Project #16409 – Effect of Pile Embedment Length on the Connection Behavior and Precast Pile Footing

http://utca.eng.ua.edu/research/projects/?id=16409

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The intent of this project is to establish the minimum embedment length required for piles into footings, develop suitable details for Accelerated Bridge Construction (ABC) solutions (i.e., from foundations to superstructure) for routine bridge designs.

ABC has gained significant momentum among various State DOTs as it helps in reducing the period of onsite construction, thereby reducing the impact to the traveling public. In response to these needs, several State DOTs and the FHWA have developed details for various prefabricated bridge elements ranging from full depth precast deck systems to precast concrete piers.

Given the recent success in the development of accelerated construction details for bridge columns and decks, the scope of the proposed research is to facilitate and take steps towards the use of ABC for an entire bridge substructure system (precast pile footing and precast column).

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Subjects:
- Bridges and other structures
- Materials