

UTC Project Information	
Project Title	MPC-576 – Sustainable Alternative to Structurally Deficient Bridges
University	South Dakota State University
Principal Investigator	Junwon Seo, PhD, PE Nadim Wehbe, PhD, PE
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Funding Source(s) and Amounts Provided (by each agency or organization)	<p>USDOT, Research and Innovative Technology Administration \$68,748</p> <p>SDSU and SDSU-SUN Seed Grant \$68,748</p>
Total Project Cost	\$137,496
Agency ID or Contract Number	69A3551747108
Start and End Dates	August 1, 2018 to July 31, 2023
Brief Description of Research Project	<p>Structurally deficient bridges in the United States may be replaced with a viable alternative made with Cross Laminated Timber (CLT). The alternative promotes environmental sustainability, diversified wood production opportunities, and increased public safety and construction efficiency. CLT products' superior strength, durability and sustainability have led to commercialization for building applications, but CLT has never been applied to bridge systems. The ultimate goal of this project is to improve bridge sustainability and performance using CLT products. To achieve this goal, researchers will pursue the following research objectives: 1) conceptualize a new CLT girder bridge system; 2) design and manufacture the full-scale specimen; and 3) investigate structural performance of the bridge system. To succeed, one CLT fabricator, who serves as an industrial collaborator on this project, will provide practical input for the production of the specimen. Further, one graduate student will gain hands-on research experience and real-world solutions. The PI will integrate the findings into SDSU engineering courses, including CEE</p>

	792: Bridge Engineering, to introduce students to CLT bridge performance.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none"> • Reports • Project Website 	<ul style="list-style-type: none"> • MPC Research Report – Sustainable Alternative to Structurally Deficient Bridges