



STRUCTURAL ENGINEERS OF COLORADO

NEWSLETTER

JULY GENERAL MEETING

2015 SCHEDULE

Meetings

Loc: Renaissance Hotel
Time: Breakfast 7:30 a.m.
January 22
March 19
May 28 (4th Thursday,
Sheraton Denver West)
July 16
September 17

Fall Seminar

Loc: Sheraton Denver West
Time: 7:30 a.m. – 12 p.m.
October 9

Annual Meeting

Details TBD

Board of Directors

Structural Consultants, Inc.
Time: 7:30 a.m.
January 8
February 5
April 2
June 4
August 6
October 1

Business Management Committee

Loc: Renaissance Hotel
Time: Breakfast 7:30 a.m.
February 12
April 9
June 11
August 13
October 8

LESSONS LEARNED FROM STRUCTURAL FAILURES

One of the fundamental tenets of the Code of Ethics for structural engineers in the performance of our professional duties is to use our knowledge and skill to make decisions in the interest of the safety, health, and welfare of the public. However, no matter how technically competent we may be, sometimes errors are made and structural failures and collapses occur. At the July General Meeting, John Lund and Jerry Maly will present and discuss a number of structural failures and will include certain findings from the subsequent investigations and insights into some of the factors that contributed to these failures.

John Lund, PE, is a Principal in the Lakewood office of Martin/Martin, Inc., where he manages the Structural Investigations Team. John has over 30 years' experience in the design, evaluation, and assessment of buildings and other structures. He is an active member and/or chairman of several ACI committees and is past President of the Rocky Mountain Chapter of the International Concrete Repair Institute.

Jerry Maly, PE, is a Principal in the Denver office of Wiss, Janney, Elstner Associates, Inc., and has practiced structural engineering in the Denver area since 1976. His work has included the design of new buildings and modifications to existing buildings, assessments and preparation of repair documents addressing structural damage and deterioration, as well as investigations of structural failures. Jerry is a past President of SEAC.

JULY 2015 MEETING

Thursday, July 16, 2015
Renaissance Hotel
Breakfast at 7:30 a.m.

3801 Quebec Street, Denver, Colorado 80207
(south of the I-70/Quebec intersection)

RSVP by *Monday, July 13*, on the [SEAC website](#).

BOARD OF DIRECTORS

Structural Engineers Association of Colorado



Don Carroll

President

J.R. Harris & Company

303-860-9021

don.carroll@jrharrisandco.com



Ben Cook

VP/Treasurer

Wiss, Janney, Elstner

Associates, Inc.

303-914-4300

bcook@wje.com



Paul Doak

Secretary

Martin/Martin, Inc.

303-623-4927

pdoak@martinmartin.com



Paul Hause

Past President

Structural Consultants,

Inc.

303-399-5154

paul@sci-denver.com



Rob Jackson

Director

URS Corporation

303-843-2755

rob.jackson@aec.com



Bob Pattillo

Director

Pattillo Associates

Engineers, Inc.

303-860-9021

bob@paengineers.com



Susan Jorgensen

Director

303-919-9321

susiejorg315@comcast.net

We Want to Hear from YOU! The SEAC Board of Directors is interested in hearing your suggestions, comments, and ideas. Please feel free to contact a member of the BOD at any time.

Thank you to all of our members who continue to support SEAC!

