



### SEAI Mission Statement

"To promote and enhance the Structural Engineering profession in Idaho by educating the public about the activities of Structural Engineers and their benefit to society and by providing professional development and support to SEAI members that is relevant, reliable, and inspirational to modern engineering practices."

## Message From the Board

*By Erick Baca, Treasurer*



I encourage everybody to never stop learning. For those seasoned in their careers, don't forget to keep learning. For the newer engineers, work hard, be patient, and don't get discouraged about the obstacles to getting your S.E. Earning a Professional Engineering license brings quality assurance, trust from the public, self-satisfaction, esteem for the profession, better outcomes, and potentially higher pay. 📌

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I read recently in Forbes that Boise is one of the fastest growing cities in the United States, and with that comes a lot of design, development and construction. One of the main requirements for all these to happen is the involvement of a Professional Licensed Engineer – as the Engineer of Record, the Specialty Engineer, or an individual responsible for assisting and managing the projects throughout the different phases.

I remember when I was at school, I was very excited about graduating and starting work designing all kinds of structures. After I graduated, I knew that wasn't the end. I set my goal to work under a professional engineer to get my years in to be able to get my P.E. At that time passing the P.E. was one of the most exciting moments in my career. Even though school is over, we never stop learning. We always have to stay up to date with building codes, materials, research, construction methods, and much more.

Having a professional license is not only about getting the next big project. It is about setting norms, establishing standards, being proficient, and ultimately being responsible for the public safety.

## Committee Update – Katie Walker, Newsletter Editor



## Opening an SEAI Dialogue: FIU Bridge Collapse from March, 2018

If you're reading this, congratulations! You've made it to the second page of the SEAI newsletter. As the newsletter editor, I'd like to thank you for reading. I know the average SEAI member doesn't have a lot of free time, so I hope you are finding it rewarding and informative to read the monthly committee updates, messages from the Board, and other contributions from the SEAI community.

With that in mind, I thought I'd try a new approach to this month's committee update article. In the spirit of facilitating dialogue within SEAI, I sent out a list of questions to all SEAI members and invited them (you!) to contribute thoughts on the recent pedestrian bridge collapse at Florida International University on March 15, 2018. The following is a summary of the feedback I received. Thanks to all who participated! I hope our organization can find ways to keep this important conversation going.  
-Katie

### Background:

On March 15, 2018, a pedestrian bridge under construction at Florida International University collapsed onto active traffic below. Six people were killed. The cause of the collapse is still under investigation. The main structural system was a single post-tensioned concrete mega-truss. A diagonal member at the end of the truss can be seen failing in numerous slow-motion videos on YouTube. Speculations about the cause of collapse tend to focus on the post-tensioning, but little else can be said with certainty. *The Miami Herald* published a comprehensive article, cited at the end of this article, which features input from a structural engineering professor at the University of Illinois and summarizes some of the more popular theories from various online structural engineering forums.

### The questions:

1. How long have you been in the industry?
2. What was your initial reaction to the news of the FIU bridge collapse?
3. Knowing the information currently available to the public, do you see any opportunities for lessons learned? (Answer as broadly or specifically as you'd like.)
4. Will you make any changes to how you approach your work moving forward?
5. If there was one thing you could share with the general public to help them understand how these kinds of tragedies can happen - what would it be?
6. Would you like to remain anonymous?

### The results:

Most of the responses came from individuals with 20+ years' experience. Their reactions were emotional, sympathetic, and humble. They tended to form immediate theories about what had caused the collapse, while at the same time acknowledging that there are too many unknowns to be able to say for sure at this point. The general focus was not on placing blame but on learning from what happened.

"Media information is not a great place to come to understand the root cause of an accident of this magnitude," said Wilson Antoniuk of RedBuilt. "I am fairly certain none of the parties involved ever imagined the result that has unfolded - so it makes you think - is there anything I can do better? Do I have blind spots?" His takeaway: ***"All accidents are preventable, so if we can make sure we follow safety first in a project, then everything else can fall in line behind."***

Richard Feuerborn, P.E., S.E., of Feuerborn Associates responded similarly, specifically noting the importance of redundancy. "It's hard to anticipate the forces that will be imposed on and within our structures. Redundancy should be designed in whenever possible, and always designed in when the importance factor is high. Lifting systems are required to have a safety factor of at least 5, but apparently not so with bridges." Still, he adds, "Engineers and contractors are human. They make mistakes. We must wait for the investigations and reports to be completed, but cases like this are frequently a combination of several errors and shortcuts that came together to erase the safety factor."

