



**Metro**

Los Angeles County  
Metropolitan Transportation Authority

One Gateway Plaza  
Los Angeles, CA 90012-2952

213.922.21  
metro.net

**32**

**SYSTEMS SAFETY AND OPERATIONS COMMITTEE**

**OCTOBER 17, 2013**

**SUBJECT: METRO GREEN LINE TRAIN CONTROL EQUIPMENT**

**ACTION: APPROVE CONTRACT MODIFICATION**

**RECOMMENDATION**

Authorize the CEO to execute Contract Modification No. 1 to Contract No. OP39602915 with Ansaldo STS USA for the upgrade of the existing solid-state, train control equipment to include the replacement of the communication system (Fiber-mux) in an amount not-to-exceed \$1,424,775, increasing the total contract value from \$7,103,248 to \$8,528,023.

**ISSUE**

On January 13, 2013, Metro awarded Contract No. OP39602915 to Ansaldo STS USA to upgrade the train control Microlok systems for the Metro Green Line (MGL). The system controls interlocking and provides automatic train protection and train control, thereby, ensuring safe train routing along the entire alignment. The Microlok system requires an effective communication system. Upgrading the communication system was not part of this contract and was slated as a separate project. However, staff has determined that including the communication upgrade as part of this contract is the more efficient and cost effective way to proceed.

**BACKGROUND**

The MGL is equipped with an Ansaldo MicroLok I train control system. This system has been operational from the start of the MGL, approximately 17 years ago, but is no longer supported by the Original Equipment Manufacturer (OEM). The equipment needs to be replaced as it nears the end of its useful life.

MicroLok I is a subsystem of the MGL automatic train control system that safely routes trains along the alignment. The existing MicroLok system was manufactured by Ansaldo and supplied under the H1100 contract in the mid-1990s. The equipment was Ansaldo's first generation of vital solid-state logic controllers for train control and was not widely used across the United States.

Ansaldo's 2<sup>nd</sup> generation of logic controllers (MicroLok II) is a direct replacement for the MicroLok I unit and is used across multiple transit and freight agencies both domestically and worldwide. An evaluation of the MicroLok II system revealed that the software is easily integrated into the current signal system. No significant new software development is required and connection from old components to new components will be easily performed. Ansaldo also understands how the existing MicroLok I equipment interfaces with other MGL systems, including central control, train-to-wayside communications, and automatic train operation. Interface documentation is already developed. These software and interface capabilities allow Ansaldo to smoothly transition train control equipment replacement, and upgrading the communication system will enable seamless equipment change out with minimal impact to service.

### **DETERMINATION OF SAFETY IMPACT**

This communication upgrade is essential for safe and on-time service delivery on the MGL system. If the communication system is not upgraded, system operation and maintenance issues may impact vital safety systems and safe system operation.

### **FINANCIAL IMPACT**

Total contract value is \$8,528,023. Funding of \$2,018,000 for this procurement is included in the existing LOP budget under projects 211016, MGL Signal System Rehabilitation and 211030, MGL Signal System Rehabilitation Phase II.

Since this is a multi-year contract, the cost center manager, project manager, and Executive Officer, Wayside Systems will ensure that the balance of funds is budgeted in future fiscal years.

### **Impact to Budget**

The funding for this acquisition will come from the Proposition A 35% Rail Funds. These funds are eligible to be used for rail operating and capital projects. No other sources of funds were considered for this procurement because the Long-Range Transportation Plan has designated Prop A 35% for all rail rehabilitation projects.

### **ALTERNATIVES CONSIDERED**

The Board may choose not to modify this contract. Not including the communication system upgrade is not cost-effective and will not maximize the usefulness of the train control system upgrade.

### **NEXT STEPS**

Upon Board approval, staff will negotiate and execute a contract modification to the Ansaldo STS USA contract to initiate this expanded effort.

