



ACCELERATED BRIDGE CONSTRUCTION
UNIVERSITY TRANSPORTATION CENTER

UTC Project Information	
Project Title	Accelerated Repair and Replacement Of Expansion Joints
University	ISU
Principal Investigator	Brent Phares
PI Contact Information	bphares@iastate.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	\$120,092 from ABC-UTC Office of the Assistant Secretary for Research and Technology \$60,046
Total Project Cost	\$180,138
Agency ID or Contract Number	Accelerated Bridge Construction University Transportation Center (ABC-UTC) 69A3551747121
Start and End Dates	01/01/2019-12/31/2020
Brief Description of Research Project	<p>Bridge deck expansion joints are used to allow for the movement of the bridge deck due to thermal expansion and dynamic loading. They can also prevent the passage of winter de-icing chemicals and other corrosives applied to bridge decks from penetrating and damaging substructure components of the bridge. Expansion joints are often one of the first components of a bridge deck to fail. Therefore, repairing or replacing expansion joints are essential to extend the life of any bridge. Several expansion joint replacement options have been studied in the past. However, these options typically involve extensive traffic interference and lane closure. Therefore, there is a need for accelerated replacement options and techniques, especially in areas with high average annual daily traffic (AADT) and limited time for lane closures. The objectives of this research are to: (1) conduct a literature review on repair and replacement of bridge deck expansion joints; (2) develop methods for accelerated bridge expansion joint repair and replacement; and (3) promote ABC for bridge deck expansion joint repair and replacement.</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">• Reports• Project website	https://abc-utc.fiu.edu/research-projects/isu-research-projects/accelerated-repair-and-replacement-of-expansion-joints/