



## Mark Your Calendar (2002)

### **General Membership Meetings**

*(Breakfast 7:30 a.m.)*

January 17  
March 14  
May 9  
July 18  
September 12

### **Business Practice Committee Meetings**

*(Breakfast 7:30 a.m.)*

February 14  
April 11  
June 13  
August 8  
October 10

### **SEAC Board of Directors Meetings**

*(7:30 a.m.)*

January 3  
February 7  
April 4  
June 6  
August 1  
October 3

### **Annual Dinner Meeting**

November 7  
6 - 9 p.m.

## JULY GENERAL MEETING

The Structural Engineering Institute of ASCE has established teams to study the structural performance of the buildings impacted by the tragic attacks of September 11 at the World Trade Center in New York and the Pentagon in Washington.

**Jim Harris**, of J.R. Harris & Company Structural Engineers, is a member of the team focusing on the Pentagon and will give us a report on the progress of their study at our July 18, 2002, meeting.

The Pentagon, famous for being the largest single office building in the world, was constructed in sixteen months beginning in September 1941. The five story building is a cast-in-place concrete space frame. The Boeing 757 airplane entered the first story, and the debris traveled approximately 300 feet through the structure. Although a portion of the exterior ring did collapse within a half hour of the impact, the structure exhibited remarkable toughness.

Join us for a description of the overwhelming forces unleashed within the building, the construction of the building, along with the ongoing renovation, and the status of approximate analyses attempting to capture the response. The team also intends to extrapolate their findings on performance of the Pentagon to implications for modern building design.

This presentation will be similar to the one given on the West Slope. If you attended that meeting, you probably have thought of some great questions for Jim. Please bring those questions to our July meeting. We look forward to seeing all of you there. Remember, make your reservations early.

**Important: When making reservations, please EMAIL Greg Larson at [glarson@jvajva.com](mailto:glarson@jvajva.com)**

### UPCOMING GENERAL MEETING

**Date:** Thursday, July 18 @ 7:30 a.m.

**Speaker:** Jim Harris

**Location:** Renaissance Denver Hotel - 3801 Quebec Street  
(south of the I-70 and Quebec Street intersection)

**Reservations:** Email Greg Larson at [glarson@jvajva.com](mailto:glarson@jvajva.com) by **noon** on July 16th, or call 303-444-1951!



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

*Caryn L. Bauer*  
Newsletter Publisher

## PRESIDENT'S MESSAGE

I have lived here for most of my life, and I have never seen smoke from a fire this bad. I can vaguely remember a fire on Mt. Evans around 1960, or so. We saw several red sunsets, but the smoke didn't reach Denver like this time. We just returned from vacations in Tucson and Indy. They, too, are fighting large fires in the Tucson area. Assuming you can find some spare time to head for the hills on a weekend, please use your heads and be careful with the fires. It is looking like it will be an extremely dry and dangerous year.

I wish the deadline to get my message to the editor's office was a few weeks later. I would have liked to report how our meeting on the West Slope turned out. Right now, I'm actually concerned about IF it turned out. The fire situation may have forced us to revise our plans. We will update you in the next newsletter.

I am afraid I have to fill you in on the death of this year's SEAC night with the Rockies. My keen sense of engineering judgment tells me that was not one of my better ideas. Let's just say my office responded, and I was one

of them! Nope, not a big seller. I am curious however, why it failed so catastrophically. Please let me know, if you are so inclined.

I would like to extend thanks to the **Steel Liaison Committee** for their fine presentation and hard work on Architecturally Exposed Structural Steel (AESS). This work is being considered by AISC for inclusion in national standards in the future. The package they presented us at the May meeting will be useful to us all. It was nice to see the great turnout at the meeting, as well. Good Job!

We would like to encourage member firms to submit photos of past and present jobs you have been working on. We plan to rotate those photos in and out of the website. You will be able to show off your projects, while making it a more informational site. Please submit the photos in .jpg or .gif formats to the website committee at **rhuddleston@zimkor.com**.

