UTC Project Information – Project 1.12	
Project Title	Improved UAV-Based Structural Inspection Techniques and Technologies for Northeast Bridges
University	University of Maine
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Funding Source(s) and Amounts Provided (by each agency or organization)	TIDC: $279,593; UMaine: $287,150
Total Project Cost	$566,743
Agency ID or Contract Number	69A3551847101
Start and End Dates	10/1/2020 – 9/30/2023
Brief Description of Research Project	Unmanned aerial vehicles (UAVs) or "drones" are revolutionizing some basic reconnaissance, including structural inspections. This project seeks to enhance and expand the range of applications for unmanned aerial vehicles (UAVs) to aid inspection of transportation structures. This project is primarily aimed at UAV modifications to allow new ways for the vehicles to get additional information, for example allowing the UAV to come in contact with the structure to allow for more high-fidelity measurements, or developing sensor array packages that can be varied based on the structure and the information desired. Proposed tasks include work with commercially available UAVs and development of new prototypes that can be used in specialized applications. Subsequent tasks will examine ways to optimize both the data collection and data interpretation, using AI-based data fusion approaches. Finally, both laboratory and field testing and validation are proposed. The work will be conducted in collaboration with both the Maine Department of Transportation and an engineering consultant VHB.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	To be completed after actual implementation has occurred
Impacts/Benefits of Implementation (actual, not anticipated)	To be completed after actual implementation has occurred
Web Links • Reports • Project website	