Speaker Presentations

Wednesday, May 18

9:00 a.m.

Dr. Shawn Wilson, Louisiana Department of Transportation and Development

PDCA has selected Dr. Shawn Wilson with the Louisiana Department of Transportation and Development (LADOTD) as the keynote speaker for the opening ceremony at the PDCA 20th Annual International Conference & Expo 2016.

On Dec. 16, 2015, John Bel Edwards (then governor-elect) announced Dr. Wilson as the secretary of the LADOTD. Dr. Wilson has served as chief of staff for the LADOTD, a role he filled for 10 years under three previous secretaries and under the executive administration of two governors. A proud product of New Orleans public schools, Wilson earned a B.A. in Urban and Regional Planning from the University of Louisiana, where he served as student government president and member of the University of Louisiana System Board. He holds a Master of Public Administration degree and recently earned a Ph.D. in public policy. As secretary of the LADOTD, Wilson is in charge of maintaining public transportation, roadways, bridges, canals, select levees, floodplain management, port facilities, commercials and aviation, which includes 69 airports within the state.

10:15 a.m.

Important Considerations for Designing Sheet Piling Structures
Dick Hartman,
Hartman Engineering

Anchored walls and cofferdams using sheet piling are constructed every day. Most of them perform as intended, but some experience significant problems or collapse. In this presentation, Dick Hartman will discuss several difficulties that can be encountered and ways to prevent them during both the design and construction process. Examples and case studies will be used for illustration.

10:50 a.m.

Key Factors to Achieving Construction Cost Efficiency with Today's Pile Driving Technology
Gerry McShane,
Service Steel Warehouse

The continuous charge toward ever increasing construction cost efficiency has led to advances in sheet pile material composition, profile design, weldability, strength, ductility and method of forming. Matching developments in equipment design contribute to gains in efficiency. The key factor to realizing these gains is in achieving improvements in pile installation. Gerry will explain how material and equipment changes stack up in terms of meeting design requirements and improving pile drivability will be examined in detail.

11:25 a.m.

Ethical and Risk Aspects of Pile Driving Subcontracts
Alexander Filotti, M.B.A., P.E.,
Underpinning & Foundation
Skanska, Inc.

In this presentation, Alexander Filotti will address ethical and risk aspects of pile driving subcontracts in the Northeast region of the U.S., reflecting the technical and normative advances of the industry such as soil investigations, capacity predictions, load test result interpretations and correlations and new standard contracts adopted by major owners (e.g., City of New York).

Thursday, May 19

8:30 a.m.

GENERAL BUSINESS MEETING KEYNOTE

Driven Piles – Research to Practice
Silas Nichols,
Federal Highway Administration

This presentation will summarize current work in FHWA to advance the state of the practice in the design and construction of driven pile foundations, and discuss the impact for the PDCA membership. This will include an overview on the recently completed Geotechnical Engineering Circular (GEC) 12 on design and construction of driven piles, work on GEC 9 on the design of deep foundations for lateral loading and research efforts focused on design methods for large diameter, open-ended pipe piles.

10:30 a.m.

Installation of Large Diameter Pipe Piles with Constrictor Plates – Kentucky Lakes Bridge Project
Ben White,
GRL Engineers, Inc.

Seventy-two-inch diameter pipe piles were chosen as the pier foundation piles for the Kentucky Lakes Bridge in Aurora, Kentucky. Constrictor plates were installed within the piles to force a soil plug and increase pile resistance once the minimum penetration depth was reached. In this presentation, Ben White will discuss the design phase test pile program, the pile installation process, equipment used for installation and results from dynamic testing of several production piles.

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Speaker Presentations (continued)

Thursday, May 19 (continued)

11:05 a.m.

Optimizing and Verification of the Soil-Pile Relationship through Geotechnical Instrumentation
Daniel Benedetto, Eustis Engineering Services, LLC

Through the use of strain gage instrumentation and static load testing, the design of an efficient pile can be accomplished. Geotechnical instrumentation has advanced and enhanced the design engineer's capabilities to understand soil characteristics and the ability to design friction piles of variable length from a single, statically tested pile. This presentation will show how a recent project employed geotechnical instrumentation as part of a static load test program to optimize a driven pile. Through the use of the vibrating wire (VW) strain gauges embedded within the square pre-cast concrete piles, the design engineer was able to accurately observe the stresses within the pile during a static load and observe the supporting soils interaction with the pile. Daniel will discuss the instrumentation data, results of the load test, and how utilizing instrumentation enhanced the overall project design.

11:40 a.m.

Driven Piles as a Ground Improvement Strategy
Paul Axtell, Dan Brown and Associates

This presentation will describe examples of the application of driven piles to accomplish ground improvement for the support of embankments and other structures. In many conditions, driven piles of the appropriate types can offer advantages of cost effectiveness and schedule over traditional ground improvement techniques. Performance advantages and quality assurance can comprise other advantages of driven piles in this application in some circumstances. In this presentation, Paul Axtell will describe the types of conditions that are most conducive to the use of driven piles over alternative ground improvement technologies, and will include several case histories.