

DRISI

CALTRANS DIVISION OF RESEARCH,
INNOVATION AND SYSTEM INFORMATION

Research Notes

Equipment

JULY 2023

Project Title: Evaluation of
Advanced Security Systems
for Caltrans Equipment Yards/
Maintenance Stations

Task Number: 4153

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Completion Date: June 30, 2024

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Evaluation of Advanced Security Systems for Caltrans Equipment Yards/Maintenance Stations

This project plans to research security systems to reduce component theft at Caltrans yards and Maintenance stations.

WHAT IS THE NEED?

The California Department of Transportation (Caltrans) currently experiences high amounts of vehicle component theft at equipment yards and maintenance stations. Cumulatively, the state has had over \$4 million of catalytic converters stolen to date. Equipment yards and maintenance stations typically have perimeter fences and sometimes standing guards, but guard service is prohibitively expensive for wider usage. These current security measures are inadequate to deter criminals.

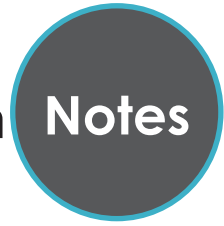
Caltrans needs evaluation of a modern security system. One possible system is mobile robot security guards for potential deployment in Caltrans yards. Another potential system uses fixed cameras and human monitoring or analytics to monitor the yard. Each of these systems holds the promise of greatly reducing this theft problem and associated costs.

WHAT ARE WE DOING?

The project plans to first survey the mobile robot security guard and video analytics security industry landscape. Once the options have been determined, the research panel will select one system to be evaluated. The researchers will develop a pilot test plan to perform specific tests to assess the system's ability to deter theft at a test site selected by the panel. The Marysville equipment yard was chosen as the test site, and Caltrans personnel are expected to participate in the pilot test. After the tests have been conducted, a cost-benefit analysis will be completed to compare the theft cost versus the system cost in addition to a survey of the pilot testers' experiences with the system.



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California's transportation system



WHAT IS OUR GOAL?

The goal of this project is to determine if modern security systems can provide overall reduced costs due through reductions in theft in Caltrans facilities.

WHAT IS THE BENEFIT?

This project plans to address the security needs of Caltrans equipment yards and maintenance stations. These advanced security systems are expected to deter theft and streamline the process of alerting responding agencies to intruders at sites where these systems are deployed.

WHAT IS THE PROGRESS TO DATE?

A contingency funding request was submitted and approved for this task. The Advanced Highway Maintenance and Construction Technology (AHMCT) researchers are currently in the process of finalizing procurement logistics.

For the most current project information, please contact the task manager.