SEPTEMBER EQUILIBRIUM

Newsletter of the
Structural Engineers Association of Washington

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SEAW September Virtual Meeting

Join your fellow SEAW members for this webinar!

"Improving the Built Environment for Post-Earthquake Reoccupancy and Functional Recovery Time"

Date: Thursday, September 16, 2021
Time: 12:00PM - 1:00PM PST
Location: GoToWebinar
Cost:
SEAW Members and Students - FREE!
Non-Members - $15

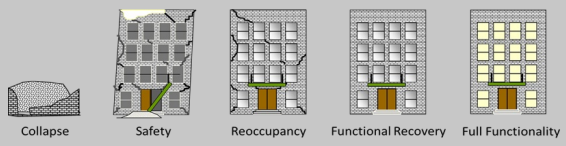
[Add to Calendar]
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Register to Attend:
[Click here.]
After registering, you will receive a confirmation email containing information about joining the webinar.

Presentation:
During a strong earthquake, buildings that meet current codes and standards may sustain damage that significantly hinders the restoration of building functionality. Lifeline infrastructure systems can also be damaged and fail to provide critical services. The damage and its consequences hinder community recovery. The public finds significant disruption and delay to building and infrastructure use unacceptable. Buildings and lifelines can be designed so that they are better able to serve their function or regain functionality within an acceptable time after an earthquake. Doing so will require shifts in design philosophy from safety-based objectives to recovery-based objectives across multiple aspects of

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practice. The 2018 Congressional reauthorization of the National Earthquake Hazards Reduction Program (NEHRP), P.L. 115-307, required the National Institute of Standards and Technology (NIST) and the Federal Emergency Management Agency (FEMA) to work with experts to address improving post-earthquake functional recovery. The speaker will discuss NIST and FEMA actions to fulfill the Congressional mandate as well as key findings from the report to Congress concerning options for improving the functional recovery of the built environment. He will also discuss some of the ongoing projects at NIST concerning functional recovery.





Presenter:
Siamak Sattar, Ph.D., is a Research Structural Engineer and the Associate Program Manager in the Earthquake Engineering Group at the National Institute of Standards and Technology (NIST). His research areas include seismic performance assessment of concrete and masonry buildings, functional recovery, uncertainty quantification, and performance-based seismic design of reinforced concrete structures. Prior to joining NIST, Dr. Sattar was a post-doctoral research associate at the University of Colorado-Boulder where he pursued his master's degree and Ph.D. In addition, he worked as a practicing structural engineer specializing in the design of concrete and steel structures for four years. Dr. Sattar is involved in development of codes and standards and is a voting member of the ACI-369 committee, Seismic Repair and Rehabilitation, and the ACI 374 committee, Performance-based Seismic Design of Reinforced Concrete Structures. He also Chairs the ACI-374A, Functional Recovery, and ACI-369C, Reinforced Concrete Frames, subcommittees. He is honored to be the recipient of a 2020 EERI Housner Fellowship.

New Washington Law: "Immunity from Liability for Non-Medical Personnel"

By Joyce Lem

For many years Washington state law has required that to have immunity from civil liability when you are a volunteer performing post-disaster building safety assessments, you must be formally registered as an emergency worker and working under the direction of the Authority Having Jurisdiction (AHJ). (Typically, the AHJ is the local building official.)

This is what we have taught and emphasized in WAsafe, Washington State's program for post-disaster building safety assessments by volunteer architects, engineers, building officials, and inspectors. This shield from liability is often referred to as the Good Samaritan Law – volunteers responding to an emergency situation are protected from being sued when they comply with state Emergency Worker Program requirements.

However, a new law went into effect on July 25. In this year's session, the Washington Legislature unanimously passed and Governor Jay Inslee signed Substitute House Bill 1209 (SHB 1209), "Immunity from Liability for Non-Medical Personnel."

What does this new law mean?

