Managing Low Volume Access Points in Work Zones

Identify and/or develop equipment to manage low volume access points in one lane, one-way traffic control closures.

WHAT IS THE NEED?

Work zones that utilize one lane, one-way traffic control often contain low volume side roads and driveways (referred to as access points) that complicate traffic control efforts.

When vehicles enter the traffic control from an access point, chances are high that they will be moving against the traffic flow or entering an area where traffic has been held from both directions. These situations are problematic and may lead to delay, collisions, and injuries. When volumes are high enough, a flagger may be posted, but in most situations, posting a flagger(s) isn’t feasible.

California Department of Transportation (Caltrans) desires to reduce the frequency of wrong way movements in one lane, reversing traffic control operations to increase safety and improve operations by using state-of-the-art technology.

A potential outcome of this research, in addition to improved safety, can include reduced congestion and operational costs. Recent research indicates new technology may be available (or developable) to achieve this goal.

WHAT ARE WE DOING?

Caltrans is working with the Advanced Highway Maintenance Construction Technology Research Center at University California, Davis to conduct this research. The research team will establish a Project Panel that consists of Caltrans staff from the Division of Maintenance and the Division of Construction, who will work collaboratively to best guide the research effort.
The research team will conduct a thorough literature review to gather and evaluate existing study about managing low volume access points in one lane, reversing traffic control operations. They will also gather information about commercially available equipment or other developed products and provide insight on market availability. Finally, they will summarize and present this information to the Caltrans Project Panel for consideration.

The presentation to the panel will address the following questions:
• Which products can supplement the T-13 Standard Plan without product modifications?
• Which products can supplement the T-13 Standard Plan if modified?
• Can concepts for new equipment be developed?

After the presentation, Caltrans Project Panel will decide:
• Which products should be selected for further evaluation
• Which concept for a new piece of equipment should be pursued

From this direction, the research team will develop a testing plan for an existing product to validate its use in the T-13 Standard Plan. This test plan will also recommend annotations to the T-13 Plan that will facilitate the use of the product.

In addition to the test plan for an existing product, the researchers will develop a research proposal (to include cost, scope, and duration) for a new piece of equipment to be used for managing low volume access points.

Next, they will select a commercial product based on guidance from the panel for testing, procure the product selected based on Caltrans requirements; develop a test protocol for testing the product in a closed facility, and then perform testing and analysis of the data obtained.

A final report will document the research results, conclusions, and recommendations.

**WHAT IS OUR GOAL?**

The goal of this task is identify and/or develop equipment to manage low volume access points in one lane, one way traffic control closures.

**WHAT IS THE BENEFIT?**

This research has the potential to benefit temporary roadway lane closures and traffic redirection work zones. It can potentially reduce traffic flow disruptions and collisions that sometimes occur in these work zones.

**WHAT IS THE PROGRESS TO DATE?**

The Project Panel for this research selected to test a Driveway Management Unit from Superior Traffic Services. A test plan was developed and testing is scheduled to take place in Fall 2019.

For additional information please contact Task Manager.

**IMAGE**

Figure 1: Driveway Management Unit from Superior Traffic Services