**ATTACHMENT**

- A. Procurement Summary
- B. Contract Modification/Change Order Log

Prepared by:           Aderemi Omotayo, Director, Wayside Systems  
                              Michael Harris-Gifford, Executive Officer, Wayside Systems

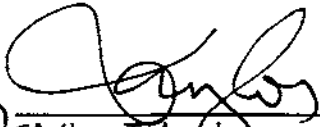
Questions:             Michelle Stewart, Transportation Planner I  
                              (213) 922-7270



Michelle Lopes Caldwell  
Chief Administrative Services Officer



Frank Alejandro  
Chief Operations Officer



for Arthur T. Leaby  
Chief Executive Officer

## PROCUREMENT SUMMARY

### MicroLok II Replacement Project

1.	<b>Contract No.:</b> OP39602915	
2.	<b>Contractor:</b> Ansaldo STS USA, Incorporated	
3.	<b>Mod. Work Description:</b> Increased Scope	
4.	Work Description: Operations; Upgrade Solid State Train Control System - MGL	
5.	The following data is current as of :	August 28, 2013
6.	<b>Contract Completion Status:</b> On Schedule	
	Bids Opened	N/A
	Contract Awarded	02/01/13
	NTP	01/16/13
	Orig. Complete Date	09/01/17
	Current Est. Complete Date	09/01/17
7.	<b>Financial Status:</b>	
	Contract Award Amount	\$7,103,248.91
	Total Contract Modification Authority (CMA)	\$710,324.89
	Total of Mods/Changes Approved to Date	None
	Total of Mods/Changes Pending to Date (including this action)	One Modification pending for \$1,424,775
	Current Contract Value (with this action)	\$8,258,023.95
8.	Contract Administrator: Tamara Reid	<b>Telephone Number:</b> 213-922-7215
9.	Project Manager: Aderemi Omotayo	<b>Telephone Number:</b> 213-922-3243

#### **A. Procurement Background**

On January 17, 2013 Metro awarded a sole source contract to Ansaldo STS USA, Inc. to upgrade the Metro Green Line (MGL) Train Control Equipment (Microlok I). Ansaldo STS USA, Inc. is the original equipment manufacturer and is the only known firm that can provide this service without replacement of existing system. The Contractor's original proposal of \$7,867,854 was formally audited, technically evaluated, negotiated, and award for a firm, fixed price of \$7,103,248.

This Board motion is to approve a contract modification adding an upgraded communication system to the train control system in an amount not-to-exceed \$1,424,775. Phased installation of train control system upgrades began in January 2013 and all MGL locations are expected to be completed by FY17. This upgrade will be integrated into the existing project schedule.

This contract change was handled in accordance with the LACMTA approved acquisition procedures for contract modifications.

**B. Cost/Price Analysis**

The recommended price for this modification is for an amount not-to-exceed \$1,424,775.48. The contractor's price proposal will be evaluated in compliance with Metro's Acquisition Policies and Procedures. Staff will conduct a comprehensive evaluation to determine that the final firm fixed price is fair and reasonable based upon the MASD audit, cost analysis, technical evaluation and negotiations.

**C. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) did not establish a Small Business Enterprise (SBE) goal for this contract due to a lack of subcontracting opportunities. SBE participation was not a condition of award or an issue of responsiveness.

**ATTACHMENT B**

**Contract Modification/Change Order Log**

Original Contract Award	\$7,103,248.95
Subtotal – Pending Changes / Modifications	\$1,424,775.00
<b>Total Mods and Pending Changes (including this change)</b>	<b>\$8,528,023.95</b>
Total Obligation	\$7,103,248.95
Prior CMA Authorized by the Board (including base award and other modifications)	\$710,325.00
Increased CMA for this recommended action	\$1,424,775.00
<b>Total CMA including this action</b>	<b>\$2,135,100.00</b>
<b>Remaining CMA for Future Changes</b>	<b>\$710,325.00</b>

**Contract Modifications**

	<b>Original Contract</b>	<b>02-01-13</b>	<b>\$7,103,248.95</b>
1.	Train control system communication system upgrade	Pending	<b>\$1,424,775.48</b>
2.	<b>Total</b>		<b>\$8,528,023.95</b>