Say a major earthquake occurs. Several days after the earthquake, WAsafe volunteers may be called up and deployed. Until then, volunteer engineers will likely be helping neighbors and friends by assessing the condition of their houses or reviewing buildings being used as shelters. Because of the new law, architects and engineers who do these types of evaluations as unpaid volunteers, even though not operating in official "emergency worker" capacity, *will receive Good Samaritan liability protection*.



Washington State Capitol in Olympia

(Please note that in this scenario, volunteer engineers are not operating under the direction of the AHJ and cannot post official placards that indicate the authority of the AHJ.)

The motivation behind the new law is recognition of the need for "neighbors helping neighbors" in the immediate aftermath of a disaster like an earthquake. Seattle has a strong volunteer Community Emergency Response Teams (CERTs) program. Leaders for the Seattle CERTs worked with legislators to author and pass SHB 1209. The operations inside the WAsafe program are not changing – WAsafe's primary purpose still is providing assistance to local AHJs with safety assessments of their building stock. WAsafe volunteers must be deputized by (and his/her building assessment work directed by) the AHJ. What SHB 1209 does is extend Good Samaritan protection when individuals are working (as volunteers) outside of WAsafe.

Read the short text for SHB 1209 – it's only two pages long – here: http://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/House%20Passed%20Legislature/1209-S.PL.pdf?q=20210814230128

For WAsafe, immunity from liability for volunteer engineers and architects as registered emergency workers is spelled out in the Revised Code of Washington (RCW) Chapter 38.52, especially in RCW 38.52.180 and RCW 38.52.195. The state Emergency Worker Program is described in the Washington Administrative Code (WAC), Chapter 118-04.

SEAW Wind Engineering Committee (WEC) Report

By Scott Douglas

The SEAW Wind Engineering Committee presents the following report:

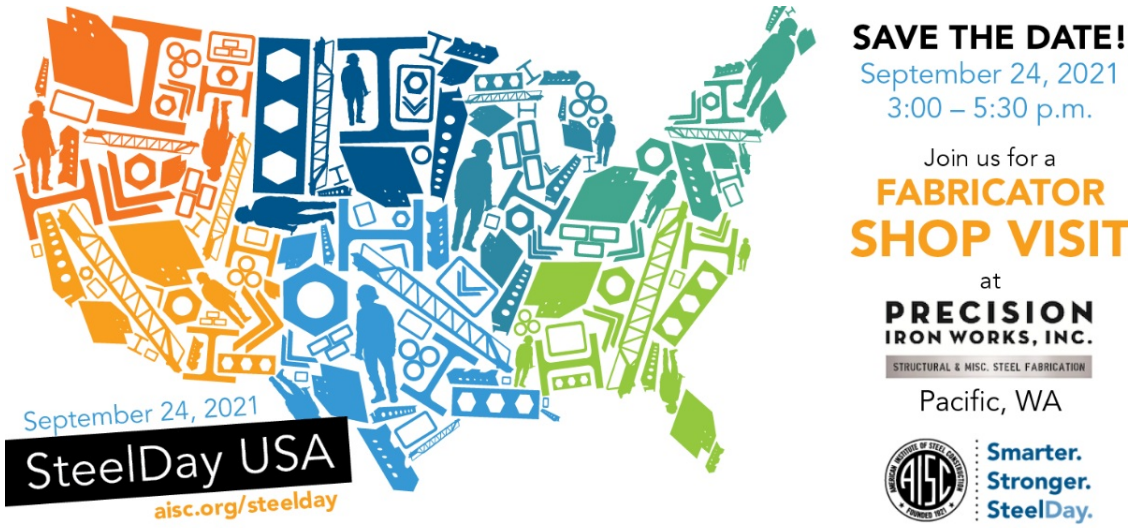
- **Washington/Oregon Special Wind Regions (SWR) Study**– The Study will begin this month. This study will quantify specific wind speeds and boundaries for the special wind regions along the Olympic Peninsula, Pacific Coast, and Columbia River Basin. The results of this study will be submitted for adoption by the Washington State Building Code Council as well as eventual inclusion in ASCE 7 and the UBC.
- **WDM Design Example 3A**– The WEC focus this month is the revision of Design Example 3A of the SEAOC Wind Design Manual. A first draft of the revised problem is currently being reviewed by the authors. A final draft will be distributed to WEC Committee members for review before discussion at the September 30 WEC meeting.
- **Participation** – All SEAW members, whatever their experience, are encouraged to participate at in WEC meetings. Please contact the WEC chair, Scott Douglas, sdouglasscott@gmail.com, to join the SEAW WEC and receive additional information and announcements on Committee

