



Board Report

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Agenda Number: 31.

**CONSTRUCTION COMMITTEE
APRIL 15, 2021**

SUBJECT: TRACK AND TUNNEL INTRUSION DETECTION

ACTION: APPROVE A DESIGN-BUILD CONSTRUCTION PROCUREMENT

RECOMMENDATION

CONSIDER:

Make a finding that a Design-Build contract to deliver a Track and Tunnel Intrusion Detection system at Metro transit facilities will achieve for LACMTA certain efficiencies in the performance of the design and construction of the Project, pursuant to Public Utilities Code Section 130242, authorizing the CEO to issue a solicitation.

Requires 2/3 vote.

ISSUE

Metro Operations consist of transportation and multiple support units which are committed to provide safe, courteous, professional, dependable, clean, and efficient transit services to customers. Underground train stations and tunnels pose a difficult environment for conventional technologies such as CCTV, motion detectors, infrared and microwave technology to work efficiently and cost-effectively. Staff anticipated these challenges and requested funding from the Department of Homeland Security (DHS) through the Transit Security Grant Program (TSGP) for a Track Intrusion Detection system to discern between people and trains as well as the ancillary areas in the train tunnels.

Finding that awarding a design-build contract pursuant to Public Utilities Code section 130242 (a) will achieve certain private sector efficiencies in the performance of design, , furnish, construction and testing work at Metro transit facilities in Los Angeles County as defined by the type of project listed on Attachment A. The recommended finding will allow staff to proceed with the solicitation of a contract utilizing a design-build delivery method.

BACKGROUND

The Track and Tunnel Intrusion Detection system project for underground rail stations proposes to

provide track intrusion systems at key Metro rail hub underground stations. Metro Headquarters (USG), which is located at Union Station in Downtown Los Angeles, is a key hub to the B (Red) and D (Purple) lines, and the 7TH Street and Metro Center Station is a key hub to the B (Red), A (Blue), D (Purple) and E (Expo) lines, all which have been determined by the DHS to be part of the Top Transit Asset List (TTAL).

Variables such as poor lighting and train headlights creating moving shadows, heat, and a lack of accurate depth perception in dark confined spaces have posed a challenging environment for our existing system. For example, the increasing number of the unhoused population seeking shelter on various parts of the Metro system, specifically in underground stations and ancillary areas has resulted in reoccurring intrusions causing concerns for their safety. Additionally, ancillary areas include doors, which lead to the Traction Power, Tunnel Ventilation and Communication Systems, as well as electrical and plumbing rooms. Protecting these areas, nearby tracks, and the unhoused population are critical to keeping our trains operational in a safe and secure manner.

Therefore, a Track and Tunnel Intrusion Detection system is crucial for the safety and protection of the Metro system, its ancillary areas, and train tunnels. This protection may be accomplished by positioning Track and Tunnel Intrusion Detection system equipment on the tunnel's walls to detect intruders. All required labor, material, equipment, design, installation, and testing of the system will be performed by the vendor in collaborations with Metro staff.

DISCUSSION

Findings

The objective of the Track and Tunnel Intrusion Detection system project is to provide Metro with the capability to determine intruders on the tracks and in unauthorized areas. The system is also capable of distinguishing between a person and an object. The system can also alert the train operator when a person is on the tracks and provide the ability to safely stop the train until the person is removed for the intruded area.

Considerations

The Work to be performed is designing, furnishing and installing a new Track and Tunnel Intrusion Detection System (TTIDS) on the Metro B & D Lines (Red & Purple), new Communication Interface Cabinets (CIC), including an option to install Metro-furnished Emergency Call Boxes (ECBs) on the B & D line platforms. Any additional staff necessary for maintenance of the Track and Tunnel Intrusion Detection system will be determined during the implementation of the project.

DETERMINATION OF SAFETY IMPACT

This capital improvement project will provide a positive safety impact to Metro employees, contractors, and the public by providing enhanced safety and security against unauthorized entries to our system. This project will also increase situational awareness and promote better behaviors from all.

FINANCIAL IMPACT

This capital improvement project was awarded a Transit Security Grant Program (TSGP) Homeland Security grant in the amount of \$6,204,960. The FY21 portion of the grant funds are included in System Security & Law Enforcement's FY21 budget, Project 212123, Cost Center 2613.

Impact to Budget

Currently, the TSGP funds are programmed to this project, maximizing the allowable project funding designations given approved provisions and guidelines. Staff will pursue additional funding as opportunities are available.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Recommendation supports strategic plan goal # 1. Approval of this recommendation supports Metro Strategic Plan Goal 1: Deliver an outstanding experience for all users of the transportation system by providing superior customer service while preventing terrorism and reducing crime on our system. This project will protect our customers, track, and tunnel areas which is crucial to keeping our trains operating in a safe and secure manner.

ALTERNATIVES CONSIDERED

In today's environment, it remains necessary to constantly adjust to the tactics, techniques and procedures of terrorists who aim to cause mass civilian casualties. These improvements will include additional digital video recorders, cabling, and the engineering to facilitate the new and upgraded CCTV cameras & Track and Tunnel Intrusion technology. With this improvement, DHS' FY20 evaluation of the national risk profile, priority of; 1) Enhancing the Protection of Soft Targets/Crowded Places, will be addressed. Any incapacitation or destruction to LACMTA's system would severely affect the continuity of operations as well as safety to public health, security and economic impact to the Los Angeles County area. This capital improvement project will support the Track and Tunnel Intrusion Detection for underground rail stations and the upgrades to the CCTV network would add to Metro's continued improvement to our physical security posture in critical locations, which have been identified as 'soft targets'.

NEXT STEPS

Upon approval of this item, Staff will begin with the solicitation process by preparing the Design-Build request for proposal package in anticipation to awarding the project in the Fall of 2021.

ATTACHMENTS

Attachment A - Capital Improvement Project Procurement for a D/B Contract

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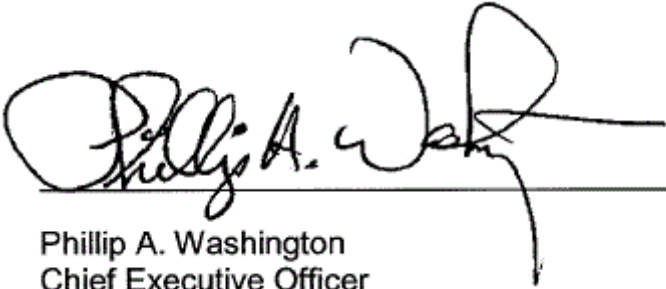
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Phillip A. Washington
Chief Executive Officer

ATTACHMENT A

Track and Tunnel Intrusion Detection Proposed for Design-Build Approach

Project No.	Project Title	Project Description	Life-of-Project Budget
212123	Track and Tunnel Intrusion Detection	Provide a new Track and Tunnel Intrusion Detection System (TTIDS) on the Metro B & D Lines (Red & Purple), new Communication Interface Cabinets (CIC), including an option to install Metro-furnished Emergency Call Boxes (ECBs) on the B & D line platforms.	\$ 8,873,092