

Maintenance

November 2025

Project Title:

Evaluation of Battery-powered
Compact Low-profile Loaders
Project

Task Number: 4316

Start Date: June 1, 2024

Completion Date: May 31, 2026

Task Manager:

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knowledge that improves
California's transportation system.

Evaluation of Battery-powered Compact Low-profile Loaders Project

This project will provide an evaluation electric low-profile loaders.

WHAT IS THE NEED?

The California Department of Transportation (Caltrans) is looking to increase its use of Zero Emission Vehicles to help reduce the carbon footprint on the environment. It is important for Caltrans to evaluate all electric equipment in our operations that have the potential to reduce our carbon footprint.

WHAT ARE WE DOING?

Advanced Highway Maintenance and Construction Technology (AHMCT) will acquire a suitable commercially available, electric tunnel mucker to be used as a culvert cleaner early in the project. The procurement procedure will be in cooperation with Caltrans Divisions of Equipment and Maintenance in the project panel. Next, AHMCT will develop a test plan to guide the evaluation, perform detailed testing to assess the suitability of the system for Caltrans operations, and provide a summary evaluation of the system. Most of the tests will be performed by or in conjunction with Caltrans Maintenance personnel. The evaluation will include feedback from Caltrans personnel regarding their experience in operating the electric culvert cleaner. The project duration is 24 months, and a brief list of tasks includes:

- Project management (24 months)
- Literature and product search (3 months)
- Acquire the system (4 months)
- Test plan development (4 months)
- System testing (9 months)
- System evaluation, including worker surveys (6 months)
- Final report and evaluation summary (4 months)

WHAT IS OUR GOAL?

The goal of this project is to evaluate the electric low-profile loader on its ability for use in Caltrans operations to reduce our reliance on combustion vehicles.

WHAT IS THE BENEFIT?

Zero emission vehicles will help Caltrans reduce our carbon footprint on the environment.

WHAT IS THE PROGRESS TO DATE?

As of November 2025, here is the progress to date: This project panel has met multiple times to discuss equipment specifications. Caltrans Division of Maintenance is currently putting together bids to procure the low profile loader for evaluation. For more information contact the task manager.