

<b>UTC Project Information</b>	
Project Title	Modeling Passing Behavior on Two-Lane Rural Highways: Evaluating Crash Risk under Different Geometric Conditions - Year 3
University	University of Idaho
Principal Investigator	Kevin Chang
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Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans \$69,000 University of Idaho \$69,000
Total Project Cost	\$138,000
Agency ID or Contract Number	DTRT13-G-UTC40
Start and End Dates	January 15, 2015– September 16, 2016
Brief Description of Research Project	<p>The primary goal of this project is to provide a better understanding of a driver's passing behavior and model their decision-making on two lane rural highways under different geometric configurations.</p> <p>This project will specifically examine passing behavior on horizontal curves on two-lane rural highways and explore how the different degrees of curvature influence driver behavior.</p> <p>The outcome of the project will provide state departments of transportation (DOTs) with guidelines that allow them to improve the safety and efficiency of traffic operations along this particular type of highway setting.</p>
Describe Implementation of Research Outcomes (or why not implemented)	For this study, two phases of driver simulation testing, consisting of twenty-four participants each, were conducted in a driving simulation environment.
Place Any Photos Here	The results indicate that the passing behavior of drivers is influenced by the degree of horizontal curvature (i.e., horizontal curves with a radius of more than 3000 feet had a higher driver passing probability when compared to curves with a radius of less than 3000 feet) and the added presence of vertical curvature compounded driver sight distance issues and caused drivers to pass with an increased sense of urgency.

	<p>The findings from this study were utilized by the Alaska Department of Transportation (which provided three locations for the driver simulation environment) to determine future needs with regard to additional signage and/or driver cues in the real-world driving environment.</p>
<p>Impacts/Benefits of Implementation (actual, or anticipated)</p>	<p>There are many impacts and benefits associated with this research effort. Specifically, agencies may consider targeted no-passing zones based on roadway geometry, signage at specific locations, and establishing more uniform geometry at future highway locations (design consideration).</p> <p>Agencies may also wish to consider increasing design speeds to meet demand, recognizing that the de facto 55 mile per hour historical threshold may, in fact, be too low when today's driver population is considered.</p>
<p>Web Links</p> <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project Website</li> </ul>	<p>Available upon request</p>