



STRUCTURAL ENGINEERS OF COLORADO

NEWSLETTER

2021 SPRING SCHEDULE
SIGN UP FOR THESE EVENTS

AT

[HTTPS://](https://seacolorado.org/)

[SEACOLORADO.ORG/](https://seacolorado.org/)

SEAC/CAGE Meeting

March 18, 2021

Via Webex

7:45am-9:00am

Mass Timber Product Presentation - SEAC YMG

March 24, 2021

Via Zoom

6:00pm

PE/SE Bridge Review Session

March 25, 2021

Business Management Meeting

April 8, 2021

7:30am

SEAC April Project Presentation

April 27, 2021

Via Webex

4:30pm

March General Meeting

SEAC March General Meeting

March 18, 2021

via Webex

7:30am-8am—Announcements and Networking

8am-9am—Presentation (1 PDH)

Higgins Lecture: *Gusset Plates: The Evolution of Simplified Design Models*

In the design of steel structures, each member is isolated and evaluated using the appropriate AISC Specification requirements. Similarly, gusset plate connections can be complex structural systems that are separated into several elements for design purposes. The behavior of these gusset plate elements can be captured with simple design models, where portions of the plate are treated as structural members with well-documented and predictable behavior. This presentation will provide a brief history of gusset plate design methods and discuss their evolution over the last century.

Current design provisions will be discussed, where column and beam models are used to predict the strength of gusset plates in various configurations, including wrap-around gusset plates.

Learning Objectives

- Participants will gain a historical perspective on gusset plate design
- Participants will learn about current design methods for gusset plates in various configurations.
- Participants will learn about recent research and new design methods for gusset plates.

SPEAKER:



Bo Dowswell started in the steel industry in 1985 as a detailer. Since then, he earned BD, MS and PhD degrees from Auburn University and The University of Alabama at Birmingham. As a professional engineer, his design practice focuses on steel structures. Currently, he is principal of both SDS Consulting, a design firm, and ARC International, which specializes in research and consulting. Bo Dowswell is also an adjunct professor at The University of Alabama at Birmingham, where his research and teaching is concentrated on steel connection design. Additionally, he provides consulting services for the AISC Steel Solutions Center.

Bo Dowswell is the author of AISC Design Guide 33—*Curved Member Design*, and he regularly publishes technical articles on steel design. He is a member of several AISC Committees, including the Committee on Specifications, the Committee on Manuals, the Committee on Research and the Task Group on Industrial Buildings and Nonbuilding Structures. Bo Dowswell is also a member of the Structural Stability Research Council, where his activities are primarily related to connection element and beam stability.

Sponsored by



PRESIDENT'S MESSAGE

Structural Engineers Association of Colorado

It has been a long, lonely winter. COVID has kept us all home and separated from those whose company we enjoy. On the work front, the Colorado Business Economic Outlook 2021* noted that although the construction industry was designated an essential business in early 2020 during the Coronavirus pandemic, 2020 diverged in construction metrics from a four-year trend of 5% annual increases to a 2.1% decrease in construction employment. Continuing challenges include regulatory and political uncertainty, supply chain and import problems due to COVID disruptions, and fewer projects in the planning pipeline. As warehouse inventory is used up, new shipments of steel, lumber, and other inputs do not appear to be keeping up with demand, which is affecting the cost of construction materials. Additionally, reduced tax revenue may cause publicly funded projects to be delayed or canceled. Although companies involved in construction are currently busy, many are reporting fewer projects being added to their backlogs, with specific concerns about a lack of planned projects beginning in mid-2021. These problems add to existing challenges, including a shortage of skilled and unskilled labor, unease regarding trade policy, and the "silver tsunami" of baby boomers retiring.



But there is light at the end of the tunnel. With three vaccines being distributed across the country, it is possible to imagine an end to the isolation, a return to semi-normalcy, and hopefully, an uptick in construction. Positive trends for the nonresidential sector include continuing relocation of many new companies to Colorado. Economic development agencies across the state report that corporate relocation inquiries are still robust to date, even during the pandemic. Single-family permits issued in Colorado in 2020 were up 5% over 2019. The market for second homes in Colorado is doing well due to the attraction of the outdoors and remote office working. Road and bridge construction spending will likely decrease only modestly in 2021 if the state legislature issues the next \$500 million tranche of bonding for CDOT projects in March. A federal stimulus bill could lead to an uptick in transportation project awards of "shovel-ready" projects. And Colorado economic indicators including gross domestic product, personal consumption expenditures, and government expenditures point to 2021 being very similar to 2019.