Our **seacolorado.com** website has undergone its initial creation, it's "Under Re-Construction" phase, and now it's starting its next phase of enhancement. This is the phase where we hope to make it useful for its visitors and more fun to navigate. One of the first things we will

be using it for will be to distribute copies of our updated membership roster. These updates will be available to our SEAC members only, and will be password protected. We are also placing the documentation on AESS on the website. If you were unable to attend May's meeting, you can still have a copy of the information packet the committee provided. Members will be notified via email of their password. Those SEAC members that we do not have an email address for should have received a separate piece of paper with a password written on it. In order to maintain our privacy, I would like to stress that this password is to be kept private. In the future, there may be things posted on the site that will be for members only. Please help us keep such information confidential. Access the site and download your update after reading this newsletter. If you did not receive the password, please contact a Board member.

If you have any suggestions regarding activities of SEAC, please forward them to me at my email address. Any thoughts on Certification, yet? See you in July.

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# FEMA: ONE DAY TRAINING COURSE

FEMA has offered to provide materials and expertise for a one-day training class for the use of the ATC-20 document, Post-Disaster Inspection of Buildings. This will be a free class. Students from this class will most likely be placed on lists of eligible individuals qualified to assist local agencies in reviewing structures with respect to safe access after a catastrophic event. Depending on circumstances, such services may be compensated, or would be performed on a volunteer basis. Either way, it would be beneficial to you and your communities. For obvious reasons, let's all hope it turns out to be a giant waste of time, but those interested in participating are encouraged to enroll in the training. **PLEASE REVIEW THE ENCLOSED INSERT IN THIS NEWSLETTER.**

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## NCSEA NEWSLETTER UPDATE

### Spring Board Meeting Dues Increase

At the spring Board of Directors Meeting in Seattle, the treasurer's report indicated that we can expect a shortfall this year. The good news is that NCSEA has become the "go to" organization for those wanting input from structural engineers. The bad news is that with success comes a price. Therefore, the Board of Directors voted unanimously to ask the membership for a dues increase. Currently the dues are \$5.00 per year per Member Organization member. The Board proposes an increase to \$10.00 per year per Member Organization member.

Yes, that is a 100% increase. There is no way to hide that fact. However, the increase is less than a trip for two to McDonalds, it is less than the cost to see a bad movie, it is less than the cost of two beers at a ballgame, and it is less than the cost of the daily commute for most of us who live in large cities. Anyway, you get the picture. NCSEA dues are still cheap even with a 100% increase.

What are you getting for your dues?

STRUCTURE Magazine is published ten times a year. If your dues only went for STRUCTURE, it would be a bargain at \$1.00 and issue, less than the cost of most Sunday Newspapers.

### Participation

A ketchup commercial talks about a-n-t-i-c-i-p-a-t-i-o-n.

We get p-a-r-t-i-c-i-p-a-t-i-o-n.

### Through NCSEA, you participate in the following:

The International Building Code (IBC). NCSEA, through its Code Advisory Committees, has voting members on the committees that wrote and maintain the structural provisions of the code. In fact, Jim Delahay, SEAoAL, has become the chair of the Structural Subcommittee. The National Fire Protection Association (NFPA) 5000 Building Code. NCSEA has voting members on the committees that are developing this code. As much as we disagree with NFPA's decision to publish their own building code, it behooves us to participate in its development in order that the two codes are as similar as possible. The World Trade Center Building Performance Study Team Coalition. NCSEA is a member of this coalition that is partnering with the National Institute of Standards and Technology (NIST) to make recommendations for research in "Structural Behavior of Buildings Under Fire". This is a four-year program with a proposed budget of 56.4 million dollars. Included in the budget is further investigation of the World Trade Center and surrounding buildings, as recommended by the World Trade Center Report issued on May 1, 2002; research, testing and verification as recommended by the coalition; and improved tools and guidelines for the industry.