PRESIDENT'S MESSAGE

Structural Engineers Association of Colorado

I wager most of us are structural engineers because we truly love the work. With an interesting problem at hand, I am engrossed thinking about it, whether at the office or at home, and gladly let it enter my non-working hours. I realize some may find what I am about to say blasphemy, but so be it. There are those who believe that being a structural engineer is a lifestyle choice where much of your “free” time should be dedicated to your craft. I don’t agree with that philosophy. While I find the career of structural engineering a personally rewarding and fulfilling career choice, I think it is necessary to enjoy some things that have nothing to do with work. After all, there is a reason it is called work, and not super happy fun time. With the longer summer days beckoning folks outside, why not try something new and non-work related? Carve out some time and have new experiences: climb a 14er that you can drive up (my goal for the summer), do one of those Tough Mudder endurance events, or solve the riddle of how to tire out your almost-four-year-old so she might fall asleep before you do. (That last one is possible but significantly harder than you might think.) If you followed my advice from the last newsletter, you took some time to sit quietly outside and just enjoy. Perhaps you read a book or something along those lines. There are many truths to be learned by reading up on what smart folks have said. Things like:

- *There are two kinds of concrete. Concrete that is cracked, and concrete that is going to crack.* Source unknown but likely copyrighted by ACI.
- *If it is on the internet, it must be true.* Albert Einstein
- *Experience is what you get when you didn’t get what you wanted.* According to the internet, this one has been around a long time but enjoys a resurgence as of late due to Randy Pausch.

I am a big fan of that last one. So much so I may have to get it framed. You can never craft a note or detail carefully enough that some enterprising person will not find a way to misinterpret what you thought you asked for, but you can learn from your own experiences, and those of others, to minimize the chances that something really goes wrong. The topic of July’s general meeting will be *Lessons Learned*. Jerry Maly, of Wiss Janney Elstner, and John Lund, of Martin Martin, will be presenting a few instances where, for whatever reason, the engineer didn’t get what they thought they asked for—or at least what they should have asked for.

On a more somber note, the end of an era is upon us. The fabled nametag crate will make its final appearance at the July meeting. If you would like a piece of nostalgia, feel free to pick up your old SEAC nametag and take it home with you. After July’s meeting, Paul Doak will be taking the crate to pasture, never to be seen again.

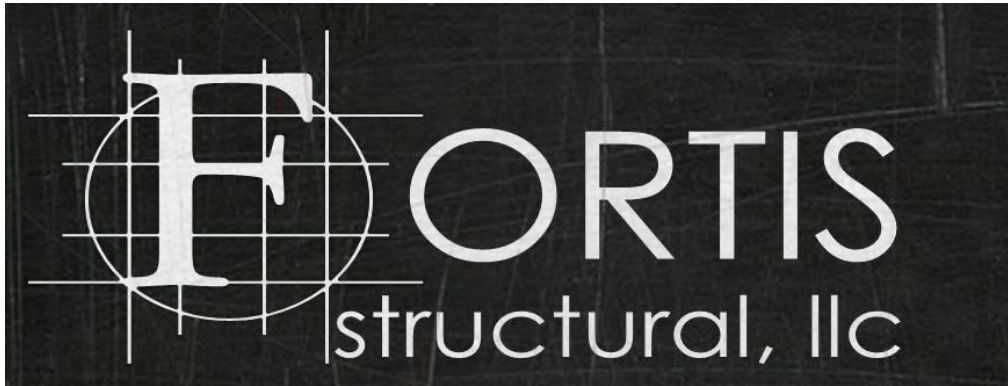
Cheers,



Don Carroll, SEAC President

EMPLOYMENT OPPORTUNITIES

Structural Engineers Association of Colorado



Fortis Structural is a Denver-based firm providing structural engineering services to some of the top owners, developers, architects and contractors in the industry. We work on a large variety of projects, including office buildings, multi-family residential projects, medical facilities, and mountain resort projects. Our projects are primarily in Colorado although we are also doing work in multiple states throughout the country. We're constantly looking for the best and brightest talent in the structural engineering field, with particular needs as follows. Candidates shall have experience in commercial, retail, multi-family residential, hospitality, resort or institutional projects.

Design Engineer

0 to 5 years of experience in structural engineering. A Bachelor's degree in Civil (Structural) or Architectural Engineering is required, with a Master's degree preferred. Familiarity with the International Building Code and Revit Structures is a plus.

