

2021 SPRING SCHEDULE SIGN UP FOR THESE EVENTS AT <u>HTTPS://</u> <u>SEACOLORADO.ORG/</u>

SEAC Meeting July 15 2021 Via Webex 7:30am-9:00am

Fall 2021 SE/PE Study Group Kick-off July 20, 2021 6:30pm-7:30pm

Business Management Committee August 12, 2021 7:30am-9:00am

SEAC/CAGE/ASCE/ADSC Golf Tournament August 19, 2021 Racoon Creek Golf Course 7:30am-1:00pm

## STRUCTURAL ENGINEERS OF COLORADO NEWSLETTER

## **July General Meeting**

SEAC May General Meeting July 15, 2021 virtual 7:30am-8am—Announcements and Seismic Committee Presentation/Vote 8am-9am—Presentation (1 PDH)

Denver Building Permit Submittals - Process, Submittal Tips and Common Issues

David Renn, PE, SE and Rodger Young, PE

#### Abstract:

With project design and construction schedules being compressed more and more, it is critical that the building permit review process is accounted for and doesn't bring any surprises. No engineer wants their review to be the last one standing between the contractor and their ability to pull a permit! This presentation is intended to give the structural engineer some insight from Denver's plan reviewers to help create good permit submittals and to avoid common design and document issues that can extend the review process. We will also look at the steps of the process and how the quality and completeness of the initial submittal can affect the overall timeline. The goal behind good permit submittals is to make the process more efficient for both structural engineers and plan reviewers – a win-win for all!

#### Speakers

**David Renn, PE, SE**, is an Engineer-Architect Specialist with Community Planning and Development at the City and County of Denver. Renn is responsible for commercial architectural and structural plan reviews, serves as assistant supervisor for the architectural/structural plan review group, and assists the supervisor and Building Official on various projects and policies. Renn joined Denver in 2013 as an Architectural/Structural Plan Review Engineer, performing commercial architectural and structural plan reviews. Prior to that, Renn was a structural engineer at Denver firm S. A. Miro, Inc. for 18 years, performing structural design for all sizes and types of commercial buildings.

**Rodger Young, PE**, is an Architectural/Structural Plans Review Engineer with Community Planning and Development at the City and County of Denver. Young is responsible for commercial architectural and structural plan reviews and joined Denver in 2016. Prior to that, Young was a practicing structural engineer for over 35 years designing commercial projects throughout the United States. In 2000 he founded the structural consulting firm, KYSE-Structural, and was one of the principals there until deciding to move to the public sector.

# PRESIDENT'S MESSAGE

### Structural Engineers Association of Colorado

As the fog of the global pandemic begins to rise, curiosity brims as to what the post-pandemic world will hold. Recently, at a SEAC function, leaders of local structural engineering (SE) firms were asked about their post-pandemic policies. Note, this was an impromptu, unscientific poll, but the responses were telling. All of those who answered said their company expects everyone to return to the office setting on a full-time permanent basis. The approach to achieving this end varied widely from organized, mandated days one must report to the office to simply asking the employees to come back when they are ready. Most firms have or are developing policies that fall somewhere in-between. Further questioning revealed some firms may allow individuals to work remotely on a case-by-case basis but that reporting to the office was the expected norm. This is pretty much a return to pre-pandemic conditions.



SEAC is looking forward to holding in-person meetings soon. Please watch for and respond to polls that are being sent to members to gauge interest in attending in-person activities. Most likely, the first in-person meeting will be the September Member Breakfast based on member responses to the poll. The July 22<sup>nd</sup> general SEAC meeting on Building Department Issues will be a virtual meeting and the Fall Seminar in October will likely be hybrid. On the national scene, NCSEA will host the Structural Engineering Summit both in-person and virtually. The In-Person Summit will be held in New York City at the Hilton Midtown on October 12<sup>th</sup>-15<sup>th</sup> and the Virtual Summit will span from September 27<sup>th</sup> to October 21<sup>st</sup>.

On a much different note, the collapse of the Champlain Towers South in Miami is devastating news. Our thoughts are with the families and community of Surfside, Florida in the aftermath of this disaster. This catastrophic event, combined with the narrow save of the Hernando DeSoto Bridge in Memphis have brought our profession into the national spotlight. It is customary for the general public to ignore our work until something goes wrong. This order of events: silence, near-failure or failure, and negative press coverage, can lead to a degradation in the public trust with respect to our roles.