The Infrastructure Security Partnership (TISP). NCSEA is a member of TISP. TISP will act as a national asset, facilitating dialogue on domestic infrastructure security and offering technical support and sources of comments on public policy related to the security of the nation's built environment. Jon A. Schmidt, P.E. from the newly formed Structural Engineers Association of Kansas and Missouri (SEAKM) is NCSEA's representative to TISP.

NCSEA Structural Engineers Emergency Response Plan (SEERP). NCSEA SEERP Committee is preparing a document to be used by our member organizations to respond to natural and manmade disasters. Initiated after the attacks on the Pentagon and World Trade Center on September 11, 2001, this document will, among other things, outline how to set up a command center, as well as how to interact with federal agencies and local fire and police departments.

AISC Committees. NCSEA has members on AISC Code of Standard Practice Committee, AISC Fire Steering Committee, Chairman's Advisory Council, and the Steel Construction Industry Roundtable. Fortunately, AISC funds participation in these committees.

Applied Technology Council (ATC). The ATC has created a position on their Board of Directors for NCSEA. Currently, Jim Delahay from the Structural Engineers Association of Alabama (SEAoAL) is our representative on the ATC Board. Fortunately, ATC funds our participation.

NCSEA Certification Committee. Our Certification Committee has recently completed its task of developing a model of certification for structural engineers. This model is being presented to our membership at local meetings across the country. NCSEA Certification Business Plan Committee. This committee, composed of NCSEA past presidents, is putting together a business plan for certification, to be used in the event that the certification model is approved by the membership. NCSEA Advocacy Committee. This committee promotes the structural engineering profession. It has 11 members and is looking for more. It has several subcommittees including Students and Educators, Prospects and Clients, Regulators and General Public and Media. If you are interested in joining this committee, please contact the Chair, Stan Caldwell, from the Structural Engineers association of Texas at scaldwell@half.com or (214)346-6280. National Council of Examiners for Engineering and Surveying (NCEES). NCSEA has been asked to place NCSEA members on various NCEES committees.



SEAC ICC-Colo Chapter



## POST-DISASTER INSPECTION OF BUILDINGS ATC – 20 TRAINING

ATTENDEES OF THIS SEMINAR MAY BE PLACED ON A LIST TO BE CALLED IN RESPONSE TO AN EVENT

### IN COOPERATION WITH

City and County of Denver, Department of Public Works  
Community Planning and Development Agency

Structural Engineers Association of Colorado (SEAC)

Colorado Chapter of the International Code Council (ICC)

University of Colorado at Denver

City of Colorado Springs, Office of Emergency Management

El Paso County Office of Emergency Management

Colorado Office of Emergency Management

the Federal Emergency Management Agency (FEMA)

A seminar titled *ATC – 20 Training* will be presented *August 22<sup>nd</sup> in Colorado Springs and August 23<sup>rd</sup> in Denver*. The seminar is intended to establish procedures for post earthquake safety evaluation of buildings, as well as damage caused by other events (whether natural or man-made). Specifically, the seminar provides procedures and guidelines for making on-the-spot evaluations and decisions regarding continued use and occupancy of buildings damaged by a disaster. The seminar is designed for structural engineers and building inspectors. The seminar includes rapid and detailed evaluation procedures for inspecting buildings and posting them as “inspected” (apparently safe), “limited entry” or unsafe”. Also included are special procedures for evaluation of essential buildings (e.g., hospitals), and evaluation procedures for nonstructural elements, and geotechnical hazards. Overviews of the Colorado earthquake hazard will be provided each morning.

**Attendees completing the training may choose to be made part of a call list for evaluators and may then be called to assist in analyzing buildings for safe occupancy or re-occupancy following an event. The City and County of Denver and the Colorado Office of Emergency Management are working towards the establishment of protocol for this response format. Evaluators on the call list will be required to provide contact phone and/or pager number.**

The program is free. FEMA will provide the course manuals. Each attendee will receive a copy of ATC-20, “Procedures for Post-Earthquake Safety Evaluation of Buildings”, ATC-21 “Rapid Visual Screening of Buildings” and the FEMA-ASCE “World Trade Center Building Performance Study”. Lunches are on your own.

