$659,645	\$0	\$0	\$4,752,696	7.2%
MTA Administration	\$1,353,353	\$422,279	\$542,000	\$310,382	\$0	\$0	\$2,628,014	4.0%
Contingency	\$0	\$0	\$0	\$0	\$0	\$3,653,754	\$3,653,754	5.6%
38 Newest Vehicle Summary	\$13,378,853	\$14,803,864	\$17,528,028	\$16,368,641	\$0	\$3,653,754	\$65,733,139	100.0%
Contract Modifications - Option Vehicle Overhaul								
Overhaul 36 Option Vehicles	\$4,624,856	\$1,240,633	\$0	\$1,757,088	\$8,770,768	\$1,878,473	\$18,271,818	87.3%
Professional Services	\$0	\$0	\$0	\$347,840	\$249,398	\$0	\$597,238	2.9%
MTA Administration	\$0	\$0	\$0	\$124,755	\$290,000	\$22,407	\$437,162	2.1%
Contingency	\$0	\$0	\$0	\$0	\$0	\$1,622,643	\$1,622,643	7.8%
36 Option Vehicle Order Summary	\$4,624,856	\$1,240,633	\$0	\$2,229,683	\$9,310,166	\$3,523,523	\$20,928,861	100.0%
Overhaul 74 Option-Buy Vehicles	\$14,471,304	\$14,708,884	\$15,985,361	\$17,155,702	\$8,770,768	\$1,878,473	\$72,970,493	84%
Professional Services	\$2,179,051	\$913,333	\$1,000,667	\$1,007,485	\$249,398	\$0	\$5,349,934	6%
MTA Administration	\$1,353,353	\$422,279	\$542,000	\$435,137	\$290,000	\$22,407	\$3,065,176	4%
Contingency	\$0	\$0	\$0	\$0	\$0	\$5,276,397	\$5,276,397	6%
Order Summary Total	\$18,003,708	\$16,044,496	\$17,528,028	\$18,598,325	\$9,310,166	\$7,177,277	\$86,662,000	100.0%
Contract Modifications - Vehicle Contractor								
2.1. Add Fire Mist Suppression System (FMSS)	\$0	\$1,094,013	\$2,732,140	\$1,491,280	\$0	\$0	\$5,317,432	30%
2.2. Add Fire Mist Suppression System (FMSS) Option	\$0	\$0.00	\$0	\$1,240,860	\$2,732,140	\$1,064,568	\$5,037,568	29%
3.1. Add Train To Wayside Communication (TWC)	\$0	\$221,492	\$537,728	\$290,868	\$0	\$0	\$1,050,088	6%
3.2. Add Train To Wayside Communication (TWC) Option	\$0	\$0	\$0	\$246,861	\$537,728	\$210,231	\$994,820	6%
4.1. Add Truck Frame Inspection and Repair Services (Increase Requested)	\$0	\$0	\$1,867,455	\$727,858	\$0	\$0	\$2,595,313	15%
4.2 Add Truck Frame Inspection and Repair Services (Option Vehicles) (Increase Requested)	\$0	\$0	\$0	\$605,634	\$1,333,493	\$519,590	\$2,458,717	14%
38 Newest Vehicle Contract Modifications	\$0	\$1,315,505	\$5,137,323	\$2,510,006	\$0	\$0	\$8,962,833	51%
36 Option Vehicle Order Contract Modifications	\$0	\$0	\$0	\$2,093,355	\$4,603,361	\$1,794,389	\$8,491,105	49%
Total Contract Modifications - Vehicle Contractor	\$0	\$1,315,505	\$5,137,323	\$4,603,361	\$4,603,361	\$1,794,389	\$17,453,938	100%
Contract Modifications - Consultant								
1.1. Add Ten (10) Months Contract Extension Option	\$0	\$0	\$0	\$0	\$794,955	\$198,739	\$993,693	100%
38 Newest Vehicle Contract Modifications	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0%
36 Option Vehicle Order Contract Modifications	\$0	\$0	\$0	\$0	\$794,955	\$198,739	\$993,693	100%
Total Contract Modifications - Vehicle Contractor	\$0	\$0	\$0	\$0	\$794,955	\$198,739	\$993,693	100%
38 Newest Vehicle Summary Including Contract Modifications	\$13,378,853	\$16,119,369	\$22,665,351	\$18,878,647	\$0	\$3,653,754	\$74,695,972	71.06%
36 Option Vehicle Order Summary Including Contract Modifications	\$4,624,856	\$1,240,633	\$0	\$4,323,039	\$14,708,481	\$5,516,651	\$30,413,659	28.94%
Total New Order Summary Including Contract Modifications	\$18,003,708	\$17,360,002	\$22,665,351	\$23,201,685	\$14,708,481	\$9,174,405	\$105,109,632	100.00%
Sources of Funds		FY19	FY20	FY21	FY22	FY23	Total Sources	%
Measure R 2% (206038)	\$1,636,916	\$0	\$0	\$0	\$0	\$0	\$1,636,916	1.6%
PropA 35% Bonds/Cash	\$6,290,906	\$0	\$0	\$0	\$0	\$0	\$6,290,906	6.0%
Transportation Development Act Article 4	\$6,376,002	\$16,367,495	\$18,079,978	\$11,050,849	\$4,589,435	\$7,895,606	\$64,359,365	61.2%
Federal 5337 Funding	\$3,699,884	\$992,506	\$0	\$3,458,431	\$6,849,179	\$0	\$15,000,000	14.3%
Cap and Trade; Other State & Federal sources (206038)*	\$0	\$0	\$0	\$5,422,537	\$0	\$0	\$5,422,537	5.2%
Division 20 Portal, Turnback, and Storage Project	\$0	\$0	\$4,585,373	\$3,269,868	\$3,269,868	\$1,274,799	\$12,399,908	11.8%
* Future Local, State & Federal Funds to be identified as they become av	0	0						
Total Funding Sources	\$18,003,708	\$17,360,002	\$22,665,351	\$23,201,685	\$14,708,481	\$9,174,405	\$105,109,632	100.0%

* 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.