This cycle is not new and is well known in SE circles. NCSEA is currently launching a marketing and public relations initiative to build awareness of the structural engineering profession and elevate the perceived value of structural engineers and the contributions they make to their communities. This initiative could not be more timely. After these newsworthy events, the public is very aware of structural failures. We need to turn this awareness into a positive association with structural engineering and maintain the public trust in what we do. Each and every one of us is an ambassador for our profession. We need to keep our message positive, reassuring, and focused on our contributions to society.

Respectfully yours,

Lacey Goetz

## **Welcome to our Newest Members**

Sean Lamb Professional Member Conor Lenon Affiliate Member Andrew Palffy Affiliate Member Ryan Thomson Student Member Amber Vail Professional Member

Andi Vicksman Affiliate Member Luke Waldo Affiliate Member

## COMMITTEE NEWS

Structural Engineers Association of Colorado

### **EDUCATION COMMITTEE**

## Save the Date

The 2021 SEAC Fall Conference will be October 7 from 7AM-12:15PM at the Doubletree by Hilton Denver-Westminster Hotel, 8773 Yates Dr., Westminster, CO. There will be a broadcast registration available. Details will be sent soon on the speaker lineup and registration costs.

### SOUTHERN COLORADO COMMITTEE

SEAC will *always* seek ways to better serve the association membership. A Southern Committee is being formed to encourage additional membership from the many Southern Colorado engineers. The committee hopes to plan local activities and put emphasis on the important structural activities in the region. They are in the process of planning a project presentation for late summer. Stay tuned for future announcements.

Leading the expansion of the new Southern Colorado Committee of SEAC, will be Jeremy Knakmuhs, PE. Jeremy recently started expanding the CTL Thompson, Inc. structural department into the Colorado Springs area. He has been with CTL Thompson, Inc. for 11 years and has designed and worked on projects ranging from residential design and storm sewer inlet design to both small- and large-scale earth retention. He graduated from South Dakota State University and obtained his Professional Engineering license in 2015.

The Southern Committee is currently meeting remotely the third Tuesday of the month at 10:00 am. If you are interested in joining, please contact Jeremy at 303-981-2565 or by email: jknakmuhs@ctlthompson.com. We are excited for you to share your ideas and promote structural engineering throughout the Southern Colorado region.

ASCE Colorado Section's Structural Engineering Institute (SEI) is offering the **Cal OES Safety Assessment Program** (SAP) web-based training on **Sunday, August 8, 2021**.

Certified SAP evaluators assess the safety of buildings and other infrastructure after earthquakes, floods, and other disasters, helping local officials expedite the re-occupancy of safe buildings. SEI offers this training to facilitate professional development and to increase the number of certified SAP evaluators. Participants in the course are eligible for Continuing Education Units (0.8 CEUs) or Professional Development Hours (8 PDHs). It is the trainee's responsibility to verify that CEU or PDH credits are applicable for the state of licensure. Course materials, including the ATC-20 and -45 field manuals, are provided for Colorado residents compliments of the Colorado Geological Survey; a modest registration fee covers postage for course materials. More information and registration can be found here: https://www.eventbrite.com/e/atc-20-atc-45-and-cal-oes-sap-training-tickets-157561329177.

# COMMITTEE NEWS

Structural Engineers Association of Colorado

#### YOUNG MEMBER GROUP

Dear SEAC Members & non-members:

Are you planning on taking the PE or SE exam this October? Want to increase your chances of passing? Are you looking for a study group or a group to take a review course with? Are you a PE or SE and interested in a refresher course or assisting with the study group?

The SEAC Young Member Group would like to invite you to a remote get-together on **Tuesday, July 20th, starting at 6:30 PM.** This kick-off meeting is to assess the interest in possible study groups, review course options for both the PE and SE exams in October and to provide an opportunity for individuals to ask questions about preparing for exam day. It is our hope that we can facilitate self-organized study groups and/or identify individuals hoping to join a group to register for an online review course at a discount-ed rate. Webinar overviews and group discount options will be posted to this event page on the SEAC website.

If you are interested in increasing your chances of passing your upcoming professional licensing exam, please join us! This opportunity is being extended to SEAC members and non-members so please feel free to distribute this to your colleagues and encourage them to join. If you have any questions, please contact the SEAC YMG Committee at <u>ymg@seacolorado.org</u>.

