



Board Report

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Agenda Number: 32.

OPERATIONS, SAFETY AND CUSTOMER EXPERIENCE COMMITTEE OCTOBER 17, 2019

**SUBJECT: TRACK AND TUNNEL INTRUSION DETECTION & VIDEO ANALYTICS
TECHNOLOGY GRANT**

ACTION: ESTABLISH A LIFE OF PROJECT

RECOMMENDATION

ESTABLISH the Life-of-Project for the following capital projects:

- A. APPROVE the Life-of-Project for Track and Tunnel Intrusion Detection for Underground Rail Stations for \$8,873,092. The project was awarded Transit Security Grant Program (TSGP) grant funds of \$6,204,960; and
- B. APPROVE the Life-of-Project for Video Analytics Technology for CCTV cameras at Rail Stations and bus lines for \$7,200,000. The project was awarded Transit Security Grant Program (TSGP) grant funds of \$7,200,000.

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. Subway stations and tunnels pose a difficult environment for conventional technologies such as video analytics, motion detectors, infrared and microwave to work efficiently and cost-effectively.

Staff has anticipated these challenges by requesting funding from 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.

DISCUSSION

The projects that will be established with Federal funding are the Track and Tunnel Intrusion Detection project for Underground Rail Stations at the Union Station Gateway (USG) and throughout system-wide underground stations and the Video Analytics Technology for CCTV cameras project for at grade rail and bus stations system-wide.

Track and Tunnel Intrusion Detection for Underground Rail Stations

The Track and Tunnel Intrusion Detection for Underground Rail Stations project proposes to install track intrusion systems at key LACMTA rail hub underground stations. Most importantly, LA Metro Headquarters, which was determined by the Department of Homeland Security to be part of the Top Transit Asset List (TTAL). (USG) is a hub for the Red and Purple Subway Lines. In addition 7th Street and Metro Center (Red, Blue, Purple and Expo Lines) on the LACTMA system also makes the list. Variables which include poor lighting, and train headlights create moving shadows, heat, and a lack of accurate depth perception in dark confined spaces. The results pose a challenging environment for our existing system. Therefore a track intrusion detection system is crucial to protecting our system, and the ancillary areas in the train tunnels. The ancillary areas include doors, which lead to the Traction Power, HVAC communications, as well as electrical and plumbing rooms. Protecting these areas and nearby tracks are crucial to keeping our trains operating in a safe and secure manner. This protection can be accomplished by positioning the proposed track intrusion equipment on the walls in the tunnels to provide detection of any intruders on tracks. All installation, power, and monitoring of this equipment will be conducted by the vendor and LACMTA. Another current and reoccurring problem found in the LACMTA subway and ancillary areas is intrusion by the homeless community. It is an ongoing crisis, which causes them to frequently seek shelter in the underground areas where our system runs.

Video Analytics Technology Grant

In addition to strengthening our unground stations and tunnels, the Video Analytics Technology for CCTV cameras project will strengthen our awareness throughout the system. LACMTA has 1363 current CCTV cameras at our rail stations system-wide; however, cameras provide views of the ticket vending machines, fare gates, handicapped gates, and general views of the passenger platform, therefore providing only a limited view of activity in the system. The camera installations for this project will significantly enhance and increase the view of all platforms, track areas, and avenues of approach to the rail station hubs at USG for Amtrak and Metrolink as well as throughout LACMTA's rail lines. USG is also a pickup and drop off destination for regional, local buses, taxis and ride-pickup. In the case of underground stations for the subway, stairwells and mezzanine areas, installation of these CCTV cameras will enhance all angles of the stations as well as visibility of activity in the system. LACMTA and its Security Force as well as our law enforcement partners, will have greater visibility of our rail stations and the areas around the stations for situational awareness overall effort to protect our system and USG. In addition, our mobile application for CCTV cameras will improve the ability to view events on the ground before law enforcement deploys to a scene.

The objective of the Track and Tunnel Intrusion project is to provide the capability to LACMTA to determine whether an intruder has entered the tracks and is in the unauthorized area. The equipment 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.

The object of the Video Analytics Technology for CCTV cameras at Rail Stations and bus lines project is to purchase, install and replace 1001 new CCTV cameras and 49 DVRs. They will be located at LACMTAs elevated, at grade rail and bus stations, and unground stations.

These equipment upgrades will substantially improve the overall effort of LACTMA to protect our system and the (USG) TTAL against unauthorized persons and potential terrorist threats or attacks against our system trains, bus, tracks, passengers, employees, and our ancillary areas.

DETERMINATION OF SAFETY IMPACT

This capital project expenditure 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 provide better situational awareness and promote better behaviors from all.

FINANCIAL IMPACT

New Capital project numbers will be created and grant revenues added to fund them. Since this is a multi-year project, the Cost Center Manager and Chief System Security Officer will be responsible for budgeting future years for the balance of the project.

IMPACT TO BUDGET

The DHS Grant funds of \$6,204,960 & \$7,200,000 of these projects are eligible for bus and rail operating and capital improvements, although the grant award is for this specific project. The grants do not require a local match. The Track and Tunnel Intrusion project will require \$2,668,132 of TDA Article 4 funds to fund the balance of the project cost beyond the grant funds. TDA Article 4 is eligible for bus and rail operations and capital expenses.

ALTERNATIVES CONSIDERED

In today's environment it is necessary to constantly adjust to the tactics, techniques and procedures of terrorists intent on causing mass civilian casualties and paralyzation to daily lives. These enhancements 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' evaluation of the national risk profile for FY20 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.

An option considered would be not to amend the budget with the funding from the Department of Homeland Security Grant Program. This alternative is not recommended because the Track and Tunnel Intrusion Detection for Underground Rail Stations and the upgrades to the CCTV network is a necessary step to continue to improve our physical security posture in critical locations.

NEXT STEPS

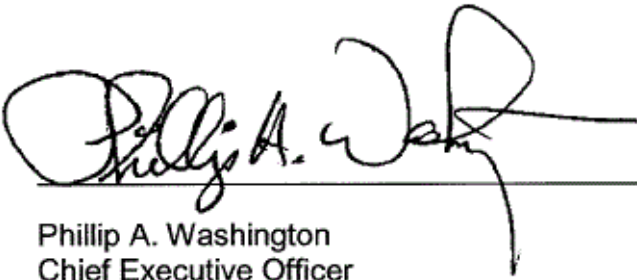
Upon approval of recommendation, staff will setup the new Capital project number, establish the LOP

budgets for the capital project and commence work.

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