Structural Engineers Association of New Mexico

Annual Meeting

Friday, June 25, 2010

Embassy Suites Hotel Albuquerque

Welcome to the SEANM Annual Meeting!

Please take a moment to review the following tips for a positive meeting experience.

ROOM ASSIGNMENTS: All sessions will take place in Sandia ballrooms VII and VIII. Breaks will take place in Sandia VI. Exhibitors are set up in Sandia VI and the adjacent hallways.

RESTROOMS: Restrooms are located south of the meeting rooms, just before the elevators. All meeting facilities are smoke-free.

PHONES/PAGERS: Out of courtesy to the presenters and fellow attendees, please turn off cell phones and pagers, or place them on the vibrate mode before entering any sessions.

ARRIVE EARLY: Sessions will start on time. In order to prevent disruption, please arrive on time.

BADGES: Please wear your name badge at all times during the meeting.

EVALUATIONS: Please complete general conference evaluation, which can be found in your conference bag. Your valuable feedback will be provided to presenters and assist in planning for next year.

HANDOUTS: Your conference bag contains handouts for each of the sessions.

LOST AND FOUND: Any items found during the meeting will be taken to the registration desk.

CERTIFICATES: Please pick up your certificate at the end of the meeting from the registration desk. You must turn in your evaluation in order to receive your certificate.

QUESTIONS?: Staff at the registration desk are available to assist with any questions.

2009 – 2010 SEANM Board Members

Daniel Axelrod
President

Vicky Watt
Vice President

Bob Crossno
Treasurer

Matt Cramer
Secretary

Rhonda Young
State Director

Agenda of Events

7:30 – 8:10 AM **Registration**

8:10 – 8:15 AM **Welcome: Daniel Axelrod**

8:15 – 9:45 AM **LRD Foundation Design and Special Inspection of Foundations**

Dr. John Lommler, PE, AMEC Earth & Environment, Inc.

Sponsored by iLevel by Weyerhaeuser

Geotechnical foundation recommendations have historically been "allowable soil bearing". To determine the base area of a footing, structural engineers had to determine the service column loading then divide by the net allowable soil pressure. To design the footing concrete for thickness and reinforcing, the structural engineer then had to divide the factored loads by the footing area to determine a factored soil resistance. Geotechnical LRFD design has come, and now you should receive the factored soil resistance directly from the geotechnical engineer. What should you expect, what should you ask for, and what terms do we all need to use to clarify this potentially confusing situation.

9:45 – 10:00 AM **Break Sponsored by Coreslab Structures**

10:00 – 11:30 AM **Rammed Earth Construction**

Quentin Wilson, *Adobe Program Director & Instructor*, Northern New Mexico College

Sponsored by GCC of America

The understanding of adobe and rammed earth through engineering in 2010 AD was championed by Richard Hudson Clough. In 2010 BC it was championed by Nubian masons. Codes, regulations and standards presently in effect will be iterated and they show surprisingly widespread acceptance. The actual implementation of design and construction of earthen structures lags but there are signs of new life across New Mexico, the USA and the World. Close coupling of adobe with passive solar adds a new dynamic to its mass. This presentation looks at several recent projects and some old ones. What is known and unknown from the structural point of view will be reviewed. Proselytizing will occur.

11:30 – 11:45 AM **Break**

11:45 – 1:15 PM **Lunch Session Structural Failures from the Haiti Earthquake**

Eric MacFarlane, SE, PE, LEED AP BD+C, *Associate*, Dekker Perich Sabatini

Sponsored by Simpson Strong-Tie Anchor Systems

On January 12th, 2010 a 7.0 magnitude earthquake rocked Port-au-Prince, Haiti. The earthquake resulted in near 250,000 deaths, caused more than 1000 buildings to collapse and damaged countless other structures. The presentation includes a discussion of factors that contributed to the failure of masonry and concrete buildings and probable collapse mechanisms. Field observations made by Mr. MacFarlane in early April 2010 of damaged and collapsed structures in Port-au-Prince will serve as the basis for the presentation.