#### Please RSVP by end of day Monday, July 19th using the following link:

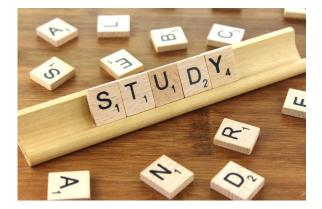
https://docs.google.com/spreadsheets/d/1M9Rd6HJewseDxBiKsWsow-uchl-FeO\_A02eHdVXg\_v0/edit?usp=sharing

#### **Review Course Options:**

Please follow link to a list of commonly used SE and PE Review Courses. Please note this list is not exhaustive. https://drive.google.com/file/d/1HfmQD1u4bo0avscxUaD3AaERYIn051se/view?usp=sharing

**Meeting Call-in Information:** 

Microsoft Teams meeting Join on your computer or mobile app Click here to join the meeting Learn More | Meeting options



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## COMMITTEE NEWS

Structural Engineers Association of Colorado

## **Gingerbread Bridge Competition**

#### Register now to sponsor and/or participate in the 2021 Gingerbread Bridge Competition!

The 2021 Gingerbread Bridge Competition has been scheduled for the afternoon of **Friday, November 19nd**. Doors open for display set-up at noon. Architectural judging starts at 1pm. Weigh-in and load testing to follow.

#### Final Event location TBD

The origin story for the Gingerbread Bridge Competition, rules for the 2021 event and past load test results can be found at <a href="http://gingerbreadbridge.com/denver/rules-denver/">http://gingerbreadbridge.com/denver/rules-denver/</a>.

#### **Important Deadlines:**

Sponsors - Payment and logos due by Friday, September 24th Bridge Entries - Payment and number of team members due by Friday, October 29th

#### **\*\*ATTENTION STUDENT TEAMS\*\***

Prior to registering your team, please contact <u>ymg@seacolorado.org</u> indicating your interest in participating in the 2021 Gingerbread Bridge Competition. We will then provide you with a promo code to waive the bridge entry fee.

Please save all receipts for construction materials. Submit copies of your receipts at the check-in table when you arrive at the event for reimbursement of up to \$50/team. (Actual stipend for construction materials may be increased at the discretion of the YMG Committee based on the sponsorship received and the number of student teams participating)

#### Links of Interest

BEST Denver News Coverage: <u>https://www.facebook.com/watch/?v=1980848478839633</u> Fox31 News Coverage: <u>https://www.youtube.com/watch?v=ZYECEwGFwRA&feature=youtu.be</u> 9News Coverage: <u>https://www.9news.com/article/entertainment/television/programs/next-with-kyle-clark/structural-engineers-in</u> \_colorado-take-on-a-gingerbread-house-challenge/362235262



July 2021

The SEAC Seismic Committee is considering developing the following training and would like to know SEAC member interest. If you would be interested in taking this training, please contact Rob Jackson <u>Rob.Jackson@amentum.com</u> or Keith Port <u>keith.porter@colorado.edu</u>.

Natural Hazard Mitigation Saves Project Team

MSv3 Working Paper 2021-06A

## Capacity Building for Mitigation Resource Allocation

**Problem: small, impoverished communities' disadvantage in mitigation funding.** FEMA's Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) programs promote disaster mitigation. To some extent they prioritize small, impoverished communities<sup>1</sup>. These communities have the greatest need but are least able to apply. They compete in oversubscribed programs with wealthier communities, and are least able to provide matching funds. We propose to help to reduce this competitive disadvantage with a new Mitigation Assistance Program (MAP). MAP will: (1) train a corps of volunteer expert building professionals (engineers, architects, builders, and others), social scientists, public administrators, emergency managers, and communication experts who can help communities apply for and administer BRIC grants. (2) train local, state, and tribal officials in selection and implementation of cost-effective resilience measures, and (3) provide trainees with technical resources for project selection and grant applications.

**Solution: building capacity through volunteers, training, and technical resources.** MAP will resemble Cal OES' Safety Assessment Program (SAP<sup>2</sup>) and FEMA's National Earthquake Technical Assistance Program (NETAP<sup>3</sup>). With a few dozen trainers, SAP and NETAP annually train thousands of building professionals and state and local government officials in pre- and post-disaster safety assessment of existing buildings and lifelines. People participate for professional development and public service. SAP involves a few hours' training every 5 years. SAP and NETAP provide technical resources such ATC-20, ATC-45, FEMA P-154, and FEMA E-74, which offer procedures and boilerplate forms for safety evaluation. SAP and NETAP align interests of trainees, communities, and government policies. MAP will do the same, but for mitigation resource allocation. It will provide related technical resources: mitigation procedures (e.g., FEMA P-312<sup>4</sup>), costs and benefits (e.g., *Natural Hazard Mitigation Saves*<sup>5</sup>), and boilerplate forms to document grant need and value. Trainee labor counts toward non-federal cost share, further reducing disadvantage. MAP will include diversity, equity, and inclusion (DEI) efforts both in recruiting trainees and in helping them to target the communities most in need of assistance.