Another respondent, a structural engineering business owner with 24 years' experience, noted safety as well, pointing out that the construction approach, while innovative, has been proven to be safe if done properly. So, perhaps the collapse was a result of unsafe practices during construction - or perhaps safety was not prioritized at some other stage of the project. ***"We as an industry need to make sure that the folks that are back checking and reviewing the designs are funded enough so that they can protect the public."***

In response to question 5, this same individual suggested, "Make sure to fund infrastructure through taxes and appropriations. We desperately need our infrastructure upgraded, but we need to do so with proper back checks, including environmental studies and design studies. These can only be done through tax payer dollars or through permitting fees. We complain about the time it takes to get these studies done, but if these agencies are squeezed on money, they will take longer. If they are fully funded, we could make the permitting a small item on the construction schedule."

Personally, I will move forward with the following mantra in mind (credit to Richard Feuerborn for the thoughtful advice):

***"Try to be more thorough in checking structures and in looking for the wisdom each structure hides within it."***

References (note that these forums and articles are speculative and should be fact-checked by the reader):

- 1) <http://www.miamiherald.com/news/local/community/miami-dade/west-miami-dade/article207358659.html> (Comprehensive article from *The Miami Herald*, dated 3/30/2018)
- 2) <https://www.eng-tips.com/viewthread.cfm?qid=437029> (Forum recommended by SEAI member Richard Feuerborn, P.E., S.E., Feuerborn Associates)
- 3) <http://www.miamiherald.com/news/local/community/miami-dade/article208587214.html> (Article from *The Miami Herald*, dated 4/18/2018)
- 4) <https://www.newcivilengineer.com/tech-excellence/experts-cite-explosive-joint-failure-as-cause-of-florida-bridge-collapse/10029278.article> (Article in *New Civil Engineer* dated 3/20/18, featuring helpful diagrams)
- 5) <http://www.sciforums.com/threads/florida-international-bridge-collapse.160673/> (Online discussion board - to be taken with a grain of salt)



## SEAI MONTHLY LUNCHEON

- Topic:** Concrete Repair
- Date:** Thursday, 4/19/18
- Time:** Social—11:45 am  
Lunch & program—12 pm
- Location:** Cottonwood Grille  
913 W. River St.  
Boise, ID 83702
- Cost:** Member—\$20  
Non-member—\$25
- Speaker:** Craig Schumann,  
BASF Restoration Specialist

**QUESTIONS TO NIC PEÑA**  
[nicolas.pena@kpff.com](mailto:nicolas.pena@kpff.com)

Pay in Advance Using PayPal Links Below:

Members — \$20 — [Pay Here](#)  
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## Concrete Repair

### Speaker Bio:

Craig Schumann earned a degree in Construction Management from Michigan State University and has gained over 25 years of experience in the concrete repair and waterproofing business. Craig started his professional career in the consulting business and then worked in contracting, distribution, and manufacturing sides of the restoration market. Craig can offer a unique perspective on the needs of the concrete repair industry. Craig has been with BASF Construction Systems since 2010 as Restoration Specialist and Territory Sales Manager for the Pacific NW.



### Presentation Overview:

This presentation will center on concrete repair, with the following points of discussion:

- Concrete deterioration—common causes
- Corrosion and corrosion mitigation
- Best practices
- Training standards
- Safety
- Concrete repair materials & methods 📄



Structural Engineers  
Association of Idaho  
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### WISH TO PLACE AN AD IN THE NEWSLETTER?

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### Monthly Rates for Advertising

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## UPCOMING EVENTS

### [SEAI Young Member Group Meeting](#)

Thursday, April 26, 5:30 pm, 10 Barrel

Speaker: Tim Grissom, Architect with Design West Architects

### [NCSEA's Newest Committee: SE3's Mission \(Webinar\)](#)

Tuesday, April 17, 10:00 am

See page 6 of this newsletter for additional information!

