

UTC Project Information	
Project Title	MPC-541 – Assessing Road Conditions for Wyoming County Gravel Roads
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 \$90,476</p> <p>University of Wyoming \$87,960</p>
Total Project Cost	\$178,436
Agency ID or Contract Number	69A3551747108
Start and End Dates	November 2, 2017 to July 31, 2022
Brief Description of Research Project	<p>There are over 1.6 million miles of unpaved roads (53% of all) in the United States. In the state of Wyoming, there are around 12,000 miles of gravel roads maintained by Counties in Wyoming. Though these gravel roads generally serve less traffic, they still need a large portion of the counties' budgets to remain in good enough condition to provide service at levels that are acceptable to the traveling public. The fundamental gravel roads maintenance and management challenges faced by county road departments are to provide service at acceptable levels within an acceptable budget. To tackle these challenges, there is a need to develop a Gravel Road Management System (GRMS). A GRMS is a strategic and systematic process to maintain the road network efficiently. This system basically identifies the best mix of road preservation projects maximizing the overall road condition within limited budget. To develop a GRMS, assessment of existing gravel roads is the first step followed by developing performance and optimization models.</p>

	<p>The development of a GRMS includes several major tasks: collect data, develop performance and optimization models. It is not feasible to collect the data for each segment for a statewide GRMS as they serve less traffic. As counties face major challenges to get sufficient funding to maintain their gravel roadways, they also look for cost-effective tools to use their resources efficiently. This study aims to conduct the tasks in a cost-effective manner and also, to develop a GRMS that will be implemented efficiently within available budget.</p> <p>This proposal describes data collection, analysis and modeling techniques for assessing current gravel road conditions that will allow appropriate measures to be taken by Counties to use their resources efficiently. In addition, the development of performance and optimization models are also discussed briefly in the following sections that will provide necessary tools to develop a GRMS.</p> <p>Research Objectives:</p> <ol style="list-style-type: none"> 1. Develop a comprehensive GRMS methodology to manage gravel roads. <p>The main objective of this study is to develop a comprehensive GRMS methodology to manage gravel roads. The GRMS will be applied in Laramie County as a pilot study. Laramie County has more than 1,000 miles of gravel roads and can be considered as the representative county in Wyoming. The proposed GRMS will be responsive primarily to potential increase in future traffic volumes due to industrial activities.</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 	