The Calgary Geotechnical Society,
Pile Driving Contractors Association and
The Deep Foundations Institute Driven Pile Committee

Present

Driven Pile Technologies for the 21st Century

June 28, 2012

Calgary, Alberta

Executive Royal Inn Hotel & Conference Centre

Benefitting:

Design Engineers, Geotechnical Engineers, Structural Engineers, Foundation Contractors, Project Managers, Material/Equipment Suppliers, Professors & Foundation Specialists

Seminar Sponsors:

FORCE PILE DRIVING LTD. WHERE QUALITY AND SERVICE ARE DRIVEN TOGETHER

LEVELTON

Golder Associates

amec

Seminar Details

Venue and Accommodations

Executive Royal Inn Hotel & Conference Centre Calgary

2828 - 23 Street NE,
Calgary, AB T2E 8T4

Toll Free:
1-888-388-EXEC(3932)

Fax: (403) 291-2019

Web: **www.executivehotels.net/calgaryhotel/**

Conference rate is $129.00 CDN plus taxes.

Specify "Driven Pile Seminar/CGS" for this rate.
**Please make reservations early. Space and rate are subject to availability with a cut-off date of June 14, 2012.*

Calgary Airport Hotels Location

Executive Royal Inn Hotel & Conference Centre in Calgary is conveniently located in North Calgary only minutes from Calgary's International Airport (YYC) and Calgary's downtown core. All the major Calgary attractions are easily accessible from this Calgary Alberta airport hotel. Whether you are visiting Calgary on business, in town for the legendary Calgary stampede, or taking in the sights such as the Olympic Oval and the Calgary Zoo, the Executive Royal Inn Hotel & Conference Centre Calgary is where you want to stay.

Airport Shuttle Service

This Calgary airport hotel offers a complimentary airport shuttle to and from the Calgary International Airport. The Airport Shuttle runs from 3:40am – 12:00am, 7 days a week. Or if you prefer to make your own way around the city, this Calgary airport hotel has an on-site AVIS car rental agency.

Exhibitor Information

Includes one attendee registration fee, a 6' skirted table, electrical power and 1 chair. All exhibit materials must fit in the 10' wide, 4' deep space provided.

- The hotel contact person for further information is Kelly Marshall at 403-219-7482 and Email: kmarshall@royalinn.com.
- All persons tending exhibits, for all or a portion of the seminar, must be registered as full seminar attendees.
- Exhibitor set-up 7:00-7:30 am.
- Exhibitor tear-down 5:00-6:00 pm.

Labels should be marked as follows:

Executive Royal Inn Hotel & Conference Centre
Attn: [Senders Name] C/O Kelly Marshall
For Driven Pile Seminar June 28th
2828 - 23 Street NE,
Calgary, AB T2E 8T4

Sponsorship Opportunities

Speaker Dinner Sponsorship*: $1,000

One opportunity available

Sponsor the Speaker Dinner and your company has the opportunity to host an exclusive dinner event for the speakers and seminar organizers. Your company representatives have the opportunity to meet with the speakers and discuss industry topics. Your sponsorship will be verbally acknowledged during the seminar and your logo included in the sponsorship page which will be added on the flash drive seminar content.

Flash Drive Sponsorship*: $900

~~*One opportunity available*~~

Sponsor the Seminar Flash Drive of Presentation Handouts and have your company logo seen by every attendee. This sponsorship keeps your brand in the hands of the attendees after the seminar when they take the flash drive and your logo home for further use.

Meeting Room Sponsorship*: $500

~~*Two opportunities available*~~

Sponsor the Meeting Rooms and have your company logo displayed at the entrance of the seminar meeting room and exhibit room. Your sponsorship will be verbally acknowledged during the seminar and your logo included in the sponsorship page which will be added on the flash drive seminar content.

Meal / Break Sponsorship*: $350

~~*Four opportunities available*~~ *Two opportunities remain*

Sponsor a Meal or Break and have your company acknowledged for one of the meal or break sessions. Your sponsorship will be verbally acknowledged during the seminar and your logo included in the sponsorship page which will be added on the flash drive seminar content.

*Sponsors' logos will be included in marketing material whenever possible (will depend if sposnorship is confirmed and logo available at time of marketing material release).

