



Caltrans Division of Research,  
Innovation and System Information

# Research



# Results



Transportation  
Safety and  
Mobility

**APRIL 2020**

**Project Title:**

Safety Effects of Yellow Alert  
Changeable Message Signs

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## Safety Effect of Yellow Alert Changeable Message Signs

A study to identify and evaluate the safety effects of the Yellow Alert Changeable Message Signs on drivers.

### WHAT WAS THE NEED?

In 2015, a bill was signed into law in California that mandated the implementation of the Yellow Alert Changeable Message Signs (CMS) for hit-and-run accidents. The Yellow Alert CMS was briefly implemented in California, but shortly after, the Federal Highway Association (FHWA), which has strict regulations about what can be displayed on the CMS, ordered California Department of Transportation (Caltrans) to discontinue the use of Yellow Alert.

In 2016, Caltrans requested for FHWA's approval to conduct a two-year demonstration program to evaluate the effectiveness of displaying Yellow Alert messages on CMS. FHWA denied Caltrans' request addressing safety concerns of using CMS. FHWA contended that the alert may distract drivers as they look for the subject vehicle, change driving behaviors when examining and reporting a suspected vehicle, and even follow or stop the suspected vehicle.

An in-depth study would provide an insight to Caltrans, to decide if further actions for reinstating the Yellow Alert CMS should be pursued.

### WHAT WAS OUR GOAL?

The primary objective of this research was to identify and evaluate the safety effects of the Yellow Alert CMS on drivers.



Caltrans provides a safe, sustainable,  
integrated and efficient transportation  
system to enhance California's  
economy and livability.



## WHAT DID WE DO?

The research team utilized a survey to ask drivers about their understanding of the Yellow Alert and their responses after reading it. Drivers who indicated high likelihood to take actions after reading the Yellow Alert was invited to participate in a simulation experiment to investigate the safety effect of their driving behavior.

## WHAT WAS THE OUTCOME?

Based on the outcome, the result indicates that when the yellow alert CMS was displayed and when the suspected vehicle was present, the participant's driving performance was changed. For more detailed information, please refer to the final report.

## WHAT IS THE BENEFIT?

The research was designed to provide a better understanding of the safety effects if the proposed Yellow Alert message was displayed on CMS.