Implementing Emergency Foundation Repairs on I-495 in Delaware

Tuesday, March 3, 2015
12pm in the Steinman Exhibit Room

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Abstract
At bridge Br 1-813 on I-495 over Christina River in Delaware, a soil stockpile was placed adjacent to a stretch of the bridge. The existing bridge, built in 1973, is supported on groups of vertical and battered steel H-piles. The piles were driven through soft clay layer approximately 100 feet thick to a competent stratum consisting of weathered rock/rock. The placement of the soil stockpile induced lateral deformation and mudwave through the compressible soft clay layer that in turn applied lateral load on the group of piles. The piles exhibited lateral movement which caused the bridge piers to tilt and the bridge deck to be misaligned. Delaware Department of Transportation (DelDOT) responded immediately by shutting down the bridge for traffic and engaged the services of AECOM to provide immediate retrofit to the bridge. This presentation will outline the foundation retrofit and repairs required to reopen the bridge.

Biography
A graduate of Penn State University and Polytechnic University, Ms. Armfield has over 15 years of experience providing geotechnical engineering investigation and design services for railroads, highways, ports, bridges, airports and power facilities. She is currently the Geotechnical Department Manager for AECOM’s NYC based Geotechnical Department where her team designs infrastructure projects throughout the Northeastern US and internationally. Ms. Armfield is also on a team that administers AECOM’s internship program for their Northeast Region bringing over 40 interns to the NY, NJ, CT and MA offices each summer. Additionally, she is currently an Adjunct Professor at CUNY, NYC Technical College where she teaches Soil Mechanics in the Civil Engineering Department.

Light refreshments will be served.