

UTC Project Information	
Project Title	MPC-599 – Connected-Autonomous Traffic Signal Control Algorithms for Trucks and Fleet Vehicles
University	University of Wyoming
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Funding Source(s) and Amounts Provided (by each agency or organization)	<p>USDOT, Research and Innovative Technology Administration \$60,723</p> <p>Wyoming Department of Transportation \$148,866</p>
Total Project Cost	\$209,589
Agency ID or Contract Number	69A3551747108
Start and End Dates	April 16, 2019 to July 31, 2022
Brief Description of Research Project	<p>The standards and protocols of CAV (connected-autonomous vehicles) technologies are currently in development, with limited number of tests and implementations. The installation of CAV hardware/software in traffic signals in Wyoming creates opportunities for developing methods and algorithms that would help the State's unique transportation challenges. ConnexUs Lear connected-vehicle hardware will first be installed at six signalized intersections near freeway interchange ramps in Evanston, Rock Springs, Rawlins, Laramie and Cheyenne. This study will review the current protocols and recommend options applicable to Wyoming conditions. It will analyze, assess and develop traffic control algorithms that would use CAV technologies to improve operations and safety through signalized intersections. The focus will be on optimizing operations of freight and emergency vehicles through signalized intersections. The analyzed strategies will include emergency preemption, speed harmonization and freight priority. Other strategies that would improve traffic and operations will also be assessed for future implementation. The developed control algorithms will be tested in a</p>

	<p>virtual environment (through traffic microsimulation and driving simulation) and the recommendations for field implementation will be provided. The researchers will work closely with WYDOT engineers to develop control protocols that would have significant practical applications. The programs will be tested on the six signalized intersections, but the transferability to other locations will also be explored. Furthermore, because of the importance of these technologies on the national level, this study will benefit transportation agencies across the U.S., especially those that face similar transportation challenges.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project Website 	