activities and actions.
- **Next Meeting** – Thursday September 30 from 12:00 noon to 1:00 pm. The meeting will be virtual via the following Zoom link: https://us02web.zoom.us/j/89101924346?pwd=VFNSdG1aOXFXWmVGYUdtYUd4RDQrdz09

Meeting ID: 891 0192 4346
Passcode: 885221

Register for STEEL DAY on Sept. 24!

By Evan Jordan, YMG



SEAW YMG along with AISC is hosting a tour (with free food and drinks!) of Precision Ironworks, Inc., a state-of-the-art steel fabrication facility in Pacific, WA.
This event is kindly sponsored and organized by AISC in honor of Steel Day, an annual celebration of the structural steel industry.
Precision Ironworks, Inc., is a structural and miscellaneous steel fabrication business with a diverse product line background. It has a 30,000-square-foot fabrication facility and a 4,000-square-foot paint facility in Pacific, WA.
The site tour will take place on Friday, September 24th at 3 PM. Due to its location and if enough people register, AISC will offer a charter bus in Seattle to take attendees to and from the event. The bus will leave Seattle at 2 PM from the Seattle Public Library.
The event will feature free canned beer, wine, and light snacks at the facility. Five steel construction manuals and five seismic design manuals will be raffled off. In the event the shuttle bus travels to Pacific, the film *Leaning Out*, a biographical account of famous structural engineer Leslie Robertson and his prominent projects including the World Trade Center, will be shown on the drive.

Contact Evan Jordan at ejordan@mka.com with any questions and register at https://docs.google.com/forms/d/e/1FAIpQLSc9d0AVCw6zAIMHRI3t5ehJv1nN1v1wqWZX2JwTW8PyoQzMyQ/viewform

Introduction to SEFW Fall Forum Panelists

By Angela Gottula Twining

The 11th Annual SEFW Fall Forum to be held on November 17, 2021! This year's topic is "Washington Sports Venues Then and Now: An Engineering Evolution," which will focus on sports venues that have been renovated through the years using innovative structural engineering, including ClimatePledge Arena but also several other venues from around the state. We are excited to introduce our speakers and panelists to you:

Knute Berger will be the first event speaker and will serve as moderator for the ensuing panel discussion. Knute is a local journalist, television personality, and avid historian. He is an award-winning columnist for Crosscut.com, host of "Mossback's Northwest" on KCTS9-TV, and author of several books, including a history of the Space Needle published for the 50th Anniversary of the Seattle World's Fair. Knute grew up a couple of blocks from the late, lamented Sick's Stadium in the Rainier Valley, home to the Seattle Rainiers and the Seattle Pilots, and watched the Kingdome get blown up in 2000.



Knute Berger | Steve Hofmeister | Jon Magnusson | Mark Aden

The Forum's three additional speakers and panelists are as follows:

- W. Steven Hofmeister, P.E., S.E., LEED AP, is a managing principal and structural engineering practice co-leader at Thornton Tomasetti in Chicago. With specialized expertise in signature sports and public assembly projects, he oversees the strategic, management and technical aspects of the firm's work in that sector. With nearly four decades of professional experience, Steve has been responsible for several large-scale projects around the world. His portfolio includes Climate Pledge Arena in Seattle, Washington; U.S. Bank Stadium in Minneapolis, Minnesota; MetLife Stadium in East Rutherford, New Jersey; Yankee Stadium in New York City; and Basrah Sports City in Iraq.