While I very much enjoy all the data and analysis, my simple take-away is this: stay positive, roll up your sleeves and take one in the arm to help get everyone and everything back on track!

Stay safe,

Lacey Goetz

*Economic data and projections taken from Colorado Business Economic Outlook 2021 published by the Leeds School of Business at CU Boulder

Welcome to our Newest Members

Iana Ivanova
Professional Member
Ryan Arp
Professional Member
Harrison McKittrick
Student Member

Dylan Lektorich
Student Member
Steven Babcock
Professional member
Kelsey Welch
Affiliate Member

COMMITTEE NEWS

Structural Engineers Association of Colorado

BUSINESS MANAGEMENT COMMITTEE

The Business Management Committee will be sending out the 2021 Business Practices Survey to all SEAC firms by April 1st with the goal of receiving responses by mid-May. This year's survey improves upon last year's results where we had responses representing over 750 employees in our structural engineering profession. The 2021 BPS survey will summarize current information regarding staff demographics, salaries, benefits, insurance and relevant business practices. Anonymity is preserved and in these challenging times, this information is a significant benefit to the firms that participate. If you have any questions at all, please contact Tom Soell at tsoell@jvajva.com or Paul Doak at pdoak@martinmartin.com.

EDUCATION COMMITTEE

Are you studying for the PE or SE exam in April 2021? Please join us for an **AASHTO Review Session on March 25th** at 6:00pm! This virtual event will focus on an overview of the AASHTO bridge code and sample problems. Join us with your code books, practice problems and any bridge questions you may have. If you've got tricky practice problems or questions on specific material you'd like to see covered in the session, please forward them to educationseac@gmail.com prior to March 25th.

Use this link to register for the event: https://docs.google.com/spreadsheets/d/1d7_VbBzfmGKOhr-W_kRIQSK0FijNXf-4270LWQhk8Q/edit?usp=sharing

The committee is looking for excited and motivated members to join the committee. This is a great time to join and learn more. If you are interested in attending the meeting (with lunch provided), please RSVP at EducationSEAC@gmail.com.

SEAC 2021 PROJECT PRESENTATION

The Many Glacier Hotel Critical Life Safety Upgrades, Glacier National Park, MT
April 27th at 4:30PM (via webinar)



- Historic Lodge - 136,000 square foot/4story building
 - Strengthening the significant deficiencies in the roof framing and building lateral force resisting system
- Various design challenges and accelerated construction schedules

COMMITTEE NEWS

Structural Engineers Association of Colorado

SE3 COMMITTEE

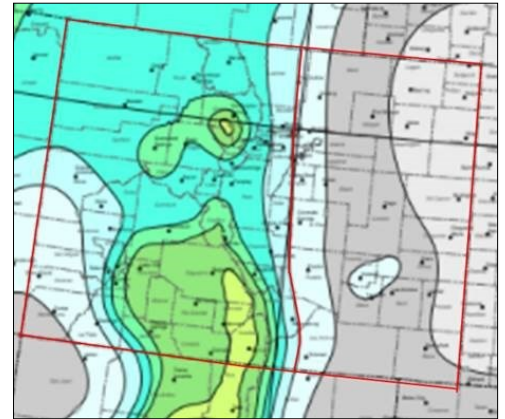
The SE3 committee held a kickoff meeting on February 18th to discuss goals and events for 2021-2022. Committee members include Kate Benton, Michelle Black, Katie Courtright, Ben Gallaher, Aura Lee Kelly, Jessie Kramer, Dorian Krausz, Alexander Lakocy, Brian Lobmeyer, and Chad Mitchell.

Look for future announcements regarding committee events, including a series of Mentorship events, a Career Pathways panel discussion, a 2020 SE3 survey results presentation, and a personal vision workshop.

Email se3@seacolorado.org to get involved with the committee, ask questions, or provide input on events or initiatives you'd like the committee to pursue.

SEISMIC COMMITTEE

The SEAC Seismic Committee will be meeting in April. The main topic will be the upcoming seismic provisions in ASCE7-22. These will be adopted in the 2024 International Building Code. The code will use the new National Seismic Hazard Maps and a revised methodology for determining the design response acceleration parameters. Site coefficient parameters will no longer be separately applied. The site class effects will be directly included in the attenuation equations. Coupled with the unchanging breakpoints for Seismic Design Category these changes will have an impact along the Front Range. If interested in the committee please contact the chair, Rob Jackson, at rob.jackson@amentum.com



YOUNG MEMBER GROUP

The SEAC Young Member Group is pleased to announce a Virtual Mass Timber Product Presentation that will take place on Wednesday, March 24th from 6-7 PM MST.