1:15 – 1:30 PM **Board Elections**

1:30 – 3:00 PM **Buckling-Restrained Braced Frames**

Andy Hinchman, *Chief Engineer*, CoreBrace, LLC.

Sponsored by TXI-Expandable Shale & Clay

Buckling-Restrained Braced Frames (Barbs) are now a code identified Seismic Load Resisting System. The presentation will cover: why Barbs offer superior performance at a lower cost; how Buckling-Restrained Braces (BRBs) work; testing requirements for BRBs; how to incorporate BRBs into projects; detailing options for BRB connections and will include BRB project highlights.

3:00 – 3:15 PM **Break**

3:15 – 4:45 PM **BIM Steel**

Luke Faulkner, *Director of IT Initiatives*, American Institute of Steel Construction

Sponsored by Hayward Baker Inc.

4:45 – 5:00 PM **Closing Remarks: Vicky Watt**

Exhibitors

AMEC Earth & Environment, Inc.
(505) 821-1801
www.amec.com
AMEC, currently ranked #7 by ENR, is one of the largest geotechnical consulting, engineering and construction firms in the world. The AMEC business model is built upon providing innovative and global solutions on a local level to our clients, and therefore AMEC has established over 120 regional offices in North America, including eight serving New Mexico. AMEC has been providing geotechnical and environmental engineering, construction materials testing, and special inspections for over 50 years now in New Mexico. A'MEC's experienced professionals and inspectors are fully trained, qualified and have certifications to accomplish all levels of engineering, special inspection and testing.

Bentley Systems, Inc.
(760) 809-3983
www.bentley.com
With RAM, STAAD and ProSteel, Bentley offers the most comprehensive structural products anywhere. These flexible and scalable products allow seamless workflow of analysis, design, detailing, documentation and BIM data for building, plant and civil applications.

Crocker Ltd
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Crocker Ltd is a general contractor offering specialized services in emergency stabilization, foundation repair, wall stabilization, masonry repair and moisture remediation on both historic and non-historic structures. The firm is a certified installer for A.B. Chance helical piers.

Core Brace
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Epic Metals Corporation
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www.epicmetals.com

Delta Structural Technology, Inc.
(281) 821-3006
www.fiberwrap.com
Delta Structural Technology Inc. is a full-service innovative solution provider specializing in composite fiberwrap technology used for structural strengthening, corrosion repair, comprehensive flood proofing, historical preservation, and blast protection of new and existing structures.

GCC of America
(505) 889-5562
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New Mexico's only cement manufacturer.

Hayward Baker Inc.
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www.haywardbaker.com
North America's leader in specialty geotechnical construction is committed to providing the most technically correct and cost effective solution for every geotechnical challenge.

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www.us.hilti.com
Hilti, the highest innovation and expertise in fastening and support systems.

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(505) 873-5242
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Manufacturers and distributors of engineered wood products and software solutions for the complete structural frame in residential and light commercial construction.

Powers Fasteners Colorado
(303) 922-9202
www.powers.com
Powers Fasteners lead the industry in ICC approved concrete and masonry cracked concrete anchors.

Ram Jack of New Mexico
(505) 771-8890
www.ramjacknm.com
Ram Jack of New Mexico is a foundation underpinning company which utilizes helical piers, micro piles, resistance piers and compaction grouting in repair and preconstruction applications. Additional services include: Soil nail and strand tiebacks, ground anchors, and gunite for permanent and temporary shoring applications.

Simpson Strong-Tie Anchor Systems
(505) 991-4719
www.strongtie.com
We help people build safer structures economically. We do this by designing, engineering and manufacturing “No Equal” structural connectors and other related products.

TXI - Expandable Shale & Clay
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www.txi.com
Producer and distributor of rotary kiln expanded shale and clay lightweight aggregate.

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www.grace.com
Supplier of concrete admixtures, shrinkage reduces, macor fibers, corrosion inhibitors, lithium nitrate and pervious concrete.