Metro

Board Report

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File #: 2023-0488, **File Type:** Contract

Agenda Number: 30.

OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE
OCTOBER 19, 2023

SUBJECT: INTEGRATED DATA AND COMMUNICATION SYSTEM (IDCS)

ACTION: CONTRACT AWARD

RECOMMENDATION

CONSIDER authorizing the Chief Executive Officer:

A.   to award a firm-fixed price Contract No. TS83056-2 Integrated Data and Communication System (IDCS) to Siemens Mobility, Inc., for the design, manufacture, test, installation, and commission of the IDCS system for the A650 heavy rail fleet as base contract and the P3010, P2000, and P2550 light rail fleets, and the HR4000 heavy rail fleet as Options. The base contract amount for the A650 fleet is $5,043,855 inclusive of sales tax Option 1 for the P3010 fleet is $18,051,025 inclusive of sales tax; Option 2 for the P2000 fleet is $4,415,668 inclusive of sales tax; Option 3 for the P2550 fleet is $4,775,826 inclusive of sales tax; and Option 4 for the HR4000 fleet is $6,417,348 inclusive of sales tax, for a total Not-to-Exceed (NTE) contract amount of $38,703,722, subject to the resolution of all properly submitted protest(s), if any.

B.   to increase the Life of Project (LOP) by $10,456,129 from $33,971,532 to $44,427,661.

ISSUE

The IDCS will provide real-time access to information on the train, which will reduce operations and maintenance response and diagnostics time. Further, the IDCS will improve real time arrival predictions by tracking the vehicle location using the Global Positioning System (GPS) and will calculate the vehicle location when GPS is not available, such as in tunnels. The system will also allow for more automatic retrieval of historical maintenance data and CCTV video. In addition, live viewing of the CCTV system will be possible enabling security personnel to respond faster to incidents. Finally, this System will employ the latest in cybersecurity technology to prevent disruption from external and internal threats while providing our passengers with Wi-Fi access.

BACKGROUND

Metro is seeking to acquire the IDCS to provide real-time access to information on the train. Implementing the IDCS will greatly improve service reliability, customer experience and security. The

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IDCS aims to improve train arrival prediction information; improve security and safety personnel response time and evidence collection by providing remote access to each vehicle's CCTV system; provide passenger Wi-Fi; and improve maintenance response time to vehicle reducing in-service delays.

The IDCS is comprised of two distinct subsystems: the physical device onboard, i.e., hardware; and the data management system, i.e., software. The Onboard device will monitor the train equipment to retrieve data and store it on Metro's IT-related sources and authorized servers but must not have the capability to control any other onboard system.

DISCUSSION

There are 4-key elements to the IDCS project:
1. Real-time download of on-board train systems data.
2. Accurate train location in the tunnels.
3. On-demand and remote access to downloading video clips or on-demand live streaming of a specific train's CCTV system.
4. Provides customers with Wi-Fi access.

Metro trains log a large amount of performance-related data in each of its major systems. Metro needs to install the IDCS hardware on the trains to be able to automatically access this data to provide better customer service, support better maintenance turn-around and recovery times to mainline incidents and obtain streaming surveillance video from the trains at any time to assist law enforcement. The equipment will communicate to a data management system through software allowing for data transfer to local servers for analysis.

Improving the customer experience is one of Metro's tenets and having Wi-Fi access is an amenity that many customers expect whenever they occupy a building or vehicle. The Metro trains do not currently have free public Wi-Fi, the IDCS will enable this feature. In addition, train reliability and quick return to service after an incident can greatly improve service reliability.

This state-of-the-art project is extremely critical to provide improved train arrival predictions, remote access to CCTV video, passenger Wi-Fi, and vehicle health monitoring.

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 IDCS project will permit Metro to embrace technological improvements to improve maintenance capabilities, improve the train arrival prediction algorithm, and provide access to real-time CCTV video.

FINANCIAL IMPACT

The Project LOP for project 214004 includes funds for the IDCS equipment and installation, software services for one year, spares, Metro labor, and project contingency, for a total of $44,427,661.

Currently, there is $ 2,500,000 budgeted in the FY24 budget in Cost Center 3942, under CP-214004, IDCS project.

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 current source of funds for this action is State funding that is eligible for Bus and Rail Operation and Capital activities. Concurrently, staff is actively pursuing additional State and Federal sources such as the 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.

EQUITY PLATFORM

The IDCS will be installed on all rail vehicles and operate on all Lines. However, the project will commence with the A650 fleet which is operated on Metro's B and D Lines. As seen in Attachment C, each of Metro's rail lines service EFCs and nearly all the B and D Line stations are located within EFC areas.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendation supports Metro's Strategic Plan Goal 5) Provide responsive, accountable, and trustworthy governance within the Metro organization. The completion and rollout of the IDCS project will provide state-of-the-art assets that will provide train location, passenger WIFI, real-time CCTV viewing, and vehicle health monitoring for all Metro trains.

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 Options award for this project; however, this alternative is not recommended by Metro staff because this IDCS project is new to all the rail fleets in Metro. Delay in exercising the Options will cause a delay in providing these improved services to the remaining Metro rail fleets.
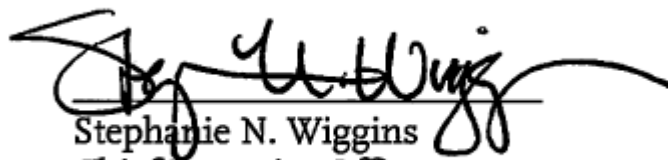
NEXT STEPS

Upon Board approval, Metro will issue the contract.

ATTACHMENTS

Attachment A - Procurement Summary
Attachment B - DEOD Summary
Attachment C - Metro EFC Map 2022

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