UTC Project Information	
Project Title	MPC-446 – A Modified Approach for Predicting Fracture of Steel Components under Combined Large Inelastic Axial and Shear Strain Cycles
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Funding Agencies	USDOT, Research and Innovative Technology Administration
Agency ID or Contract Number	DTRT12-G-UTC08, Modification No. 1
Project Cost	$204,507
Start and End Dates	April 1, 2014 - July 31, 2017
Project Duration	1 Year
Brief Description of Research Project	The objectives of this project are as follows: 1) Collect experimental data on identifying mathematical models for predicting low-cycle fatigue (LCF) and ultra-low cycle (ULC) fatigue behavior in metallic structures; 2) Generate data from experimental testing to be used for predicting LCF and ULCF response of bridge girders; and 3) Develop a framework for fracture predictions.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The results can be implemented to revise existing code provisions on connection strength.
Impacts/Benefits of Implementation (actual, not anticipated)	The report provides a methodology that, for the first time, allows fracture in steel connections under combined loads to be captured. The results and the modeling approach can be used to design and assess connections against failures.
Web Links • Reports • Project Website	https://www.ugpti.org/resources/reports/details.php?id=902