

<b>UTC Project Information</b>	
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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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Office of the Assistant Secretary for Research and Technology \$59,857  University of Utah \$46,200  Reaveley Engineers \$11,800
Total Project Cost	\$117,857
Agency ID or Contract Number	69A3551747108
Start and End Dates	October 30, 2020 to July 31, 2023
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.

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>The research results have just been published and implementation is expected to take some time to occur.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>The research is expected to facilitate the use of recessed connections with intentional debonding such as the one studied in this research for bridge bents constructed in seismic regions using accelerated bridge construction.</p>
<p>Web Links</p> <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project Website</li> </ul>	<ul style="list-style-type: none"> <li>• MPC Research Report – <a href="#">Analysis of ABC Bridge Column-to-Footing Joints with Recessed Splice Sleeve Connectors</a></li> </ul>