



Structural Engineers Association of Colorado Newsletter

## MAY GENERAL MEETING

## Schedule

Mark Your Calendar (2009)

General Membership Meetings (Breakfast 7:30 a.m.) January 15 March 19 May 21 July 16 September 17

#### Business Practice Committee Meetings (Breakfast 7:30 a.m.) February 12 April 9 June 11 August 13 October 8

#### SEAC Board of Directors Meetings (7:30 a.m.) January 8 February 5 April 1 June 4 August 6 October 1

Fall Seminar October 28

Annual Dinner Banquet November 12 6 - 9 p.m.

#### Heavy Timber Construction: It's All About The Connections!

ric is going to talk about the different types of connections that TETW has used in the past and why he has chosen those connections. "Often times, with a little bit of creativity we can change the loads on our beams from moment connections and shear connections to loading the bearing faces." With high snow loads in the mountain regions he often has to use steel in order to modify the "traditional" joinery connections. He will show examples of custom fabricated steel to facilitate the connections, and considerations related to assembly and shipping. Eric will also discuss the different machinery TETW has at its disposal including its limitations.

TETW is an engineer-to-order manufacturer of heavy timber structures including full timber frames as well as timber components. The products vary from traditional timbers with mortise and tenon connections to more contemporary styles using engineered lumber and steel reinforced connections. TETW has been part of the construction of both commercial and residential projects using many different styles of construction and materials over the last 10 years. TETW services include design of the structures. They develop and detail shop drawings that include a structural engineer's review and stamp. They use 3D solid modeling parametric software that allows them to build exact models of the structure, develop material take off's and make design changes quickly and efficiently.

Eric Seelig is the president of Three Elements Timberworks Inc. (TETW) Eric served for 3 years in the US Army and 5 years in the Colorado National Guard. He graduated from the University of Colorado in Boulder with a Bachelor's degree in Economics. After operating Seelig Construction as a sole proprietor for 5 years he started Three Elements Timberworks Inc. in 1999. At Seelig Construction Eric was a framer on custom residential projects in the Front Range. While framing he discovered the art of timber framing and began to learn the trade. As demand for his services grew so did the company. Some of the towns you can see his work in are the mountain towns of Steamboat Springs, Vail, Winter Park, Aspen and Telluride. As the owner of a heavy timber manufacturer Eric has built timber trusses with clear spans of over 60' and shipped them assembled to Kansas City MO. He also works directly with his design team in order to create a comprehensive set of shop drawings that originate from a full 3D solid model drawing.

In 2004 Eric traveled to Morocco as a heavy timber construction expert for a television program aired by The Discovery Channel. The show documented the construction of a replica of the weapon allegedly invented by Archimedes called "Archimedes Claw".

#### Don't Miss Out - May General Meeting

#### Date: Thurs. May 21st 2009

Speaker(s): Eric Seelig, TETW Location: Renaissance Denver Hotel 3801 Quebec Street (South of the I-70 Quebec Intersection) Please e-mail your reservation to Caryn at: <u>seac@martinmartin.com</u>. Reservations MUST be made By Monday, May 18, 2009

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#### **Officers & Board Members**



Elizabeth Jones President Martin/Martin, Inc. 303-431-6100 ejones@martinmartin.com



Ron Hedrick VP/Treasurer Jirsa Hedrick Associates, Inc. 303-839-1963 rhedrick@jirshedrick.com



Andrew Kelsey Secretary Ascent Group Inc. 303-499-3022 <u>a.kelsey@ascentgrp.com</u>



Rodd Merchant, P.E. Past-President JE Dunn Construction 303-691-7632 rodd.merchant@jedunn.com



John Malcom Director Peak Engineering, Inc. 303-274-0707 jmalcolm@peakengr.com



Jeannette Torrents Director JVA, Inc. 303-444-1951 jtorrents@jvajva.com



Alexander Abel Director City & County of Denver (720) 865-2812 <u>alexander.abel@denvergov.org</u>

Submit comments/articles to: Caryn Bauer Structural Engineers Association of Colorado c/o Martin/Martin, Inc. 12499 West Colfax Avenue P.O. Box 151500 Lakewood, CO 80215 (303) 431-6100 x403 (303) 431-6866 fax seac@martinmartin.com

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

Caryn L. Bauer SEAC Executive Assistant seac@martinmartin.com

## President's Message

Support for our organization and activity levels remain high in 2009 in terms of general membership meetings, committee activities and membership. We currently have 277 members who have paid dues in 2009.