- Jon Magnusson, P.E., S.E., is Senior Principal at Magnusson Klemencic Associates, headquartered in Seattle. Jon has served as structural engineering Principal-in-Charge for many major sports venues around the country, including the local icons of KeyArena, T-Mobile Park, Lumen Field, Hec Edmundson Pavilion renovation, and three major renovations of Husky Stadium. He has been with MKA for 45 years, including 25 years as CEO, and is a Life Member of SEAW, a Distinguished Member of ASCE, an honorary member of the American Institute of Architects, and a member of the National Academy of Engineering in Washington, DC.

- Mark Aden, P.E., S.E., is Principal at DCI Engineers. Mark joined DCI in 1998 and opened their first branch office in Spokane, served as President/CEO from 2007 to 2021, and most recently opened their office in downtown Los Angeles. Mark's projects include the Washington State University Martin Stadium renovation, Gonzaga basketball arena, and Gonzaga soccer and baseball fields. Mark attended the first Seahawks game in the Kingdome, has been a Husky season ticket holder for 35 years, and has frozen his butt off at many an Apple Cup in Seattle or Pullman.

Registration for the Forum will be available on Monday Sept. 20 on SEFW's website. We are working on details for the venue, but we are hoping to have an in-person event in Seattle and broadcast the presentation to other parts of the state. Partnership letters will go out to firms in September, as well. We are excited about this event! Contact admin@sefw.org with any questions or comments!

Engineer's Notes from Afield: Thoughts Today on My Time in Afghanistan

By Scott Douglas

Recently, Afghanistan has been a top headline in the news. This has been an extremely poignant topic for me personally, having been deployed in Kabul from 2011 through 2013 with the US Army Corps of Engineers and in 2016 performing an assessment trip in Bamyan for Global Affairs Canada. After my return to the States, I was fortunate enough to give presentations on my experiences at SEAW Seattle and Southwest Chapter meetings. I'd like to share with my SEAW colleagues a few thoughts regarding my work there.

I recently talked to a few engineering friends that were in Afghanistan and received responses from them such as, "I'm still in shock how fast they got control," "Words cannot describe how I am feeling now," and "The news out of Afghanistan is really depressing. I think I need to take a break from reading all the latest reporting."

For me the news has been devastating. I have had more difficulty blanking my mind and falling asleep. One Afghan government employee that assisted and helped assure my safety during my Bamyan trip asked for my help to leave the country. Since he did not directly work for the US military, state department, a US NGO, or as a journalist, there was regrettably nothing I could do to help him. It was heartbreaking.

USACE's mission in Afghanistan was *capacity development*, defined as "…the building of human, institutional, and infrastructure capacity to help societies... through mentoring, training, education, and physical projects…." USACE's engineering work for infrastructure improvements for the Afghan National Police and Army are now questionable; for sanitation, electrical, school and hospital projects, not so much. USACE did set an example of good engineering practice. We also demonstrated basic American values, including individual liberty, opportunity, and equality. I feel a large part of Afghan society has adsorbed many of these practices and values and will not forget them.



Kabul Military Training Complex



Bamyan Provincial Hospital

We all have projects that don't turn out as expected. My Afghanistan work is an extreme example, but I am not discouraged and will continue my other international work. I'd like to encourage others to pursue their passion and share their engineering expertise, whether it is local, national, or international. Even with occasional setbacks, I expect most find it extremely rewarding.

Calendar of Events

SEAW Virtual Meeting – Sept. 16
AISC Steel Day – Sept. 24
State SEAW Board of Trustees Meeting– Sept. 24
Seattle Chapter Dinner Meeting– Sept. 28
SEFW Fall Forum – Nov. 17

For more details and registration on events visit the website.