*Your logo needs to be an original file at the original size (at least 2" wide). Please do not copy logos or images from websites. These are low resolution and not suitable for print. Original files include: AI, PSD, EPS, TIF, High resolution (bit-mapped image/photo) 300 dpi or higher PDF or JPG. *With AI and PSD all type must be converted to curves, graphics or outlines. Logos should be sent to Frank Magdich at frank@oakenviro.com

Seminar Program*

7:00-7:30 am **Exhibitor Set-Up**

7:30-8:20 am **Registration and Breakfast**

8:20-8:30 am **Opening Remarks and Introduction**

8:30-9:20 am **Recent Advances in Resonant Drivers**
Matthew Janes, M.E.Sc., P.Eng., MBA, Resonance Technology International Inc.

Resonant Drivers and Drills are being used for installation of piles, micro-piles and tie backs. Recent advances and case histories are presented which demonstrate the ability to rapidly install foundations with a minimum of ground disturbance.

9:20-10:10 am **Lateral Resistance of Piles Near Vertical MSE Walls From Full-Scale Tests**
Kyle M. Rollins, Civil & Environmental Engineering Dept., Brigham Young University

Pile foundations for bridges must often resist lateral loads produced by earthquakes and thermal expansion or contraction. However, space constraints are also leading to vertical mechanically stabilized earth (MSE) walls at abutments. Engineers must estimate the lateral resistance of piles near these walls along with the load applied to the reinforcements. Dr. Rollins will present results from three bridges where full-scale lateral load tests were performed on piles located 1.5 to 8 pile diameters from the wall face. The reduction in resistance and the force on the reinforcements will be presented along with approximate methods for analyzing pile behavior.

10:10-10:40 am **Break and Exhibits**

10:40-11:30 am **Megapiles in Construction and the Equipment That Drives Them**
Dave Yingling, VP, American Piledriving Equipment, Inc.

The presentation will focus on installation of super large diameter piles, including the 72' diameter piles driven for the Hong Kong Macau Zhuhai Bridge.

11:30-12:20 am **Energy Piles: Integrating Ground Source Heat in Deep Foundations**
Tom Nichols, East Coast Regional Manager, GI Endurant LLC

Energy Piles are a method for integrating geothermal tubes into deep foundations to provide sustainable heating and cooling to buildings. The presentation will focus on the current state of practice of ground-source technology as it applies to large commercial, health care, and government installations. Energy Piles and other related technologies are well established in Europe but remain relatively new in North America. Special mention will be made to Trevor Day School, the first Energy Pile project in New York. We will highlight design considerations and potential field issues. We will also review the tremendous federal tax savings available for these systems.

12:20-1:20 pm **Lunch and Exhibits**

1:20-2:10 pm **Noise and Vibration Challenges on a Large Piling Project: A Brief Case History of the West Toronto Diamond Project in Toronto, Canada**
Michael D. Justason, M.Eng., P.Eng., MBA Product Manager, BERMINGHAM Foundation Solutions

This presentation describes various techniques used to address challenging noise and vibration issues on a pile driving project in Toronto, Canada. These techniques included: hydraulically activated shrouds for the hammers and piles; moveable noise barriers; active control of a vibratory hammer based on measured ground vibrations; a pile 'crowd' system; and ultimately the use of 'press-in' piling technology to meet the most stringent noise and vibration requirements.

2:10-3:00 pm **Quantification and Application of Time Effects in Pile Foundation Design**
Patrick Hannigan, GRL Engineers, Inc.

The capacity of a driven pile typically changes after the driving process. In most cases the capacity increases with time but in some cases it may decrease. These time dependent soil strength changes can be quantified and incorporated into the pile installation criteria to satisfy the capacity requirements. Procedures for evaluating time dependent soil strength changes will be discussed. Use of dynamic test results in quantification of time effects will be reviewed along with important considerations including capacity mobilization, use of superposition, and geotechnical considerations.

3:00-3:30 pm **Break and Exhibits**

3:30-4:20 pm **Static vs. Dynamic Design of Driven Piles**
Chris Workman, M.Eng., P.Eng., Principal/Calgary Branch Manager, Thurber Engineering Ltd.

Mr. Workman will give a discussion on two distinct driven pile design methods, specifically "Static Design", which is using parameters derived from known or interpreted soil conditions, and "Dynamic Design", which is determining capacity based on driving energy and resistance (relying on WEAP analysis and PDA testing). The basics of the two methods will be discussed and compared, along with the practical implications of each. Some relevant case histories will also be discussed.