We saw great presentations and large turnout for our first two General Meetings with presentations on strengthening of concrete structures and testing/inspection of structural steel. We will hit other aspects of our field with heavy timber construction in May and a geotechnical presentation in July. Then we will wrap up our breakfast meetings for the year with our own Steel Liaison Committee presenting in September.

I am very pleased with our committee work this year. Besides the very active Steel Liaison Committee mentioned above, the Scholarship group is making significant progress this year, the Architectural Liaison Committee has been reactivated (see article on page 5), and the Education Committee has kicked in to plan the Fall Seminar. However, there is room for more Committee activity. The Seismic Committee has been inactive for a few years, although we often see interest from those filling out the member application forms. If anyone has ideas for a focus of the Seismic Committee and/or interest in getting it going again, please contact me.

As I mentioned before, the Board has decided to re-vamp the website this year. **John Malcolm** is in the lead for the special committee to select a website consultant and then John and others will continue on to work with the consultant. We have narrowed the search to two firms, conducted interviews, and a selection is imminent. The Board of Directors also took up discussion of the model Code of Ethics document sent to us by NCSEA. This draft document is included in this newsletter. SEAC can adopt this document in whole, with revisions, or not at all. The Board voted to keep the language in place as is and put it forth to our membership for consideration. We recommend adopting this as a Policy Statement rather than a change to the Bylaws. We view this as a document that would serve as a guideline for operating in a professional and ethical manner and it is consistent with our organization's stated objectives. As a Policy Statement, we can vote on this at a General Meeting or we can do a letter ballot. The current plan is to present this document to you in this newsletter and at the General Meeting. allow a period of time for comments. and then conduct a letter ballot. If you have any feedback or questions, please contact a member of the Board between now and June 3, 2009, so that we can consider the issues at our June Board Meeting and then develop a letter ballot, if appropriate.

Another piece of business that we will take care of at our May Meeting is a vote on the Snow Load publication. The SEAC Bylaws define a process for adopting publications formally. We previously adopted the Building Department Survey and Standard of Practice publications, as well as the Wind Load Study.

Don't forget - if you have ideas for construction site or fabrication plant tours, please let me know!

See you at the May Meeting!

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# **GENERAL NOTES -** ANNOUNCEMENTS

#### MAY GENERAL MEETING SPONSOR



Hilti is a world-leading manufacturer and supplier of quality, innovative and specialized tools and fastening systems for the professional user. With more than 1,600 highly trained Hilti account managers and engineers throughout North America and an additional 1,300 Hilti employees nationwide, Hilti expertise covers the areas of powder actuated fastening, drilling and demolition, diamond coring and cutting, measuring, firestopping, screw fastening, adhesive and mechanical anchoring, and strut and hanger systems.

#### MARCH MEETING PHOTOGRAPHS'S



Ben Nelson, NCSEA BOD Providing SEAC Members with an NCSEA Update





Dr. Ray Reed, CTC-Geotek <u>March Speaker</u>

# **GENERAL NOTES -** ANNOUNCEMENTS

In The Spotlight

### NOTICE TO MEMBERSHIP

MAY 21, 2009 GENERAL MEETING SNOW LOAD PUBLICATION VOTE. OUR BYLAWS REQUIRE A MAJORITY OF VOTING MEMBERS AT A GENERAL MEETING TO APPROVE PUBLICATIONS. WE WILL VOTE ON THIS PUBLICATION AT THE MEETING.



#### FUTURE MEETING TOPICS

The Board of Directors would like to invite the membership to make suggestions for possible future meeting speakers and topics. Please send any ideas to: <u>rhedrick@jirshedrick.com</u>

Welcome

Please WELCOME our newest members to SEAC!!

