

UTC Project Information	
Project Title	MPC-572 – Incorporating Tourism Data in Traffic Estimation on Wyoming Low-Volume Roads
University	University of Wyoming
Principal Investigator	Er Yue Khaled Ksaibati
PI Contact Information	<p>Er Yue, Ph.D. Postdoctoral Research Associate University of Wyoming Phone: (307) 766-6743 Email: eyue@uwyo.edu ORCID: 0000-0001-7968-1088</p> <p>Khaled Ksaibati, Ph.D., P.E. Professor University of Wyoming Phone: (307) 766-6230 Email: khaled@uwyo.edu ORCID: 0000-0002-9241-1792</p>
Funding Source(s) and Amounts Provided (by each agency or organization)	<p>USDOT, Research and Innovative Technology Administration \$95,162.00</p> <p>Wyoming Department of Transportation \$88,215.27</p>
Total Project Cost	\$183,377.27
Agency ID or Contract Number	69A3551747108
Start and End Dates	July 3, 2018 to July 31, 2022
Brief Description of Research Project	<p>This project will incorporate tourism-related data into the travel demand model and develop methods to estimate traffic volume on low-volume roads near tourism destinations in Wyoming. Tourism trips occupy a major part of traffic volume in Wyoming, especially in frequently visited areas. So far, tourism traffic is barely recognized in travel demand model due to available data in this field. The first goal of this project will be incorporating the tourism-related travel behavior parameters in the four-step modeling process to estimate traffic volumes. The second goal will be to implement the model for the whole State of Wyoming. Finally, an analysis will be carried out to determine the seasonality in tourism travel demand and the impact of tourism travel on local transportation system.</p> <p>By accomplishing these three goals, a more efficient means of providing low-volume roads traffic information will be developed for the entire state; this will support a wide variety of design, planning, and management functions on both the state and county road networks. Using improved models will make better traffic volume estimates</p>

	<p>possible with the same data, thereby lowering costs and improving the quality of traffic information. By taking advantage of better software and better models, more and higher quality information may be provided, leading to improvements in safety and other planning efforts.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>This study shows the significance of capturing the tourism-related traffic volumes for transportation planning and maintenance. The tourism-based model can be easily incorporated into the existing statewide travel demand model and used for future tourism travel demand prediction. This study also adds to the existing knowledge on the estimation of traffic volumes by travel demand model in rural areas. Previous studies mainly focused on estimating traffic volumes in urban areas and Interstate highways. The model developed in this study can be used to estimate ADT in the rural areas where not enough traffic counters are installed. The model is recommended to update based on the updated census data from the U.S. Census Bureau and the visitation data from the NPS. The model developed in this study is recommended to be applied by government and tourism agencies in other states or regions where tourism is a major generator of traffic flow on low-volume roads.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>This study shows the significance of capturing the tourism-related traffic volumes for transportation planning and maintenance. The tourism-based model can be easily incorporated into the existing statewide travel demand model and used for future tourism travel demand prediction. This study also adds to the existing knowledge on the estimation of traffic volumes by travel demand model in rural areas. Previous studies mainly focused on estimating traffic volumes in urban areas and Interstate highways.</p>
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project Website 	<ul style="list-style-type: none"> • MPC Research Report • Traffic Estimates for Low-Volume Roads in Wyoming