



# SEAC

## GENERAL NOTES

Structural Engineers Association of Colorado Newsletter

### NOVEMBER ANNUAL MEETING

### Earthquakes

#### Schedule

Mark Your Calendar (2011)

##### General

##### Membership Meetings

(Breakfast 7:30 a.m.)

January 20

March 17

May 19

July 21

September 15

##### Business

##### Management Committee Meetings

(Breakfast 7:30 a.m.)

February 10

April 14

June 9

August 11

October 13

##### SEAC Board of Directors Meetings

(7:30 a.m.)

January 6

February 3

April 7

June 2

August 4

October 6

##### Fall Seminar

October 20

##### Annual Lunch Banquet

November 17

Time: 11:30 a.m.

Four notably damaging earthquakes occurred over fourteen months of 2010 and early 2011. Each is likely to have significant long term effects on the structural engineering practice in the US.

- Port au Prince, Haiti, January 12, 2010: A moderately large earthquake demonstrated, again, how devastating strong ground motion is to construction that is both heavy and brittle.
- Bio-Bio, Chile February 27, 2010: A great earthquake shook a region with a substantial amount of construction quite similar to US practice.
- New Zealand February 21, 2011: A moderate earthquake directly under a

city with very modern building codes surprised everyone with the intense ground shaking, the concentration of heavy damage, and the impact on the urban development.

- Japan March 11, 2011: A great earthquake and tsunami shook a large area of earthquake resistant construction, with generally good performance in ground shaking and big lessons for tsunami.

Jim Harris will offer his reflections on selected lessons from these earthquakes. He has made first hand observations in Chile and Japan, and will draw from those experiences and reports from colleagues on all four earthquakes.



#### Don't Miss Out - November Annual Meeting

Date: Thurs. November 17, 2011

Speaker(s): **Jim Harris, P.E.**

**J.R. Harris & Company**

Location: **Renaissance Denver Hotel**

**3801 Quebec Street**

**(South of the I-70 Quebec Intersection)**

Please Register on the SEAC website at [www.seacolorado.org](http://www.seacolorado.org)

Reservations MUST be made by: Monday, Nov. 14, 2011.

## Officers & Board Members



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*Information for inclusion in the newsletter must be received one month prior to the next general meeting.*

*Caryn L. Farrell*  
SEAC Executive Assistant  
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## PRESIDENT'S MESSAGE

I was greatly impressed with the turnout at our annual Fall Seminar recently and wanted to thank **Tim Mays** for presenting details on the Design of Diaphragms, Chords and Collectors. It was well presented and received based upon comments I have heard. In addition, I want to thank **Hilti Corp.** for their informative presentation, hands on demonstrations, and meals for the membership. We also had generous support from **LPR, Simpson Strong Tie, and Colorado Prestress** –THANK YOU ALL. Concern was appropriately expressed prior to the conference that the cost would be prohibitive to the membership, but after review of the numbers it appears that the conference turned at least a \$4,000 profit for the membership. The Board will be discussing how to use these funds to benefit the membership in the near future.

As you might imagine, I have a lot of thanks to hand out as this will be my last President's Letter for SEAC.

Thanks to:

- Caryn Farrell for keeping the SEAC boat well managed
- Jerry Maly for keeping the SEAC boat on the straight and narrow
- Alex Abel for his 3 years of service as Director
- The SEAC BOD for driving to Boulder this past year and for their continuous support of my questionable presidential abilities
- The Active SEAC Committees for providing the SEAC membership a public voice and presence, and for bringing the membership top notch presentations
- The Renaissance Hotel for BACON!
- My Ascent Group Partners for letting me take time to be a part of a truly excellent organization!

- The membership for its participation in our semi-regular on-line surveys and for the input on SEAC's support of, and concern with, the NCSEA's proposed SE licensing policy.

In closing, I want to say what a privilege it has been to work with both the Board Members and with Committee Chairs this year. I have had the chance to get to know and work with my peers, and I am a better engineer because of it.

Finally, I want to thank **Jim Harris, J.R. Harris and Company** for his generous consent to present to the membership his experiences with 4 recent earthquakes at the annual lunch, we are lucky to have him. I highly recommend that the membership join the Board at the annual lunch this month for his presentation and to join the Board in thanking various past board members for their contributions to SEAC.

Andrew C. Kelsey, PE  
President

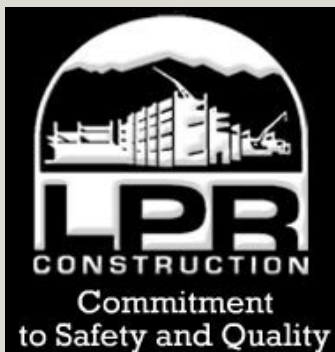
# GENERAL NOTES - *General Announcements*

Structural Engineers Association of Colorado General Announcements

## FALL SEMINAR SPONSORS THANK YOU



®



## NOVEMBER SPONSOR: STEGO INDUSTRIES, LLC THANK YOU



Stego Industries is the industry leader in the below-slab vapor barrier market. We manufacture Stego Wrap Vapor Barriers and Vapor Retarders. Our products are composed of the highest quality, virgin resins and provide superior protection against the costly problems associated with below-slab moisture migration (i.e. flooring failures, mold growth, ASR, alkaline efflorescence, etc).

We have earned the recognition and respect of the design and construction community by providing quality products and continuous support. It is important we are a partner you can rely on, addressing any questions about our product selection, location, and installation that you may have. In addition, we provide continuing education seminars to share the latest industry information on the subject of below-slab moisture protection and moisture in concrete.