**Geri Boone** (Professional Member) BASE Structural

**Conner Barry** (Affiliate Member) Peak Engineering, Inc.

Mark Grundmann (Affiliate Member) BASF Building Systems

**Ian Jesse** (Affiliate Member) Anchor Engineering, Inc.

Scott Cochran (Professional Member) CASE Forensics

**Dan Mullins** (Professional Member) Martin/Martin, Inc.

Cory Schrauben (Professional Member)

Brenda Crane (Affiliate Member) RMG Engineers

**Justin Jones** (Affiliate Member) KL&A, Inc.

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#### **PUBLICATIONS FOR SALE**

2007 COLORADO GROUND SNOW LOAD REPORT & MAP Price: \$75 (members)

A Guide For Consulting Structural Engineering Services: A Recommended Standard Of Practice Price: \$25 (members) and \$50 (non-members)

2006 SURVEY OF COLORADO BUILDING DEPARTMENTS UNIT PRICE: \$50.00 CD: \$100.00

Contact Caryn Bauer at: <u>seac@martinmartin.com</u> for order form.

# **GENERAL NOTES -** ANNOUNCEMENTS

## Architectural Liaison Committee

SEAC's Architectural Liaison Committee was restarted in January of this year and has been meeting each month since then. A nucleus of current Committee members began by reviewing the objectives and accomplishments of the previous Liaison Committee that was active between 2003 and 2006. Discussions followed on overall goals, the direction the Committee's activities might take, and how to effectively engage architects and other structural engineers in Colorado.

The Committee's past and current mission: To raise the level of understanding, facilitate communications, and develop closer and lasting working relationships between Colorado's architectural and structural engineering communities.

The Committee is currently discussing issues of interest to design professionals, with special focus on architects. The identified issues will then be used to develop a series of relevant and engaging questions and/or discussion topics. The intent is to develop these questions into a survey format that will then be presented to the design community through personal meetings with members of the committee. In other words, the Committee intends to take the survey 'on the road' in an effort to more directly engage the intended recipients of the survey materials. The Committee has targeted the end of May 2009 as the launch date for survey activities.

Further discussions have led to the idea of creating a usable and interactive 'question and answer' section on the SEAC website with an associated section that archives and organizes the 'questions and answers' (and perhaps other topics) into some form of searchable listing or database.

The Committee will be exploring the possibility of working and/ or partnering with AIA Colorado on this and future projects.

Future meeting announcements and Committee information will be posted in the SEAC newsletter. Please contact Mark Cormier, the Committee Chairperson, at 303-444-1951 or mcormier@jvajva.com with any questions.



Mark your Calendars! The Half -Day Fall Seminar is currently scheduled for **Wednesday, October 28, 2009,** and the Annual Dinner is scheduled for **Thursday, November 12, 2009**. Further details will be communicated to all SEAC members as the dates get closer.

# Important

If you have a change of address, phone, fax, or e-mail. Please email Caryn Bauer at <a href="mailto:seac@martinmartin.com">seac@martinmartin.com</a>



Please review the 2009 Membership Roster. If you notice any items that need to be changed. Please email Caryn Bauer at seac@martinmartin.com

July 29, 2008

#### NCSEA Model Code of Ethics<sup>1</sup>

#### Introduction<sup>2</sup>

This Code of Ethics is provided to NCSEA member organizations (MO's), to adopt in whole or in part as they so deem appropriate. Individual MO's may determine whether or not enforcement of this Code will be implemented. Local statutory and regulatory requirements should also be reviewed, and the adopted Code amended to avoid conflicts.

#### **Fundamental Purpose**

This Code of Ethics is provided as guidance for individual structural engineers, and applies to the responsible individual who provides professional services in the analysis, assessment, design, construction, or repair of buildings, bridges, and other structures.

All of the Fundamental Principles, Tenets and Guidelines should be applied in accordance with the standards of skill and care generally exercised by other structural engineers in the same locale acting under similar circumstances and conditions.

