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

File #: 2024-0643, **File Type:** Contract **Agenda Number:** 24.

OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE
NOVEMBER 21, 2024

SUBJECT: LIGHT RAIL VEHICLE DOOR DETECTION ENABLE SYSTEM

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

A. AWARD a firm fixed price Contract No. OP123557000 to Hitachi Rail STS USA, Inc. (Hitachi) in the amount of $24,444,798.94 to modify the onboard automatic train control (ATC) software on Metro's Light Rail Vehicles (LRVs) to only allow the doors on the platform side to open upon the vehicle berthing, subject to resolution of any properly submitted protest(s), if any;

B. FIND that there is only a single source of procurement for the proprietary ATC system software and modifications set forth in Recommendation A above, and it is for the sole purpose of modifying, integrating, and testing the LRV ATC functionality on the A and E lines; and

C. INCREASE the Life-of-Project (LOP) budget for the Correct Side Door Enable System Project by $22,938,000, increasing the LOP budget from $9,062,000 to $32,000,000.

(REQUIRES TWO-THIRDS VOTE OF THE FULL BOARD)

ISSUE

All of the rail lines, both subway and light rail, operate an automated door control system at the station platform, except for the Metro A and E Lines, which operate on a manual door control system that requires the Train Operator to open the doors when the train comes to a stop at a station platform. However, there have been limited instances of train doors incorrectly opening on the non-platform side of the train. The California Public Utilities Commission (CPUC) has identified "correct side door" technology that reduces the chance for human error. To reduce the risk of train doors opening on the non-platform side, a contract award and an LOP budget increase are needed to implement a correct side door enabling system to ensure that only the platform side of the train door may open.

BACKGROUND

When train doors open on the non-platform side of the station, it may expose Metro passengers to bodily injury, including death. However, no accidents have occurred to date that resulted in passenger injury or fatality on the Metro system. In 2016, these risks came to the attention of the California Public Utilities Commission (CPUC), which recommended that Metro look into correct side door enable technology that reduces Train Operator error by preventing doors from incorrectly opening on the wrong side of the train at the station platform. Metro began seeking a correct side door enable system solution by initiating open competitive procurements. The first solicitation in 2018 did not produce any proposals, and the second solicitation in 2021 resulted in one unqualified bidder. In 2023, Operations Engineering staff reassessed the project scope, opting for a non-competitive solicitation with an Original Equipment Manufacturer (OEM) of correct side door enable system technology. In May 2024, Request for Proposal (RFP) No. OP123557 was issued as a non-competitive procurement to Hitachi Rail STS USA, Inc. (Hitachi) in accordance with Metro's Acquisition Policy and Procedures. The functional requirement for a similar system is included in the current version of the Metro Rail Design Criteria, and as a result, will be available on all future light rail transit projects.

DISCUSSION

Currently, Metro employs a similar safety system on all rail lines except the A and E Lines, which ensures that train doors only open when properly aligned with the correct side of the station platform. The project's scope is to install a crucial safety system on the A and E Lines that automatically detects which side of a platform is adjacent to a stopped train, allowing the train doors to open only on that side. This will prevent the unintended opening of doors on the non-platform or "wrong" side of the station. Additionally, the safety system will prevent a Train Operator from opening the train's doors if the train is not correctly positioned at a station. The project work is scheduled to be completed in the Fall of 2027.

The initial cost and LOP budget of a correct door detection enable system was estimated based on the existing technology in 2017, without using a more complex proprietary system, and within the scope of work identified. A re-scoping of the project had to be completed upon negotiation of Contract No. OP123557000, which resulted in a $32,000,000 LOP budget now estimated to complete the project. Refer to Attachment C for the expenditure plan of capital project 205118 - Correct Side Door Opening.

DETERMINATION OF SAFETY IMPACT

The correct side door enable system is a safety improvement project. The award of this contract and the establishment of the LOP will eliminate the current risk of Train Operators inadvertently opening the door on the wrong side of the platform. The CPUC has also recommended the implementation of technology to reduce the chance of such errors.

FINANCIAL IMPACT

This action will increase the LOP budget by $22,938,000, from $9,062,000 to $32,000,000 for capital project 205118-Correct Side Door Opening. The FY25 budget includes annual funding of $536,797

for this project.
Since this is a multi-year project, the Project Manager will ensure that the balance of funds is budgeted in future fiscal years.

Impact to Budget

The current source of fund is Measure M Metro SGR 2%. This funding is eligible for Rail SGR Projects. Additional funding sources will be pursued as opportunities become available.

EQUITY PLATFORM

Metro is committed to maintaining transit assets and ensuring reliable and equitable transportation options for Metro riders. The equity benefits of this action improve passenger safety on the A and E Lines. These lines directly provide service to many Equity Focus Communities (EFCs) as well as to low-income riders, who are the primary users of the Metro transit system.

The A and E Lines serve communities with a high concentration of EFCs, including Westlake, Exposition Park, Central-Alameda, Huntington Park, Vermont-Slauson, Vermont, Knolls, Vermont-Vista, Watts, Willowbrook, Compton, Long Beach, and Wilmington. They also serve as transfer connections to other Metro rail lines and multiple bus lines. Implementation of this safety system ensures safe operations that benefit low-income riders.

The Diversity & Economic Opportunity Department (DEOD) did not recommend a Small Business Enterprise or Disabled Veterans Business Enterprise (SBE/DVBE) participation goal for this procurement due to the lack of subcontracting opportunities.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Approval of this recommendation supports Metro's Strategic Plan Goal to deliver outstanding trip experiences for all users of the transportation system.

ALTERNATIVES CONSIDERED

The Board may choose not to award Contract No. OP123557000 and not establish a LOP budget for project 205118. Staff does not recommend this because incidents can occur, and the CPUC is recommending that Metro implements this safety system.

NEXT STEPS

Upon Board approval of the recommendations, staff will establish the LOP budget and execute Contract No. OP123557000 with Hitachi Rail for the Light Rail Vehicle Correct Side Door Enable System Project.

ATTACHMENTS

Attachment A - Procurement Summary

Attachment B - DEOD Summary
Attachment C - Project 205118 Expenditure Plan

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