UTC Project Information	
Project Title	MPC-580 – Implementation of Precast Concrete Segments for Electrified Roadway
University	Utah State University
Principal Investigator	Marvin W. Halling, PhD, PE, SE, F.ASCE
PI Contact Information	Professor Department of Civil and Environmental Engineering Utah State University Phone: (435) 797-3179 Email: marv.halling@usu.edu ORCID: 0000-0003-1599-8304
Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Research and Innovative Technology Administration \$66,500 Utah State University \$66,500
Total Project Cost	\$133,000
Agency ID or Contract Number	69A3551747108
Start and End Dates	October 19, 2018 to July 31, 2024
Brief Description of Research Project	A major impediment to broad public acceptance of electric vehicles is their limited travel range. An exciting potential solution to this problem is In-Motion Electric Wireless Power Transfer. This is essential for the development of connected and autonomous vehicles. Durability of the Civil-Electrical Infrastructure has been studied in recent research. The next logical step toward adoption is integration in a successful demonstration project.
	In order for the future adoption of this technology, roadways will need to be modified to allow the transmission of power to vehicles as they travel. Successful adoption of In-Motion Wireless Power Transfer will require advances in the efficiency of the overall electrical system, improvements in tracking of the actual vehicles, and significant developments in the civil infrastructure.
	precast system. The stringent electrical specifications will be monitored while utilized in an actual closed loop working system.
Describe Implementation of Research Outcomes (or why not implemented)	Some, of the many, in-motion wireless power transfer systems use precast concrete to stabilize the electronic components. Other in- pavement systems use other materials or systems.
Place Any Photos Here	

Impacts/Benefits of Implementation (actual, not anticipated)	This research was some of the earliest near full-scale testing that was performed on concrete panels. The combination of thermal testing and mechanical testing made this study time consuming and potentially useful for further research.
Web Links Reports Project Website 	MPC Final Report – <u>Implementation of Precast Concrete Segments</u> for Electrified Roadway