

<b>UTC Project Information</b>	
Project Title	MPC-635 – Field Evaluation of Geogrid-Reinforced Pavement Systems on Soft Subgrades
University	University of Utah
Principal Investigator	Evert Lawton, Ph.D., P.E.
PI Contact Information	Professor Department of Civil and Environmental Engineering University of Utah Phone: (801) 585-3947 Email: lawton@civil.utah.edu ORCID: 0000-0002-8203-7389
Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Office of the Assistant Secretary for Research and Technology \$64,000  Utah Department of Transportation – \$120,000 Hanes Geo Components – \$20,000 Tensar Inc. – \$13,333
Total Project Cost	\$217,333
Agency ID or Contract Number	69A3551747108
Start and End Dates	October 30, 2020 to July 31, 2024
Brief Description of Research Project	<p>The inclusion of geogrid reinforcement and geotextile filtration/separation within pavement systems bearing on soft subgrades can provide significant reductions in the thicknesses of the base course and subbase, thereby substantially reducing the cost of the pavement system and improving its long-term performance. However, our current knowledge is insufficient to know with certainty that our current design procedures and guidelines produce the most efficient and cost-effective design.</p> <p>The primary objectives of this research project are to compare the performance of pavement systems on soft subgrades: (a) designed without and with geogrid to determine if they are comparable, and (b) without and with a geotextile filter/separator at the bottom of the granular base to determine the effectiveness of the geotextile.</p> <p>These objectives will be accomplished by building and instrumenting several test sections within pavement systems bearing on soft subgrades during construction of a new roadway in Utah. The results of this research will be used to modify the design of geosynthetic-reinforced pavement systems within Utah and other states, resulting in more economical pavement systems with enhanced long-term performance.</p>

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>Analyses of the benefits of the geosynthetics were inconclusive due to significant variation of properties of the pavement support system that occurred during construction. Therefore, it is unlikely that the research outcomes will be implemented until either additional research is performed or the long-term performance of each of the test sections can be undertaken.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>Our understanding of the manner in which geogrids and geotextiles reinforce pavement systems has been greatly enhanced by this research. The data obtained from testing done on instrumentation installed within a real highway is invaluable to the profession, which in the past has relied primarily on data obtained from laboratory testing or small-scale field tests. This research has provided exposure to many aspects of the transportation field to one graduate student and one undergraduate student who have worked on this project.</p>
<p>Web Links</p> <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project Website</li> </ul>	<ul style="list-style-type: none"> <li>• MPC Final Report – <a href="#">Field Evaluation of Geogrid-Reinforced Pavement Systems on Soft Subgrades</a></li> </ul>