

Augered Cast-In-Place & Drilled Displacement Piles Short Course | March 13, 2019

Pantagis Renaissance, formerly Snuffy's | Scotch Plains, NJ

TECHNICAL PROGRAM*

7:30 AM to 8:30 AM	Registration and Networking Breakfast
7:30 AM to 8:30 AM	Speaker Preparation
8:30 AM to 8:35 AM	Welcome and Introductions Britain Materek, P.E., HNTB
8:35 AM to 8:45 AM	Short Course Welcome Jonathan Huff, P.E., Goettle
8:45 AM to 9:45 AM	Development of ACIP and DD Piles and Current Practice W. Morgan NeSmith, P.E., Berkel & Company Contractors, Inc. <i>This presentation outlines the history of ACIP and Drilled Displacement Pile methods in North America and Europe since the development of ACIP Pile method in the 1950s. The presentation highlights the evolution of the state of practice due to technological advancements and availability of design and installation guidance. Installation equipment, including drilling rigs, tooling, hydraulic/power units, grout pumps, and cranes and typical depths and diameters are outlined, and considerations for load testing set up, access, and low access equipment are presented. Typical grout components, mix designs, compressive strengths, reinforcing steel cage and centralizer configurations and placement considerations are addressed, and field and testing methods and good practices for sample collection, handling and storage are discussed. Typical plans and details are presented.</i>
9:45 AM to 10:00 AM	Networking Break
10:00 AM to 11:00 AM	ACIP and DD Pile Design Methodologies W. Morgan NeSmith, P.E., Berkel & Company Contractors, Inc. <i>The presentation will focus on commonly referenced design methods with comments on these methods based on the presenter's experience with load test results vs. predicted performance. Load test methods and interpretation of results will be discussed. The concept of finalizing displacement pile design based on drilling data acquired from the installation platform will be introduced.</i>

* Subject to change

11:00 AM to 12:00 PM

QA/QC and Integrity Testing

Seth Vaidya, P.E., Langan Engineering and Environmental Services

This presentation covers quality control aspects for installation of ACIP Piles and Drilled Displacement Piles. Best practices for drilling and grouting procedures, spoil removal, reinforcing steel installation, tooling, and grouting equipment and calibration procedures will be addressed. Automated monitoring equipment and testing methods are also discussed, and quality control documentation will be outlined.

12:00 PM to 1:00 PM

Networking Lunch

1:00 PM to 1:30 PM

Challenges for the ACIP/DD Pile Designer

Timothy Siegel, P.E., G.E., D.GE, Dan Brown and Associates, PC

This presentation will share experience with the design of ACIP and DD piles in California that is intended to be helpful to geotechnical engineers, designers, and contractors. It will go through the typical steps of the design process in California and place emphasis on aspects for improvement within the industry.

1:30 PM to 2:00 PM

Non Destructive Testing of ACIP and DD Piles

Bernie Hertlein, , GEI Consultants, Inc.

This presentation introduces the current commercially available non-destructive test (NDT) methods for deep foundations, and reviews their operating principles, and their various capabilities and limitations when applied to Augered, Cast-in-Place (ACIP) and Drilled Displacement (DD) Piles. The author then uses case histories to illustrate the importance of comparing NDT data with the output of Automated Monitoring Equipment (AME). The presentation emphasizes that neither NDT results nor AME output should be should be the sole criterion for acceptance or rejection of piles. This presentation would highlight that issue, show some projects where this was a major concern and, hopefully, demonstrate solutions to solve the problem.

2:00 PM to 2:30 PM

Water Retention in ACIP and DD Pile Grouts

John Anderson, Specrete Ltd.

This presentation would highlight the of water retention in augercast grouts which can cause difficulty in full depth cage insertion during ACIP Pile construction. The presentation will explain the phenomenon, present case histories where difficulty occurred, and propose ways to specify augercast grout with water retention capabilities.

2:30 PM to 3:00 PM

Local Experience with Drilled Displacement Piles

W. Morgan NeSmith, P.E., Berkel & Company Contractors, Inc.

This presentation highlights local and regional case histories using ACIP and DD piles for various applications. The presentation includes installation information and load testing results.

3:00 PM to 3:15 PM

Networking Break

3:15 PM to 3:45 PM	<p>ACIP Piles at the Atlanta Falcons Stadium Matthew Meyer, P.E., D.GE, Langan Engineering and Environmental Services</p>
3:45 PM to 4:15 PM	<p>Case History - Moretrench - Topic TBD (Flushing Queens DD Piles with Difficult Geology) Yaser Taheri, P.E., Moretrench</p>
4:15 PM to 4:45 PM	<p>ACIP Case History: Economy, Design, and Constructability of the Fargo WTP Piles Jonathan Huff, P.E., Goettle <i>This presentation describes the economy, design and constructability of the expansion of the Fargo, North Dakota water treatment plant. The presentation will highlight the value engineering process that changed the foundation methods and provided economic and schedule advantages over the original design. The presentation will include information on the subsurface conditions, pile configurations and load testing results.</i></p>
4:45 PM to 5:00 PM	<p>Overview of DFI ACIP and DD Piles Research Jonathan Huff, P.E., Goettle <i>This presentation will highlight recent research and initiatives undertaken by DFI's Augered Cast-in-Place Pile Committee related to non-destructive testing interpretation, verification program for ACIP piles, thermal integrity profiling for ACIP Piles, ACIP Piles Manual, and drilled displacement pile installation effects study.</i></p>
5:00 PM to 5:30 PM	<p>Panel Discussion (All Speakers)</p>
5:30 PM to 5:45 PM	<p>Closing Remarks</p>