Project Engineer

5 to 10 years of experience in structural engineering and licensed as a Professional Engineer. A Bachelor's degree in Civil (Structural) or Architectural Engineering is required, with a Master's degree a plus. Familiarity with the International Building Code is required, and Revit Structures is a plus. Experience working directly with architectural clients is required.

Project Manager

8 to 15 years of experience in structural engineering and licensed as a Professional Engineer. A Bachelor's degree in Civil (Structural) Engineering is required. Familiarity with Revit Structures is a plus. The ideal candidate will have experience working with multiple architectural clients with the ability to recruit work to the firm. Strong interpersonal and leadership skills are a must.

We offer competitive salaries and benefits and the opportunity to work in a fun, collaborative environment. Hard work and success will be rewarded. If you find yourself bored and in a rut please email your cover letter and resume to jrapp@fortisstructural.com. Something better awaits you.

EMPLOYMENT OPPORTUNITIES

Structural Engineers Association of Colorado



JVA, Incorporated is a consulting engineering firm with offices in Boulder, Fort Collins, Winter Park, Glenwood Springs, and Denver, Colorado. JVA has openings for experienced, creative, and highly motivated people to join our structural engineering team. JVA offers competitive salaries and comprehensive benefits in a rewarding work environment. To learn more about JVA, visit www.jvajva.com.

JVA, Inc. has openings for the following positions:

Structural Project Engineer: Boulder

Structural Project Manager: Winter Park or Glenwood Springs. Experience in multi-family residential construction is highly desired.

Residential Engineer: Any Office. Custom home experience required.

Historic Preservation Engineer: Any Office. Experience assessing historic structures or existing buildings and designing repairs and alterations. Strong written communication skills are essential.

Qualifications for all positions:

- Licensed Professional Engineer with 5+ years of experience
- Strong written and verbal communication skills
- Experience with REVIT
- Motivated and service-oriented with a passion for engineering
- Strong technical skills with experience in RAM and/or RISA

To apply for an open position, send your cover letter and resume to JVA, Inc., 1319 Spruce Street, Boulder, Colorado 80302 or e-mail info@jvajva.com.

EMPLOYMENT OPPORTUNITIES

Structural Engineers Association of Colorado



The City of Denver's Community Planning & Development Department (CPD) is currently recruiting for an **Architectural/Structural Plans Review Engineer**.

This crucial role will have an impact throughout Denver by reviewing and evaluating construction documents to ensure compliance to Building Codes and engineering standards for various buildings throughout the City and County of Denver.

The mission of CPD is to guide and promote the planning, building and maintenance of an outstanding Denver. The Department's three primary functions are Planning, Permitting and Inspection.

Metro Denver has an enviable quality of life that makes it simply one of the best places in the U.S. to live and work. If you are interested in building a career within one of America's most beautiful cities, while at the same time, providing a better environment for the public, this may be the ideal opportunity!

QUALIFICATIONS

Education Requirement: Bachelor of Science Degree in Architectural or Civil Engineering, or other directly related Engineering field.

Experience Requirement: Three years of experience as a Licensed Professional Engineer working as a lead project engineer in the construction industry.

Licensure and/or Certification:

- Registration as a Professional Engineer (P.E.) by the Colorado State Board of Registration for Professional Engineers at the time of application. Registration as a Professional Engineer by another state will be accepted in lieu of the requirement, provided the applicant is registered by the State of Colorado by the completion of the probationary period.
- Possession of a valid driver's license at the time of application.
- Possession of an International Code Council Building Plans Examiner Certification by the completion of the probationary period.