*Training agenda.* Following is a preliminary, conceptual agenda for a 1-day program patterned on FEMA P-154 and SAP training<sup>6</sup>. MAP could offer more-intensive options covering GIS resources, infrastructure data, and data privacy and accuracy, and other topics.

Hour 1: MAP introduction; program guidance; natural hazards; climate change, disaster risk

Hour 2: MAP procedure: community demographics; quantitative hazard data; quantitative BCR data

Hour 3: Flood mitigation measures, wind mitigation measures; their costs and benefits

Hour 4: Earthquake mitigation measures; WUI fire mitigation measures; their costs and benefits

Hour 5: Connecting building professions, emergency managers, and the local community.

Hour 6: Programs, applications, management, and implementation (monitoring, evaluation, & learning)

**Partnerships.** MAP can integrate into a rich ecosystem of resilience assistance, potentially drawing participants from professional societies and nonprofits such as the American Institute of Architects (AIA), American Society of Civil Engineers (ASCE), Association of State Floodplain Managers (ASFPM), Community Investment Corporation (CIC), Engineers Without Borders (EWB), Enterprise Community Partners (ECP), National Emergency Management Association (NEMA), and Natural Hazard Mitigation Association (NHMA), Structural Engineers Association (SEA), and state, tribal, and local governments.

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<sup>&</sup>lt;sup>1</sup> Federal Emergency Management Agency. (2020). *BRIC Technical Criteria*. <u>https://bitly/3vFzgYz</u> [accessed 6/18/2021]

<sup>&</sup>lt;sup>2</sup> Governor's Office of Emergency Services (2021). Safety Assessment Program. <u>https://is.gd/MRyV5j</u> [accessed 6/18/2021]

<sup>&</sup>lt;sup>3</sup> FEMA (2021). National Earthquake Technical Assistance Program. <u>https://is.gd/Mplqoq</u> [accessed 6/18/2021]

<sup>&</sup>lt;sup>4</sup> FEMA (2014) Homeowner's Guide to Retrofitting. FEMA P-312, <u>https://bit.ly/3q7Oicg</u> [accessed 6/18/2021]

<sup>&</sup>lt;sup>5</sup> Multi-Hazard Mitigation Council (2019). Natural Hazard Mitigation Saves. <u>https://www.nibs.org/node/741</u> [accessed 4/2/2021]

<sup>&</sup>lt;sup>6</sup> One of us (Porter) offered SAP and NETAP training over 40 times, and is confident these topics could be covered in 6 hours.

# NCSEA NEWS

### Structural Engineers Association of Colorado

#### **EXCELLENCE IN STRUCTURAL ENGINEERING AWARDS**

Each year at the Structural Engineering Summit, NCSEA awards the Excellence in Structural Engineering Awards. This program annually highlights some of the best examples of structural engineering ingenuity throughout the world. Structural engineers and structural engineering firms are encouraged to enter the awards program. Projects are judged on innovative design, engineering achievement, and creativity.

The awards are presented in eight categories:

- New Buildings < \$30 Million
- New Buildings \$30 Million to \$80 Million
- New Buildings \$80 Million to \$200 Million
- New Buildings Over \$200 Million
- New Bridges or Transportation Structures
- Forensic/Renovation/Retrofit/Rehabilitation Structures < \$20 Million
- Forensic/Renovation/Retrofit/Rehabilitation Structures > \$20 Million
- Other Structures

**Entries are due on July 13, 2021.** The winners are honored in STRUCTURE and at NCSEA's Structural Engineering Summit that will take place this October. <u>View last year's awards celebration here.</u> More information about the awards can be found on <u>www.ncsea.com</u>.

### Project Structural Engineer needed in the Castle Rock, CO office of an awardwinning consulting engineering firm.

Responsibilities includes structural engineering analysis and design of building foundations and superstructures, submittal review, construction site inspections, and evaluation of existing structural systems.

Minimum of 2 years of structural analysis and design experience and a BSCE degree required. RAM Structural Systems, AutoCad<sup>®</sup> and Revit<sup>®</sup> experience preferred. Proficiency in the design of structural steel, concrete, wood, masonry and light gage steel framing structural systems required.