#### **Fundamental Principles**

To uphold and advance the integrity, honor and dignity of the structural engineering profession by:

- 1. using their knowledge and skill for the enhancement of human welfare;
- 2. being honest and impartial in serving with fidelity the public, their employers and clients; and
- 3. striving to increase the competence of practitioners and the prestige of the structural engineering profession.

#### **Fundamental Tenets**

Structural engineers:

- 1. use their knowledge and skill in the performance of their professional duties to make decisions in the interest of the safety, health, and welfare of the public.
- 2. perform services only in areas of their competence.
- 3. issue public statements in an objective and honest manner.
- 4. act for each employer or client as faithful agents or trustees, and avoid conflicts of interest.
- 5. build their professional reputation on merit and compete fairly with others.
- 6. act in such a manner as to uphold and enhance the honor, integrity, and dignity of the structural engineering profession, without tolerance for corruption.

7. continue their professional development throughout their careers, and provide opportunities for the professional development of others.

#### **Guidelines to Practice Under the Fundamental Tenets of Ethics**

#### TENET 1.

Structural engineers use their knowledge and skill in the performance of their professional duties to make decisions in the interest of the safety, health, and welfare of the public.

- a. Recognize that the lives, safety, health and welfare of the general public are dependent upon engineering judgments, decisions and practices.
- b. Approve or seal only those design documents or engineering reports, reviewed or prepared in accordance with the rules and laws of the authority having jurisdiction, which are determined to be safe for public health and welfare in conformance with accepted structural engineering standards.
- c. Inform their clients or employers of the possible consequences, and notify such other authorities as may be appropriate, when their professional judgment is overruled under circumstances where the safety, health and welfare of the public are endangered.
- d. When there is knowledge or reason to believe that another person or firm may be in violation of any of the provisions of Tenet 1, consider first presenting such information to the person or firm suspected of the violation. If such action does not satisfactorily resolve the suspected violation, present such information to the proper authority in writing and cooperate with the proper authority in furnishing such further information or assistance as may be required, without incurring a breach of this Code of Ethics.
- e. Seek opportunities to be of constructive service in civic affairs and work for the advancement of the safety, health and well-being of their communities, and the protection of the environment through the practice of sustainable development.

#### TENET 2.

Structural engineers perform services only in areas of their competence.

- a. Engage in engineering assignments only when qualified by education, training, or experience in the technical field of structural engineering involved.
- b. Accept an assignment in which certain aspects require education and training outside their area of competence, provided their services are restricted to those areas of the projects for which they are qualified.
- c. Affix their signatures or seals to structural engineering documents or engineering reports dealing with matters for which they are qualified.

#### TENET 3.

Structural engineers issue public statements in an objective and honest manner.

- a. Endeavor to extend the public knowledge of structural engineering, and avoid participating in the dissemination of inaccurate, unfair or exaggerated statements regarding structural engineering.
- b. Be objective and honest in professional reports, statements, or testimony. Include relevant and pertinent information in such reports, statements, or testimony.
- c. When serving as expert witnesses, express an engineering opinion when it is founded upon: adequate knowledge of the known conditions, a basis of technical competence, and honest conviction.
- d. When serving as peer reviewers, preferably (subject to the consent of the client) inform the design engineer of their appointment, have access to those responsible for the design, and be able to freely discuss and resolve all pertinent matters with the design engineer. The peer reviewer should not seek to provide their services for any remedial design work to be undertaken; however, the client may elect to request the peer reviewer to review the remedial design work. In the event that the design engineer should either abstain from undertaking the remedial design work or not be engaged by the client to perform these services, the client may engage the services of the peer reviewer to undertake such work.
- e. Issue no statements, criticisms, or arguments on structural engineering matters which are inspired or paid for by interested parties, unless they indicate on whose behalf the statements are made.
- f. Be dignified and honest in explaining their work and merit, and avoid acts tending to promote their own interests at the expense of the integrity, honor and dignity of the structural engineering profession.

#### TENET 4.

Structural engineers act for each employer or client as faithful agents or trustees, and avoid conflicts of interest.