If you wish to attend this seminar, please complete the attached application and return it to FEMA Region VIII, DFC Building 710, P.O. Box 25267, Denver, CO 80225-0267, attention Doug Bausch by August 1, 2002. Or call (303) 235-4859, fax (303) 235-4849 or email [Douglas.Bausch@fema.gov](mailto:Douglas.Bausch@fema.gov).

# POST-DISASTER INSPECTION OF BUILDINGS ATC – 20 TRAINING

## *Registration Form*

*(Please print)*

*Please note that this is a seminar one-day in length, offered at the locations indicated below. Each seminar begins @ 9:00 a.m. sharp. However, please arrive by 8:30 a.m. to allow time for registration.*

Name \_\_\_\_\_

Organization \_\_\_\_\_

Registration or Certification? (*Professional Engineer, Building Inspector, etc.*) \_\_\_\_\_

Area of technical expertise consistent with background of education, practice and/or experience (*structural, electrical, mechanical, geotechnical, architectural, etc.*) \_\_\_\_\_

Address \_\_\_\_\_

City, State Zip Code \_\_\_\_\_

e-mail \_\_\_\_\_

Daytime phone & fax \_\_\_\_\_

Indicate your first and second selection with numbers 1 and 2 from one of the following dates. *Unless informed otherwise, your first choice will be honored*

<i>Location</i>	<i>Selection</i>
<i>Colorado Springs Police Operations Center Thursday, August 22, 2002</i>	_____

<i>Denver University of Colorado at Denver Friday, August 23, 2002</i>	_____
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### **About the Speaker**

Robert Bruce is a Structural Engineer with Wiss, Janney, Elstner Associates in Emeryville, California. He has acted as a safety evaluation engineer following five earthquakes in California since 1983. In addition he has written several documents on the subject and was a member of the Project Engineering Panel responsible for the production of ATC-20. He has presented the ATC-20 seminar over 200 times.

Return to FEMA Region VIII, DFC Building 710, P.O. Box 25267, Denver, CO 80225-0267, attention Doug Bausch by August 1, 2002. Or call (303) 235-4859, fax (303) 235-4849 or email Douglas.Bausch@fema.gov.

SEAC has arranged two tours in the Denver Area. The first tour is scheduled at **Zimkor Industries** on Friday, August 9<sup>th</sup> at 11:00 AM. The tour will include a trip through the plant and some hands-on experience with some welding. That's right, you'll get to try your hand at welding studs and small pieces of structural steel. This will give the folks at Zimkor a chance to see just how good of a welder we can be!

The second tour will be through the Structural and the Architectural plants at **Rocky Mountain Prestress**. No word yet on any hand-on applications there but, if you bring your muckin' boots, they might just put you to work. This tour is scheduled for August 16<sup>th</sup> at 10:00 AM.

Both tours will include a free box lunch after each tour. Please respond to the voice mailbox at (303) 791-9033, extension 4. ***DUE TO SCHEDULING CONFLICTS AT THAT NUMBER, PLEASE DO NOT***

***RESPOND TO THIS NUMBER UNTIL AFTER JULY 11, 2002.*** Please respond for the Zimkor tour before noon on August 7<sup>th</sup>. Please respond for the RMP tour at either, (303) 791-9033, extension 4, or (303) 964-7023 (**John Garlich at RMP**) between July 12<sup>th</sup> and noon on August 14<sup>th</sup>. You are welcome, and encouraged, to attend both tours. We look forward to seeing you there.



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....Structural Engineer for part time work with Phoenix Investigations, Inc., for support of its fire investigation work. Please forward a letter of introduction to Don Peak at Phoenix Investigations, Inc., PO Box 27297, Denver, Colorado 80227, or by email at phoenix@ix.netcom.com

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