Membership Postings

In accordance with SEAW bylaws, membership applications are vetted by the executive director, granted probationary status by the chapter board, and posted for membership comment. Membership is considered accepted 30 days after posting if current year dues are paid and no member objections have been received. **Read More**

New Members:

- Carleen Altinook
- Madison Broers
- Clare Terpstra
- Paolo Bourdeau

Employment Opportunities

Are you currently seeking employment as a structural engineer, senior manager, or a senior engineer technician? Check out our job board for current employment opportunities. **Learn More**

Swenson Say Fagét

Structural Staff Engineer / Project Engineer

What's missing from Swenson Say Fagét? You! SSF has immediate openings in our Seattle office for talented Structural Engineers with at least 2 years of wood engineering experience. PE licensure preferred. Responsibilities include being smart, having common sense, playing well with others and tackling challenges like a dog with a bone.

We approach project design with open minds and technical chops to find solutions to some real head-scratchers. Our loyal clients provide staff at all levels opportunities to directly collaborate with architects, owners, contractors, developers, artists and public and private entities on projects of all types and sizes. Our office culture is informal. Besides being flexible, hardworking and technically savvy, did we mention we're also really nice people and like to have a ton of fun?

You know there's a perfect job for you out there. We've been in business for 25 years and remain committed to creating a place people want to come to everyday. Pay is dependent on experience and benefits are great. Check us out at www.ssfengineers.com. If you like what you see, we'd love to hear from you. Submit your resume to info@ssfengineers.com.

GLR Engineers

GLR Engineers is seeking applicants for a structural engineer position in our Spokane, WA office. The applicant shall have a minimum of 4 years of relevant experience in the field of structural consulting design. Desired experience shall consist of working with multiple types of building materials, project types and the ability to contribute on multiple projects and deadlines. The selected applicant will be expected to produce structural calculations required for permit submittals, work with GLR's in-house drafting department to produce construction drawings, coordinate with architectural clients and other design team members, and succeed in operating in a team environment. Knowledge of Revit modeling is a plus. Applicant must be self-motivated with a strong drive to learn and expand their knowledge base.

GLR Engineers is a structural engineering firm with offices in downtown Boise, ID and Spokane, WA. We work on a variety of project types across the country and offer a diverse range of design experience on a week to week basis. Work will be shared between both office locations, web-based communication skills are a must. We offer a competitive salary, excellent benefits, and flexible work hours.

Please send your cover letter and resume for review and consideration tojacob@glrengineers.com.

Peterson Structural Engineers

PSE is seeking a Structural Engineer/Project Manager with 5+ years of experience for our Tacoma office. PSE is a growing, single discipline structural engineering firm serving a wide variety of large and small clients on nearly all types of projects. Our motto is - Bring on the challenge! While we pride ourselves in our technical abilities, at our core, our heart and soul lie in the people of PSE and our commitment to excellence.

PSE
PETERSON STRUCTURAL ENGINEERS

As a member of the PSE family, you will be supported by a technical staff of over 20 employees with professional licenses in over 30 states, as well as in house administrative and marketing resources. PSE has internal committees and mentoring programs established to ensure that our staff are always learning and growing. PSE's environment provides its employees the ability to learn and grow their technical expertise through a wide range of projects, while also valuing work-life balance.

PSE provides a generous benefits package, competitive salary, desirable office location, and a fun and casual office environment with remote work potential. PSE is an Equal Employment Opportunity/Affirmative Action Employer.

Interested candidates please submit cover letter and resume totac@psengingeers.com. PE licensure is required, SE license is desired.

Message from the Chair



By Darrell Staaleson

In the coming months we will be updating the Charter of PIC to incorporate the excellent past work and giving committee members new opportunities to create our Vision for the future and contribute to public awareness for SEAW in the future.
One of the benefits of working on the Public Information Committee is an opportunity to sharpen your technical writing skills and public speaking skills. And being able to write well and present yourself makes you more valuable to employers and clients.

Opportunities:
Equilibrium
Hall of Fame
SEAW Brand Ambassador to NCSEA

Please consider joining the Public Information Committee.

Contact: Darrell Staaleson at dstaal@staaleng.com or 253.520.0388.