Benefits include Health/Life/Disability insurance, 401(k) plan, Professional Development, fitness subsidy.

Prepare resume and cover letter to The Di Salvo Engineering Group, Structural Engineers, Inc., 405 S. Wilcox Street, Suite 105, Castle Rock, CO, 80104, Attn: Steve Lehigh and submit it to info@tdeg.com.

# NCSEA NEWS

### Structural Engineers Association of Colorado

The <u>2021 Structural Engineering Summit</u> is the industry's FIRST immersive IN-PERSON & VIRTUAL EVENT this year! Join us in-person in New York City at the Hilton Midtown on October 12-15, or virtually from September 27 to October 21. Attendees of both events will have access to an equally riveting & engaging event!

Choose <u>All Access Registration</u> for the most immersive experience, which includes:

- Over 27 Hours of High-Quality, Expert-Led Education
- The Keynote, <u>20 Years After 9/11: Lessons Learned & More to Research</u>, led by experts involved in the initial recovery efforts & building performance studies
- Laugh and learn to create levity in the worker, workforce and workplace with Thursday's Keynote: Lighten Up & Lead: Leverage Levity to Boost Client Confidence & Employee Engagement
- Awards Celebration highlighting structural engineering innovation, ingenuity, and outstanding service to the profession
- Ability to Connect Face-to-Face & Virtually with Fellow Attendees
- Access to the Trade Show & Leading Industry Suppliers with Solutions for You
- Networking Events such as the Opening Reception on the Trade Show Floor & More!
- Access to Session Recordings

## Architectural/Structural—Plans Review Engineer—Community Planning and Development

The City and County of Denver's Community Planning and Development Department (CPD) is seeking a highly motivated Architectural/Structural - Plans Review Engineer (PRE) to join our Development Services Division. The Plans Review Engineer is primarily focused on structural review of basic to highly complex level professional structural engineering work; and additionally, learning and reviewing the architectural aspects of a building by administering and monitoring a diversity of residential and commercial projects involving the new construction of and/ or renovation of buildings and facilities and reviews design and construction documents for adherence to regulatory compliance (IBC, etc.).

The minimum qualifications include a Bachelor's Degree in Engineering or related field as required by the specific opening and three years of professional structural engineering work experience after obtaining a Professional Engineering (PE) license.

Architectural/Structural - Plans Review Engineer - Community Planning and Development

Starting Pay: \$100,000 - \$134,000/year based on education and experience

<u>Benefits</u>



Join your colleagues for a day of golf and fun!



## AUGUST 19, 2021

### RACCOON CREEK GOLF COURSE

August 19, 2021 8AM Shotgun Start Raccoon Creek Golf Course 7301 W Bowles Ave, Littleton, CO 80123



## ADSC/ASCE/ CAGE/SEAC

GOLF TOURNAMENT





## INFORMATION

#### REGISTRATION

\$155 per golfer (includes lunch) \$580 per Foursome

#### SPONSORSHIPS

\$350 Hole Sponsorship and Staff the Tee Box/Driving Range \$250 Hole Sponsorships \$250 Mens/Womens Longest Drive Sponsorship \$250 Closest to the Pin Sponsorship (sold out) \$500 Beverage Cart Sponsorship \$500 Breakfast Burrito Sponsorship \$500 Breakfast Burrito Sponsorship \$500 Awards Sponsorship \$750 Cocktail/Social Sponsorship

Sign up at www.cagecolorado.org (click on Calendar of Events)

### THE EVENT

ADSC Rocky Mountain, ASCE Denver Branch, CAGE and SEAC join together for an annual golf tournament. This is a great event with lunch provided. Come enjoy the day, win some prizes and show us your golf skills. Members and nonmembers of the sponsoring organizations are invited to attend and/or sponsor.

July 2021

## **BOARD OF DIRECTORS**

### Structural Engineers Association of Colorado



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<u>We Want to Hear from YOU!</u> 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!

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# NEWSLETTER ADS

Structural Engineers Association of Colorado



## YOUR ADVERTISEMENT HERE

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

Contact Kim Wyatt at <u>administrator@seacolorado.org</u> or go online to <u>https://seacolorado.org/seac-shop/</u>.

> Full Page Employment Ad: \$250 Half Page Employment Ad: \$150 Quarter Page Employment Ad: \$100

> > Full Page Ad: \$350 Half Page Ad: \$250 Quarter Page Ad: \$200