



Caltrans Division of Research,
Innovation and System Information

Research



Notes



Maintenance

FEBRUARY 2023

Project Title:
Balsi Beam Implementation
Research

Task Number: 4193

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Balsi Beam Implementation Research

The goal is to help maintenance personnel identify the type of maintenance activities in which they can use Balsi Beam.

WHAT IS THE NEED?

Currently the Caltrans maintenance manual does not contain guidelines on where to use the Balsi Beam. There is a need to develop guidelines and procedures for the safe and effective utilization of Balsi Beam in appropriate highway maintenance and construction work zones. These guidelines can then be included in the Caltrans maintenance manual and will facilitate more use of the Balsi Beam in highway work zones resulting in improved safety for maintenance workers.

WHAT ARE WE DOING?

This project plans to perform research on where and under what conditions the Balsi Beam system can provide the best benefits at a work zone and develop draft guidance documents for updating the Caltrans maintenance manual.

In this project the research team will revisit the design and previous studies related to Balsi Beam and develop specification of its crash performance data as well as its operational envelop. This will guide the potential uses of Balsi Beam in maintenance and construction operations. The researchers will work with project panel to identify different maintenance sites and functions where positive protection is used for highway workers. These sites will be classified into categories and mapped into crash performance and operational envelop of the Balsi Beam to determine where it can be best used to benefit the highway workers. The results of the mapping will then be synthesized to develop a set of recommendations that can be considered by Caltrans to update its maintenance manual.



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WHAT IS OUR GOAL?

The goal of this project is to help Caltrans maintenance personnel identify the type of maintenance activities in which they can use the Balsi Beam.

WHAT IS THE BENEFIT?

The results of this project are expected to improve worker safety based on recommending guidelines for utilization of Balsi Beam in different maintenance and construction operations. It will also enhance the use of existing Caltrans Balsi beam units.

WHAT IS THE PROGRESS TO DATE?

The kick-off meeting of this project was held on August 19, 2022, project panel meetings were held on September 19, and December 12, 2022

Contractor updated the specification document for Balsi Beam and developed a draft Balsi Beam utilization table that shows where Balsi Beam can or cannot be utilized. Contractor also developed a draft procedure for the Balsi Beam deployment, based on Caltrans practices.

IMAGES



Image 1: Balsi Beam, Mobile Work Zone Barrier