

UTC Project Information	
Project Title	MPC-590 – Impact of Connected Vehicle Technology on Traffic Safety under Different Highway Geometric Designs
University	University of Utah
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Research and Innovative Technology Administration \$40,000 Utah Department of Transportation \$50,000
Total Project Cost	\$90,000
Agency ID or Contract Number	69A3551747108
Start and End Dates	January 12, 2019 to July 31, 2022
Brief Description of Research Project	With the recent rapid development of wireless communication and computing techniques, connected vehicle (CV) technology has reached a level of maturity and it can be expected that CVs will soon go beyond testbeds. Early deployments of CV technology have shown its great potential on improve highway safety performance. In this project, our research team aims to analyze the CV impacts on crash prevention under different highway geometric designs. Considering the strong correlations between highway geometric features and crash severity, this project will particularly study the impact of lane width, shoulder width, and alignment design on crash severity and provide guidance on methods that can be used in the impact evaluation. Grounded on a well-calibrated microscopic simulation model, this project will implement vehicle-to-vehicle (V2V) communication technologies to acquire real-time vehicle trajectory data. The collected information will further be used to analyze impacts of CVs on potential crash rate and severity with three types of surrogate measures of safety: standard deviation of speed, standard deviation of headway, and potential rear-end crash rate.
Describe Implementation of Research Outcomes (or why not implemented)	
Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links	

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| <ul style="list-style-type: none">• Reports• Project Website | |
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