Our speaker, former SEAC president, Jeremy Crandall from Lam-Wood Systems, will present on many mass timber topics including current market conditions, material types and their appropriate application.

This presentation will be geared towards young engineers; however, all engineering experience levels are welcome.

[Register Here](#) for the opportunity to add an additional layer to your timber design knowledge.

SEAC Meeting Space

As venues get begin to open back up, prices are changing to accommodate the additional work and cost for sanitizing before after each meeting. Lakewood Country Club has been an excellent meeting space due to the service and the free meeting room rental. As they move back to full service, that policy is changing.

SEAC is evaluating costs for various meeting space venues. If you have suggestions for the SEAC Board to consider, please email Becky Roland at administrator@seacolorado.org.

NCSEA NEWS

Structural Engineers Association of Colorado

[NCSEA's SE Review](#) course is **completely on-demand**. Review course materials and watch the recordings when it is **convenient for YOU**. PLUS...attendees have access to a **virtual classroom** to ask the instructors questions whenever they arise.

At \$495 for members and \$695 for nonmembers, this **on-demand course is the most economical PE Structural Exam Prep Course available**. The course includes **30 hours of instruction**: 8 Vertical Sessions and 10 Lateral Sessions. The course will give you exam preparation tips and problem-solving skills to pass the exam. All lectures are up-to-date on the most current codes. Handouts and quizzes are available.

[Annual Webinar Subscription](#) holders receive instant access to over 160 recorded webinars, and all of NCSEA's high quality live webinars for just \$36/webinar. This webinar subscription can be viewed by multiple users at the same office whether you are together or remote, just ask NCSEA how.

What do you receive as a Subscriber?

- At least **30 live webinars** a year featuring the highest-quality speakers available.
- Check out the upcoming schedule at www.ncsea.com.
- **Unlimited free CE certificates** for each webinar so multiple viewers at the same location can receive credit for every live webinar.
- **Unlimited 24/7/365 access to NCSEA's Recorded Webinar Library**—more than 160 relevant & high-quality webinars.

Available anywhere! NCSEA's webinar subscription can be used wherever you are. Need help with multiple users viewing at multiple locations? [Click here](#).

NCSEA is seeking abstracts for the [2021 Structural Engineering Summit](#). The goal is to host the event both **in-person in New York, New York** on October 13-15, 2021 **and virtually** throughout the month of October.

Sessions will be 45-60 minutes total, including time for Q&A, and will deliver pertinent information that is specific to the practicing structural engineer, in both technical and non-technical tracks.

Presentations are sought for topics that would appeal to seasoned engineers or younger engineers new to their careers (*or both*).

Questions about the abstract process or the Summit? Contact Katherine Ort, Education and Conference Manager, at kort@ncsea.com.

Submit your abstract here: bit.ly/2021SESAbstracts **Submissions are due March 26, 2021.**
Speakers will be provided with required guidelines after acceptance of abstract.

BOARD OF DIRECTORS

Structural Engineers Association of Colorado



Lacey Goetz

President

Integral Engineering

303-804-7003

president@seacolorado.org



Brian Lobmeyer

VP/Treasurer

Anchor Engineering Inc.

303-783-4797

vp@seacolorado.org



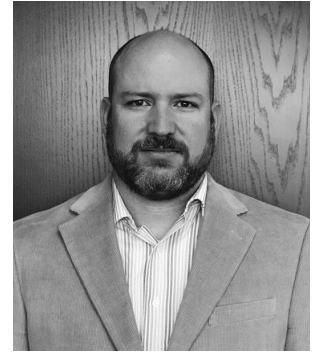
Holly Janowicz

Secretary

J.R. Harris and Co.

303-860-9021

secretary@seacolorado.org



Chad Mitchell

Past President

S.A. Miro, Inc.

720-407-1031

pastpresident@seacolorado.org



Mike Piper

Director

Martin/Martin

303-431-6100

director3@seacolorado.org



Jeff Borger

Director

Jirsa Hedrick

303-839-1963

director1@seacolorado.org



Kim Olson

Director

Nucor

303-720-4076

director2@seacolorado.org

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!

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 administrator@seacolorado.org or go online to <https://seacolorado.org/seac-shop/>.

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