

# 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 Coreselab 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.**

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[www.amec.com](http://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. AMEC's experienced professionals and inspectors are fully trained, qualified and have certifications to accomplish all levels of engineering, special inspection and testing.

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[www.fiberwrap.com](http://www.fiberwrap.com)

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