

**DRILLED SHAFT COMMITTEE
OF THE
DEEP FOUNDATIONS INSTITUTE**

MINUTES OF MEETING (UPDATED)

October 21, 2009 10:00 am to 12:00 pm
@ DFI Annual Convention, Westin Crown Center, Kansas City, MO

Fred Rhyner called the meeting to order at 10:00 am. Approximately 28 people were in attendance. Attendance sheet is attached.

SEMINARS

1. Reports on Super Pile 2009 and the Drilled Shaft Short Course.

Matt Meyer reported that SuperPile 2009 was a huge success. Over 140 people attended the two day seminar, which was held in Oakland, CA. Dr. Lance Roberts reported that the Drilled Shaft Short Course was also a success. There were about 35 participants for the event which was held on Oct. 20, 2009.

2. Seminar: 2010. Discuss plans for a seminar in 2010. Another short course format at the annual convention or a day long seminar? Perhaps combine with another committee (e.g. Testing & Evaluation or Auger Cast for displacement piles.)

After much discussion about format, content and venues, the Committee decided to sponsor a one day seminar on Drilled Shafts in Minneapolis. The date will be selected after discussion with DFI HQ. We still need one or two volunteers to help organize the technical content.

INDUSTRY STANDARDS

3. Update on **ADSC's Proposed Specification for Construction of Drilled Shafts**. Has this been accepted by AASHTO balloting?

Alan MacNab reported via e-mail that the new Drilled Shaft Construction Specification was voted on and APPROVED by AASHTO on July 1, 2009 in New Orleans. Congratulations, Alan for seeing this through to completion!

4. Update on **FHWA Drilled Shaft Manual**.

Dan Brown reported that the manual is undergoing final edits to address the last round of comments. He expected that the manual would be published by FHWA in the first quarter of 2010. Chris Dumas mentioned that the NHI Drilled Shaft Course could be made available to "private" groups, not only

State DOTs. For example, a local ASCE Chapter could request a course, which would be paid for through seminar fees from the attendees. Dan Brown mentioned that the course is three days long.

5. Update on **IBC 2006, Chapter 18 (Drilled Shafts)**. Should Drilled Shaft Committee generate more review comments for next edition of IBC Code?

*The Committee had a long, healthy discussion about load test interpretation. The IBC presently mentions three acceptable methods for interpreting load tests, one of which is the Davisson off-set method. Some members of the Committee believed that the Davisson method is too conservative for drilled shafts, while others did not necessarily agree. DFI has established a special Task Force, led by Willie Nesmith, to study the Davisson criteria and get feedback from the relevant committees, including the Drilled Shaft Committee. Dan Brown suggested that the Task Force might author a series of papers on load test interpretation, which could be published in the DFI Journal. Fred Rhyner suggested that the Task Force could update the DFI publication, *Interpretation of Static Load Tests*, which was written by Bengt Fellenius in the early 1990's. All agreed that static load tests on drilled shafts are rare in the United States, but some have been done. The Osterberg load cell test is more common for drilled shafts.*

DEVELOPMENT OF PRACTICE GUIDE

6. Update on Guideline Specification for Drilled Shafts (modeled on DFI/ADSC Micropile document.)

No discussion about this item.

OTHER ITEMS

7. Discussion about measuring the amount of sediment or loose material on the bottom of a drilled shaft prior to concrete pour. Methods of measurement, accuracy, specifications, tolerances, et al. Different criteria for rock or soil, different criteria depending on amount of end bearing assumed in design?

Kirk McIntosh suggested a discussion about the techniques for measuring the amount of loose sediment on the bottom of a drilled shaft and the acceptable tolerances. The consensus was that the common tolerance of 1/2 inch at the bottom of a rock socket is impracticable to measure with a weighted tape. Matt Meyer mentioned that his firm frequently uses a mini-Socket Inspection Device (mini-SID) in Florida and elsewhere, which can reliably measure small amounts of sediment. Fred Rhyner mentioned that the mini-SID is not in common use in most parts of the US. Dan Brown thought that the 1/2 inch criteria was achievable in rock sockets and maybe some hard clays, but probably not in drilled shafts in cohesionless sands, which would tend to get

“fluffed up” by the drilling and cleaning process. An air lift might be counter-productive for cleaning the bottoms of drilled shafts in sands. He suggested that the entire column of slurry should be exchanged with fresh, clean slurry prior to tremie pour to mitigate the problem of loose sediment on the bottom. The common specification limit for sand content in slurries is too liberal.

8. Interaction with other industry committees on drilled shafts: ADSC Committee on Drilled Shafts – Suggestion for Joint Technical Continuing Education Seminar?

Mike Moore of ADSC described the seminars ADSC has planned for 2010. They include a two-day seminar on Drilled Shafts and Earth Support in Chicago in November 2009, a one-day seminar on Drilled Shafts in Houston in March 2010, and a one-day seminar in New York or Boston for the fall on 2010. We discussed possible collaboration on the seminar for New York or Boston. Mike has spoken with Theresa Rappaport, the Executive Director of DFI to see what type of collaboration would make sense.

9. Open for other items

Andy Gordon and Gif Goodhue of KB Slurries discussed the different classes “polymer” slurries available for drilled shaft construction. The several design engineers in the meeting questioned what types of QA control tests should be performed and should there be different acceptable values for different classes of slurry? For example, the ACI Specification for Drilled Shafts calls for API specific gravity tests, viscosity tests and sand content measurements for either polymer slurries or mineral slurries. After a long discussion, the Committee decided to form a subcommittee to look into the matter and possibly prepare a recommended slurry spec. Subcommittee members will include:

Matt Meyer, Langan

Andy Gordon, KB

Gif Goodhue, KB

Dennis Duty, Baroid

Others to include: other DFI member firms who supply/manufacture slurry products for drilled shafts, and any ADSC members whom would be interested. Fred Rhyner will reach out to these groups.

The meeting adjourned at 12:00 pm.