JOB RESPONSIBILITIES

- Review and evaluate architectural and structural construction documents submitted for approval utilizing applicable codes/standards/guidelines/laws, appropriate municipal ordinances, and construction and engineering standards, determine review fees, and authorize the release of approved documents for city permits.
- Check engineering calculations and provides timely oral and/or written communication detailing design and/or construction deficiencies in plans and specifications.
- Interact with the public, professional design consultants, project managers, contractors, and elected officials to communicate permit application procedures and regulatory and code requirements and interpretations, and negotiate for special considerations on unique and/or historical projects.
- Direct and participate in design coordination meetings regarding private development projects and city, state, and regional capital improvement projects in order to lead the development process, ensure timely approval and completion of projects, and resolve any problem areas.
- Assist inspectors with difficult or unusual code compliance issues and answer questions from inspectors about plan review comments.
- Cultivate, foster, and maintain positive working relationships with directors, managers, supervisors, employees, and other stakeholders to gain their cooperation and support on assigned projects/assignments.
- Participate in recommending and establishing policies, procedures, standards, guidelines, and specifications and evaluate the effectiveness of existing methods, policies, procedures, and proposed local and national model code modifications and issues.

To apply, go to www.denvergov.org/jobs.

EMPLOYMENT OPPORTUNITIES

Structural Engineers Association of Colorado



KL&A, Inc.

Structural Engineers and Builders

All of KL&A's offices have immediate openings for engineers with 5-10 years of experience.

Full-time position applicants for this position **must** have:

- A **Masters Degree** from an accredited civil/structural or architectural/structural engineering program

Preferred applicants will have:

- A PE or SE license
- Experience with **Revit Structure** modeling
- Experience in structural design of residential, commercial, industrial, or institutional buildings
- Experience working with architects

Personal attributes of many kinds may be acceptable, but an understanding of and dedication to client-centered service is a requirement.

Applicants for full-time positions should send a cover letter and resume to Greg Kingsley (gkingsley@klaa.com) and Camie Beagan (cbeagan@klaa.com).

Please visit www.klaa.com for more information about our firm.

IS YOUR COMPANY HIRING?

Consider placing an ad in the bi-monthly SEAC newsletter to reach over 300 members, including professional engineers, architects, contractors, suppliers, and vendors.

To learn more, contact Caryn Farrell (SEAC@MartinMartin.com).

ANNOUNCEMENTS

Structural Engineers Association of Colorado

SEAC NCSEA Announcement

It is all about the people . . .

That you will meet. That you will learn from. That you will share with.

The NCSEA 2015 Structural Summit at the Red Rock Resort, Las Vegas, Nevada, promises to fulfill all this and more. This year's program has two tracks of presentations. One will be the technical track that will bring you information on some of the latest developments in codes, standards, and the design challenges we face. The second track will provide information to further develop your business.

The technical track includes topics on ASCE 7, Building Ratings and Resiliency, Wood and Light-Formed Steel Framing, Lateral Analysis, and Repairing Wood Structures. These topics will be presented by the leaders in our profession including many who help to maintain and update our standards.

The second track brings you topics such as: "Find the Lost Dollar: 6 Steps to Improve Profits", "The Decline of Engineering Judgement", and "Business Ownership Transfer". Share your business experiences with and learn from others representing all sizes of companies from the large firms to the one-man enterprises.

In addition to the presentations and discussions, there will be plenty of opportunities to interact with the attendees including receptions sponsored by SECB and The Young Engineers, a chance to see the latest and greatest from our vendors, enjoy bowling in the onsite VIP Bowling Suite, and honor the award winners at the NCSEA Banquet & Awards Presentation. Saturday morning features the NCSEA annual business meeting – a perfect opportunity to learn more about your national organization.

If you have attended in the past you can attest to the quality of information provided at this annual event, and if you have not yet joined us this should be the year you do. Mark your calendar, register at www.ncsea.com, and think about bringing two or three people to cover all of the action. Join us September 30 – October 3 in Las Vegas for the 2015 Structural Summit.

I look forward to seeing you there.



