

UTC Project Information	
Project Title	MPC-638 – Analysis of ABC Bridge Column-to-Footing Joints with Recessed Splice Sleeve Connectors
University	University of Utah
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Start and End Dates	October 30, 2020 to July 31, 2022
Brief Description of Research Project	Accelerated Bridge Construction (ABC) has been implemented in bridge construction because it provides advantages for commuters in urban areas. Prefabrication of bridge structural components is a highly effective method and is one of the ABC methods of Prefabricated Bridge Elements and Systems (PBES) proposed by the Federal Highway Administration. There is a need to develop ABC column-to-footing joints for bridges located in moderate- and high-seismic regions. Robust analysis and design methods for such joints are an important component of this effort. Grouted splice sleeve connectors are assumed for assembling the column-to-footing joints. In the proposed research, where the bars are grouted at both ends of the splice sleeve connectors (GGSS). This research aims to understand the effect of recessing the GGSS inside the footing well below the column-to-footing interface. The gap between the end of the GGSS and the column-to-footing interface is assumed to be grouted inside corrugated steel ducts. The main goal of the research is to show using advanced analysis methods that such joints constructed with precast elements perform in a satisfactory manner similar to monolithic cast-in-place (CIP) joints. A second goal of the research is to develop guidelines for the seismic design of these joints.
Describe Implementation of Research Outcomes (or why not implemented)	

Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none">• Reports• Project Website	