- a. Strive to avoid conflicts of interest with employers or clients, and promptly inform employers or clients of any business association, interests, or circumstances which could influence their judgment .
- b. Refuse compensation from more than one party for the same services on a project, or for services pertaining to the same project, unless the circumstances are fully disclosed and agreed to, by all interested parties.
- c. Avoid soliciting or accepting gratuities from other parties that create a conflict of interest.
- d. When providing public service as members, advisors, or employees of a governmental body or department, avoid participating in considerations or actions with respect to services solicited or provided by them or their organization in private or public structural engineering practice.

- e. Avoid using confidential information coming to them in the course of their assignments as a means of making personal gain or profit if such action is adverse to the interests of their clients, employers or the public.
- f. Avoid accepting professional employment outside of their regular work or interest, when such activity could harm their employer or create a conflict of interest.
- g. Avoid using equipment, supplies, computer files, computer software, laboratory or office facilities, or other real or intellectual property of their employers to carry on outside private practice without the consent of their employers, or in any manner inconsistent with any lease or licensing agreements governing such use.

#### TENET 5.

Structural engineers build their professional reputation on merit and compete fairly with others.

- a. Avoid giving, soliciting or receiving either directly or indirectly, any political contribution, gratuity, or consideration in order to secure work.
- b. Negotiate contracts for professional services fairly and on the basis of demonstrated competence and qualifications for the type of professional service required. Disclose to the client any subcontracting, joint venturing, or out-sourcing of structural engineering services by the structural engineer.
- c. Request, propose or accept professional commissions on a contingent basis only under circumstances in which their professional judgments would not be compromised.
- d. Provide accurate representation of their academic and professional qualifications or experience.
- e. Give proper credit for structural engineering work to those contributing, and recognize the proprietary interests of others. When possible, name those responsible for designs, inventions, writings or other accomplishments.
- f. Advertise professional services in a manner that is accurate, not deliberately false or misleading. Suggested and recommended means of advertising include:
  - 1. Professional advertisements in recognized publications, and listings in rosters or directories published by responsible organizations, provided that the advertisements or listings are consistent in size and content, are in a section of the publication regularly devoted to such professional advertisements, and are accurate and not misleading with respect to the structural engineer's extent of participation in projects described.
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- 6. Commercial advertisements as may be published by contractors and material suppliers, containing a modest, accurate statement acknowledging the structural engineer's participation in the project, and used by permission of the structural engineer.
- g. Avoid maliciously or falsely, directly or indirectly, injuring the professional reputation, prospects, practice or employment of others, or indiscriminately criticize another's work.
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#### TENET 6.

Structural engineers act in such a manner as to uphold and enhance the honor, integrity, and dignity of the structural engineering profession, without tolerance for corruption.

- a. Act in such a manner which will uphold the honor, integrity, or dignity of the engineering profession, and avoid knowingly engaging in business or professional practices of a fraudulent, dishonest or unethical nature.
- b. Be honest in their control and spending of monies, and promote effective use of resources through open, honest, and impartial service to the public, employers, associates and clients.
- c. Be especially vigilant to maintain appropriate ethical behavior where payments of gratuities or bribes are institutionalized practices.
- d. Strive for transparency in the procurement and execution of projects. Transparency includes disclosure of names, addresses, purposes, and fees or commissions paid for all agents facilitating projects.
- e. Avoid procuring, copying, or otherwise using the computer files, computer software, or other real or intellectual property of others without the consent of the product or property owner, or in any manner inconsistent with any lease or licensing agreements governing such use.

#### TENET 7.

Structural engineers continue their professional development throughout their careers, and provide opportunities for the professional development of others.

- a. Strive to keep current in their specialty fields. This may be achieved by engaging in professional practice, participating in continuing education courses, reading in the technical literature, and attending professional meetings and seminars.
- b. Encourage their engineering employees to become licensed, certified, or registered.
- c. Strive to attend and present papers at professional and technical society meetings.
- d. Strive to uphold a professional structural engineering relationship between employers and employees with respect to terms of employment including technical positions, salary ranges, and benefits.

#### Footnotes

<sup>1</sup> NCSEA (National Council of Structural Engineers Associations) wishes to acknowledge and thank the American Society of Civil Engineers (ASCE), whose Code of Ethics was used as the basis for this document.

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