

Grant Deliverables and Reporting Requirements for UTC Grants

UTC Project Information	
Project Title	Analysis and Design of Pavement Surface Mixtures for Traffic Noise Reduction
University	University of South Florida
Principal Investigator	Qing Lu Manjriker Gunaratne
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: \$80,000 University of South Florida: \$40,000
Total Project Cost	\$120,000
Agency ID or Contract Number	Sponsor Source: Federal Government CFDA #: 20.701 Agreement ID: 69A3551747119
Start and End Dates	Start date: 10/01/2019 End date: 09/30/2020
Brief Description of Research Project	<p>The objective of this project is to analyze the relationship between mixture design variables and acoustic performance of pavement surface and to develop a design procedure or guideline for pavement surface mixtures that considers not only conventional functions (e.g., friction and permeability) but also noise reduction. The focus of the project is to examine the current designs of open-graded friction course (OGFC) mixtures, which are widely applied on highways in some states such as Florida, to see what adjustments may be made to improve their acoustic performance. We will perform literature review on the state-of-art of research on quiet pavements, investigate the relationship between mixture design variables (primarily aggregate gradation, shape, and air-void content) and mixture acoustic performance based on data collected from the literature and numerical analysis, and develop design recommendations for pavement surface mixtures for improved acoustic performance.</p>

Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links • Reports • Project website	http://ctech.cce.cornell.edu/final-project-reports/