### [SEA NW Conference](#)

Wednesday, August 1 to Saturday, August 4, 2018 – Richland, WA

See page 5 of this newsletter for additional information!

### [Idaho Women in AEC – Speed Mentoring](#)

April 24, 2018, 5:30-7:30 pm – Library! at Bown Crossing

<https://sites.google.com/view/boisewomeninaec/events/speed-mentoring>

## SEAI Board and Chairs

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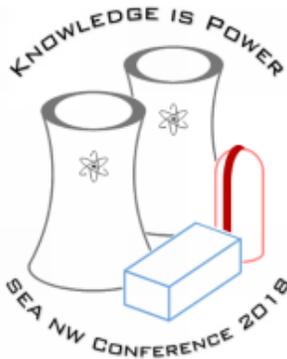
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**WEDNESDAY AUGUST 1<sup>st</sup> TO SATURDAY AUGUST 4<sup>th</sup> !!!**

**MARK YOUR CALENDARS !!! SAVE THE DATES !!!**

**THE 2018 NORTHWEST CONFERENCE IN RICHLAND, WA!!!**

- ▶ The 2018 Northwest Conference kicks off Wednesday evening at the Richland Hampton Inn for a Youth/Senior Catered Meet and Greet with no-host bar
  - ▶ Wraps up Saturday morning with a guided tour of the Hanford, Washington B Reactor (something you don't see every day) with furnished transportation to and from the reactor site.
- ▶ In between there will be educational lectures morning and afternoon with lunches and snacks provided
  - Subjects specifically selected for the immediate application
  - By the practicing Northwest engineer.
- ▶ The lectures will be held at the WSU Tri-City Campus in North Richland Morning/afternoon bus transport will be provided from the hotel
  - Or car-pool to the campus with other attendees.
  - ▶ Thursday evening's catered sit-down dinner with no-host bar Features a speaker talking about the Hanford/Manhattan Project's History and the relationship to the Tri-Cities area.
- ▶ Friday evening's dinner will be aboard a chartered yacht with a tour of the Mighty Columbia River - Sit-down dinner and no-host bar provided (Again, something you don't see every day).
  - ▶ Registration will nominally begin the end of April
- ▶ Vendor displays and presentations will be provided Thursday and Friday.



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**NCSEA Communication Webinar:**  
**NCSEA's Newest Committee: SE3's Mission & How Your SEA Can Benefit**

Presented by: *Angie Sommer & Nick Sherrow-Groves of the NCSEA Structural Engineering Engagement and Equity (SE3) Committee*

The Structural Engineering Engagement and Equity (SE3) Committee is focused on understanding the professional experiences of engineers around the country. Their mission is to ensure that every structural engineering professional has a positive experience within the profession. To do so, the committee has the following objectives:

- Conduct a biennial, nationwide survey to measure engagement and equity in our profession
- Develop a resource guide to help MOs start local SE3 chapters to address engagement and equity in their local communities
- Create a national forum to discuss issues of engagement, equity, retention, diversity, and other professional experiences

In this webinar the current chairs of the NCSEA SE3 Committee will discuss the history of the committee and a brief overview of the results from the 2016 survey.

*Attendees will have the opportunity to submit questions before and during the webinar.*

Tuesday, April 17, 2018,  
10:00 am

*This is a FREE event for  
all NCSEA SEA Members.*

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Founded in part by members of SEAI, Idaho Women in AEC welcomes any interested individuals to join us at our monthly happy hours and other events throughout the year. Come network, socialize, and learn from women in the industry!

If you are interested in joining the group or learning about corporate sponsorship opportunities, please visit the website below. You will find information on upcoming events, the group's history and mission statement, and contact information if you have any questions for the organizers.

The next event is the second annual Speed Mentoring session on April 24, 2018, at the Library! at Bown Crossing. All are welcome to attend! Visit the website for more info.

<https://sites.google.com/view/boisewomeninaec>