In addition to helping prevent moisture-related issues, Stego Wrap has also been used as part of sub-slab soil gas mitigation systems (such as radon and methane), has been a component in brownfield redevelopment, and may also help contribute to a variety of sustainable building goals.

Tom Marks, CSI, CDT, LEED Green Associate is the Rocky Mountain Regional Manager for Stego Industries. Located in Denver, he is happy to be a local resource for SEAC members.

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# GENERAL NOTES - *General Announcements*

Structural Engineers Association of Colorado General Announcements



AISC Seminar – Seismic Braced Frames – Design Concepts and Connections is coming to Denver, CO on December 13!

SEAC MEMBERS ARE ELIGIBLE FOR AISC MEMBER DISCOUNTS!

This eight hour seminar will discuss expected behavior, design requirements and review design examples for:

- Special Concentrically Braced Frames
- Ordinary Concentrically Braced Frames
- Eccentrically Braced Frames
- Buckling Restrained Braced Frames

Speaker and Author: Rafael Sabelli, S.E., Director of Seismic Design at Walter P. Moore and Associates, San Francisco, CA.

More information: [www.aisc.org/seminars](http://www.aisc.org/seminars).

## Welcome

Please welcome our newest members to SEAC:

**James A. Cherry** (Professional Member)  
Magnum Geo Solutions

**James M. Foreman** (Affiliate Member)  
Martin/Martin, Inc.

**David G. Johnson** (Affiliate Member)  
Bohannon Huston, Inc.

### Did You Know.....?

- Our Annual Dinner has changed to a LUNCH this year. Please RSVP and Pay on-line at [www.seacolorado.org](http://www.seacolorado.org)
- 2012 SEAC General Meeting Dates will be released soon.

# Thank You!

The SEAC BOD would like to thank - YOU - for your continued support of this GREAT organization.



# Proposed NCSEA Policy on Separate Structural Engineering Licensure

To be proposed at the NCSEA Annual Conference: October 20-22, 2011

## Policy

The National Council of Structural Engineers Associations (NCSEA) supports separate licensure for structural engineers to protect the safety, health, and welfare of the public due to the potential loss of life and property in improperly designed and constructed structures such as buildings and bridges.

NCSEA encourages all jurisdictions to adopt a Structural Engineering Practice Act that defines the practice of structural engineering and restricts it to those who have demonstrated competence by means of education, experience, and examination. In particular, NCSEA endorses the 16-hour Structural examination developed by the National Council of Examiners for Engineering and Surveying (NCEES) and administered for the first time in April 2011, as well as the NCEES Model Law Structural Engineer qualifications as the standard for licensure of structural engineers.

NCSEA also encourages jurisdictions to include in their new legislation an equitable transitioning clause for engineers currently practicing structural engineering.

## Issues

Some of the issues that need to be addressed in the adoption of structural engineering licensure and practice restrictions include:

- The qualifications for licensure should include education, experience and examination standards.
- The requirements for licensure should be as consistent as possible across jurisdictions to allow appropriately qualified structural engineers to practice nationwide.
- The provisions for licensure should permit currently licensed professional engineers (PE) with appropriate education and experience to continue designing structures for which they have adequate expertise without requiring additional examination.
- Some jurisdictions will choose to adopt threshold criteria for structure size and/or type for which design by a licensed structural engineer is required.
- Each jurisdiction must decide whether licensure of structural engineers should be separate from other professional engineering licensure or set up as a post-PE credential.

## Rationale

Every engineer holds paramount the safety, health and welfare of the public.

The field of civil engineering encompasses a broad spectrum of concepts from traffic and surveying, water and wastewater treatment, and municipal and utility engineering to building and bridge design. The specialty of structural engineering within

this spectrum is unique in its impact on the safety, health and welfare of the general public. A structural system failure almost always has serious consequences; even in the best cases, there are often substantial costs associated with correcting what is or could become a life-threatening situation.

The field of structural engineering has become increasingly complex, requiring the engineers who practice it to be diligent in keeping up with the latest codes and specifications. The complexity of the structural engineering field has been recognized by NCEES in the development of the “Model Law Structural Engineer” designation that requires 16 hours of examination instead of the 8 hours of testing required for other fields of engineering. The implementation of the new 16-hour structural engineering examination further attests to the higher standard to which structural engineers are being held.

The need for advanced credentials has been acknowledged sporadically across the country, resulting in a lack of uniformity among jurisdictions that makes licensure by comity or reciprocity difficult.

- The structural engineering specialty within civil engineering has been recognized by a number of jurisdictions, starting with Illinois in 1915, with the implementation of separate licensure laws.
- California requires a specialized licensing exam that incorporates seismic design principles in order to obtain a professional civil engineering license. Following sufficient experience, a separate specialized examination, in addition to the 16-hour NCEES exam, is currently required to obtain structural engineering title authority which allows the design of schools and hospitals.
- Several other western states require additional examination before an engineer can practice structural engineering or use the title “structural engineer”. These states have differing education, experience, and examination requirements and differing criteria that govern which structures must be designed by a licensed structural engineer.

The Council of American Structural Engineers (CASE) and the American Society of Civil Engineers (ASCE), as well as its Structural Engineering Institute (SEI), also support separate licensure for structural engineers.

NCSEA believes the effort to implement separate structural engineering licensure in all jurisdictions is a worthy commitment and encourages their Member Organizations and the structural engineering community to take the lead in making these changes in each jurisdiction.

Obtain the full document at [www.ncsea.com](http://www.ncsea.com).