Susan Jorgensen, PE
NCSEA Director and Liaison to SEAC

ANNOUNCEMENTS

Structural Engineers Association of Colorado

SEAC YMG Announcements

NCSEA YMG Nation-Wide Trivia Night

The NCSEA YMG Support Committee hosted the inaugural nationwide Trivia Night. Colorado had 7 engineers from the YMG come together and competed against young engineers from the western states. They were quizzed in categories such as sports, natural disasters, structural theory and United States trivia. Please join us in congratulating the SEAC YMG, the 2015 West Coast NCSEA Trivia Night champions! SEAC YMG looks forward to having more young members join in for the next NCSEA YMG event where they will have the opportunity to network with their peers and help Colorado defend their title.

YMG Summer Picnic

The SEAC YMG is hosting a summer picnic on July 25th from 10AM to 4PM (or as long as people want to stay) at Garland Park in Glendale, Colorado. We will have volleyball and other picnic games. Food will be provided, but it is a BYOB event. If you have any questions or if you would like to be added to the email distribution list, please contact yeg.seac@gmail.com.

WELCOME OUR NEWEST MEMBERS

Caitlin Greagor (Affiliate Member)
NEI Electric Power Engineering, Inc.

Addison MacMahon (Professional Member)
Martin/Martin, Inc.

Paul Retzer (Professional Member)
Walker Parking Consultants

James Sirko (Professional Member)
Sirko Associates, Inc.

Adam Wood (Professional Member)
Fortis Structural, LLC

WANTED: Members for Colorado Building Department Liaison Committee

SEAC is considering a transformation of the Building Department Survey Committee. In the past, this committee took responsibility for periodically polling city and county jurisdictions in the state to identify structural design criteria such as adopted building codes, snow loads, wind speeds, seismic requirements, frost depth, geological hazards, etc. The information was compiled in a "Survey of Colorado Building Departments" booklet, last published by SEAC in 2007. Most of us would probably agree that at the present time, it is easier to obtain this information directly from jurisdiction web sites, which are generally kept up-to-date with the latest adopted regulations.

Nonetheless, there is arguably a need to keep SEAC in touch with local building departments, primarily because the ICC codes have become more complicated and more obscure to building officials, especially with regard to structure design. For example, many building departments do not have copies of ASCE-7 and thus have no reference for understanding basic concepts of roof snow load design based on ground snow loads.

Potential goals of a new (or renewed) Colorado Building Department Liaison Committee would be 1) to establish direct contact with each jurisdiction to offer support for general structural design issues, 2) regularly represent SEAC at quarterly ICC meetings, and 3) to promote consistent structural design standards throughout the state, such as adoption of the upcoming 2015 Recommended Colorado Ground Snow Loads.

If you are interested in joining this committee, please contact Bob Pattillo, bob@paengineers.com.

ANNOUNCEMENTS

Structural Engineers Association of Colorado



COLORADO ASSOCIATION OF
GEOTECHNICAL ENGINEERS



*Structural Engineers Association of Colorado
Colorado Association of Geotechnical Engineers &
ADSC Rocky Mountain Chapter
Golf Tournament*

Friday, August 7th

**7:00 a.m. Registration - 8:00 a.m. Shotgun Start
West Woods Golf Club - Arvada, CO**

**\$125. Per Golfer
\$475. Foursomes**

(includes Green Fees, Cart, Range Balls, Breakfast
Burrito & Coffee, BBQ Lunch, 2 Drink Tickets, Raffle)
*2 Mulligans per team may be purchased for \$40.00
prior to start.

Prizes/Awards:

**1st Place, 2nd Place, 3rd Place.
Closest to the Pin. Longest
Putt. Longest Drive. Raffle.**



**\$200 Hole Sponsorships
\$500 Beverage Cart Sponsorships
\$300 Breakfast Sponsorships
\$500 Lunch Sponsorships
\$200 Prize Sponsorships**

****See Registration Form for more information****

ANNOUNCEMENTS

Structural Engineers Association of Colorado

FALL SEMINAR 2015

FRIDAY, OCTOBER 9, 2015

7:30 A.M. – 12 P.M.

