UTC Project Information	
Project Title	MPC-610 – Impact of Regulatory Hybrid Changeable Message Sign on Traffic Safety under Different Freeway Geometric Designs
University	University of Utah
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Office of the Assistant Secretary for Research and Technology $75,000 Utah Department of Transportation $100,000
Total Project Cost	$175,000
Agency ID or Contract Number	69A3551747108
Start and End Dates	February 18, 2020 to July 31, 2022
Brief Description of Research Project	The Utah Department of Transportation (UDOT) has implemented a Variable Speed Limit (VSL) zone on a section of I-80 using regulatory hybrid Changeable Message Signs (CMSs). In the current systems, the CMSs have been operated with white LED numbers on the black background. However, it has been found that the visibility of those numbers that indicate speed limits has become a problem during both winter and summer seasons. Hence, UDOT is now in the process of installing a new CMS system which replaces the color of white CMS LED by yellow. In the literature, although many recent studies have studied the impacts of CMS’s visibility on improving safety, limited efforts have studied such impacts under different freeway geometric designs. By collecting historical crash locations in the VSL zones, our research team will further discuss how the new CMS can help to prevent crashes in various geometric design scenarios. By comparing the visibility of yellow-legend and white-legend CMS systems, the results will be discussed for the legend color selection for CMS. The collected safety data will be used to analyze the impacts of CMS on potential crash rate and severity using surrogate safety evaluation method.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	

Web Links • Reports • Project Website	