4:20-5:10 pm **Negative Skin Friction**
Aaron S. Budge, Ph.D., P.E., Minnesota State University, Mankato

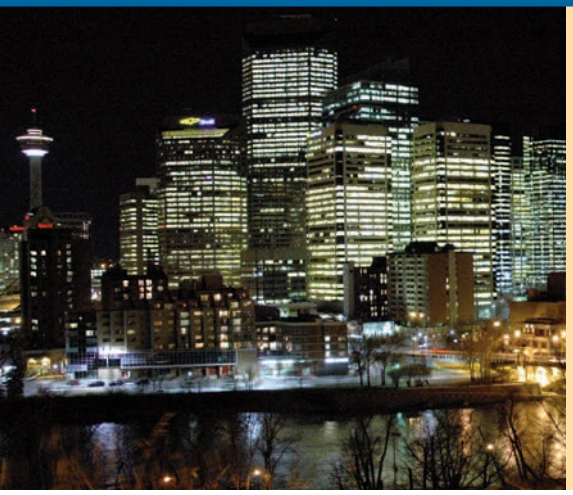
Pile group capacity can be significantly impacted by the presence of negative skin friction (or downdrag) acting on the pile group. This downdrag is often due to the settlement of fill material near the pile group. As a compressible soil layer beneath the fill consolidates, the material immediately surrounding the pile moves down with respect to the pile group, effectively adding to the pile load. Much discussion has occurred in recent years relating to how to address this negative skin friction appropriately, and numerous projects have made an effort to quantify this phenomenon, but many questions are still left unanswered.

5:10-6:00 pm **Exhibitor Tear-Down**

Professional Development Hours: Attendees will receive a certificate verifying Professional Development Hours (PDH)*
*New York State approval pending | *Florida State provider #4072

Program and speakers are subject to change.

Driven Pile Technologies for the 21st Century



Calgary, Alberta • June 28, 2012

Calgary is an attractive and dynamic city situated on the banks of the Bow River and close to Alberta's majestic Rocky Mountains. The host city of the 1988 Winter Olympic Games takes pride in its sporting legacy. Attractions, including the Glenbow Museum, Calgary Tower and Eau Claire Market are great places to visit year-round. The Executive Royal Inn Hotel & Conference Centre is conveniently located in North Calgary only minutes from the airport and Calgary's downtown core and all of the city's major attractions are easily accessible.

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Airport shuttle service is available.

Attendee Contact Information:

Name: _____ Suffix (Jr., III, etc.): _____ Professional (P.E., PhD): _____

Position: _____ Organization: _____

☐ Yes, I need my Florida State PDH Credit. My license number is: _____

Organization Type: ☐ Contractor ☐ Engineer ☐ Services ☐ Material/Equipment Supplier ☐ Educational

Address: _____

City: _____ Prov/State: _____ Postal/Zip: _____ Country: _____

Phone: _____ Fax: _____ E-mail: _____

Seminar Registration (all funds are Canadian)

(Registration fee covers seminar attendance, breakfast, breaks, lunch, registration materials and handouts.)

- ☐ **DFI / PDCA / National CGS Member Registration: $295**
- ☐ **Non-Member Registration: $395**
- ☐ **Government Employee Registration: $250**
- ☐ **Student Registration: $50**

Sponsorship Options*:

- ☐ **Speaker Dinner Sponsorship - $1,000** (One opportunity available)
- ■ **Flash Drive Sponsorship - $900** ~~(One opportunity available)~~
- ■ **Meeting Room Sponsorship - $500** ~~(Two opportunities available)~~
- ☐ **Meal Break Sponsorship - $350** (Two of four opportunities available)

Exhibit Registration:

- ☐ **Exhibit: $700** (*Includes one attendee*)

Payment

Total: $ _____

Payment By: ☐ Check or Money Order Enclosed ☐ VISA ☐ Amex ☐ MasterCard

Credit Card Number: |___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___| Expiration Date: ___ ___ / ___ ___

Credit Card PIN Number: _____ *(Please note that credit card receipts will be issued by Oak Environmental.)*

Name on Credit Card: _____ Signature: _____

Checks payable to: Calgary Geotechnical Society

Mail registration forms and checks to: CGS c/o Oak Environmental, Suite 103, 4712 – 13th ST NE, Calgary, AB T2E 6P1

For Credit Card Payments send form to frank@oakenviro.com or fax to: 403 250-3978

Inquiries: Frank Magdich, tel: 403-250-9810 or e-mail: frank@oakenviro.com

*Sponsorship fees are non-refundable once received by CGS. Registration for this seminar is **not** included in your sponsorship.

Sorry, No Refunds after June 8, 2012 for seminar registration.