SHERATON DENVER WEST

SEISMIC DESIGN: OVERVIEW AND UPDATE

James Robert Harris, P.E., Ph.D., J. R. Harris &
Company, Denver, Colorado

The lesson will include an introduction to computation of response to seismic ground motion and it will provide an overview of the codes and referenced standards that govern seismic-resistant design of building structures in the U.S. It will include a comparison of the similarities and differences between the methods for new buildings in ASCE 7 and for existing buildings in ASCE 41. The importance of correlation between the system definition and detailing requirements with the R factor used in ASCE 7 will be illustrated. It will also highlight key differences between the 2005 and 2010 editions of ASCE 7, as well as a preview of differences expected in the planned 2016 edition of ASCE 7.

UPDATES TO THE 2015 IBC: OVERVIEW OF UPDATES TO THE 2015 IBC FROM THE PERSPECTIVE OF STRUCTURAL ENGINEERS

David R. Ojala, SE, LEED AP, CWI, Exponent -
Failure Analysis Associates, Menlo Park, California

An overview and highlight of changes in the 2015 IBC from the 2009/2012 IBC and how these changes affect structural engineering design. Highlighting changes to structural design per Chapter 16. Overview of changes to special inspections and testing requirements of Chapter 17 as well as updates in the material chapters of the 2015 IBC. Presentation to include an overview of changes to referenced codes, including the reorganization of ACI 318-14.

Look for more information in the September newsletter.

SPONSOR

Structural Engineers Association of Colorado



Atlas Tube
JMC STEEL GROUP

At **Atlas Tube** our goal is to provide superior quality **HSS** products that will save you money, while simultaneously providing you with the resources you require to design and specify HSS.

With the largest HSS size range available and the shortest cycle times in the industry, we have the capability to deliver the products you need, when you need them. As the exclusive provider of **Jumbo HSS** and a producer of the new **ASTM A1085** spec, we supply products for engineering projects across North America.

Visit our website at www.atlastube.com for more information!



SEAC COMMITTEES... We Need You!

Structural Engineers Association of Colorado

Have you considered joining a committee? Your participation is what makes our organization so successful. If you are interested in joining, please click on the hyperlinked name to contact the Committee Chair or Board Liaison.

Committee	Chairperson	Contact Phone	Board Liaison
BIM	Dezi Mackey,	303.431.6100	Don Carroll
Building Dept. Survey	DORMANT		Bob Pattillo
Business Management	Wayne Muir,	303.399.5154	Paul Hause
Construction Industry	Mark Cormier,	303.444.1951	Paul Doak
Denver Building Dept.	Jerry Maly,	303.914.4300	Paul Hause
Education	Irena Kahanek	720.407.1031	Susan Jorgenson
	Chad Mitchell,		
Ethics	Peter Marxhausen,	303.947.5375	Bob Pattillo
Membership	Jerry Maly,	303.914.4300	Ben Cook
Nominating	Jerry Maly,	303.914.4300	Paul Hause
Northern Colorado	Dale Jones,	970.619.8986	Bob Pattillo
Precast Concrete	Alex Mihaylov,	303.298.1900	Paul Doak
SEER	Brent Norris,	303.860.9021	Rob Jackson
	Mike Piper,	303.431.6100	
Scholarship	Jeanette Torrents,	303.444.1951	Don Carroll
Seismic Standards	James Harris,	303.860.9021	Ben Cook
Snow Loads	Jeanette Torrents,	303.444.1951	Bob Pattillo
Standard of Practice	Jim Ness,	303.623.4927	Paul Doak
Steel Materials	Ben Cook,	303.914.4300	Ben Cook
Wind Loads	Jeanette Torrents,	303.444.1951	Rob Jackson
Young Engineers	Mathew Peterson,	303.726.2909	Paul Hause