



ACCELERATED BRIDGE CONSTRUCTION  
UNIVERSITY TRANSPORTATION CENTER

<b>UTC Project Information</b>	
Project Title	Use of Canines as a Corrosion Detection Device
University	Florida International University
Principal Investigator	Kenneth G. Furton
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Funding Source(s) and Amounts Provided (by each agency or organization)	ABC-UTC Funds: \$50,000
Total Project Cost	\$50,000
Agency ID or Contract Number	69A3551747121
Start and End Dates	May 2022 to May 2023
Brief Description of Research Project	<p>This proposal outlines the utilization of canines for the detection of corrosion within bridges and other large concrete structures. This proposal will identify the proper techniques required to effectively and rapidly train a canine to detect corrosion and apply this detection capability to actual concrete structures. Figures of merit such as accuracy of detection and comparisons to current schemes such as magnetic flux will also be reported.</p> <p>The main objective of this research is to improve the CTDOT ABC decision making tool to obtain an improved tool that is more comprehensive, less subjective, and more flexible to be used by other state DOTs. The improvements will be made by (1) Considering the benefits of ABC on roadway safety, (2) Considering the contributions of ABC to social equity and environmental justice, (3) Developing quantitative measures for the evaluation of decision criteria where possible, and (4) Using a systematic method for the determination of relative importance (weights) of criteria. A case study will be used to demonstrate the applicability of the improved tool.</p>
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The outcomes will be tracked and reported once they are identified.

Impacts/Benefits of Implementation (actual, not anticipated)	The impacts will be tracked and reported once they are identified.
Web Links <ul style="list-style-type: none"><li>• Reports</li><li>• Project website</li></ul>	<a href="https://abc-utc.fiu.edu/research-projects/fiu-research-projects/use-of-canines-as-a-corrosion-detection-device/">https://abc-utc.fiu.edu/research-projects/fiu-research-projects/use-of-canines-as-a-corrosion-detection-device/</a>