



EQUILIBRIUM

June 2017

Newsletter of the Seattle Chapter
Structural Engineers Association of Washington

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SEFW Video

By Luke Heath

Among the many professional organizations that support structural engineers, SEFW best captures the altruistic vision of our profession. SEFW is the great benefactor to SEAW by providing scholarships to bright collegiate stars, educating the public through forums and films, and providing mentorship in STEM high school programs throughout the state. Last fall, SEFW challenged our members to make a video for prospective engineering students in high school and college that would show an answer to the question: "What is cool about structural engineering?". I rolled up my sleeves and set to work.

As I was writing the script for my video, I decided to capture the essence of our profession at an elementary level that would be easy to grasp for all viewers. I wanted to show the idea that first inspired me to become an engineer: the ability to change the world through engineering.

In many ways, structural engineering is an altruistic profession, one in which we imagine a better world.

Altruistic thoughts are intrinsic to our profession. These thoughts are manifested in the buildings we design as structural engineers, the buildings in which we commune, work, play, and most importantly, live. We as engineers provide the framework for the establishment of any great society. Schools, churches, hospitals, homes—these buildings house the cornerstones of our society, helping us to bring up the next generation, who are our purpose for building a better world. Our collaboration with architects, owners, and builders is necessary to carry the vision of today for the promise of tomorrow.

Science, math, and construction come naturally for us as engineers. Most of us are "type A" individuals requiring order in the minutiae, and we appreciate parameters by which we can test our limits. Our satisfaction is found in our purpose: to provide structures that stand the testament of

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Seattle Chapter Leadership

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Joyce Lem

Darrell Staaleson

Directors 2016-2019

time. We are the unsung heroes of architecture. Our legacy is to give frameworks to visionaries' dreams, and our contribution is vital, as we provide a safe environment.

This video is intended to tease the imagination and to inspire future generations of students to explore how structural engineers can change the world. We can all make a difference, and our legacy is also passing our passion on to the next generation.

From a personal standpoint, this video is the culmination of so many people that have invested in my life. I wanted to become an engineer when I was in 7th grade. Math and science came naturally. Unfortunately, my dream was almost snuffed out. We grew up economically handicapped in Raymond, Washington, often depending on government subsidies. I learned at an early age to work hard, to pay for my own clothes, and even for my brother's one year. I knew early on that my only chance to go to college was if I earned my way or if I received a scholarship. Ultimately, I had to use both approaches to complete my college education.

What sets my story apart is that I had a whole town that believed in investing in its future. On graduation day, the school awarded their community scholarships to the graduating class. My class of 43 students received over \$200,000 that year. I am very blessed, as I was awarded enough scholarships to go to school and pursue my dream. When I left the high school commencement stage in 1995, I was emotionally drained, but eternally grateful. I vowed that someday I would start a fund that would help low-income high school students reach their potential. [Read more](#)

Seattle Chapter June Spring Social

By Darrell Staaleson

The Story of Seattle's Locks and Ship Canal

June 20, 2017

Lake Union Cafe, 3119 Eastlake Ave E.

Seattle, WA 98102

5:30 - 9:00pm

\$50 - SEAW Members | \$50 - Non-members

Douglas Beck
Shalini Prochazka

YMF President
Morgan Wiese



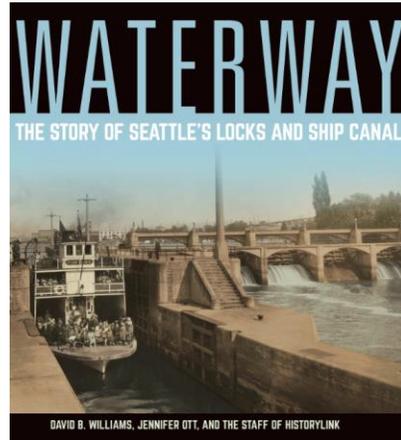
A timber work partner for structural engineers.
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PURSUE A MASTER OF SCIENCE IN STRUCTURAL ENGINEERING

Curriculum informed by industry advisory board

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COLLEGE OF SCIENCE AND ENGINEERING



Construction of the Lake Washington Ship Canal by King County and the Army Corps of Engineers was the culmination of more than 60 years of efforts to join Lake Washington with Puget Sound. When it was first opened in 1916, vessels of all sizes could traverse the divide between fresh- and saltwater - stimulating the economy and spurring shoreline development on the lakes. Jennifer Ott, co-author with David B. Williams of *Waterway: The Story of Seattle's Locks and Ship Canal*, will share some of the stories they uncovered in their research about the decades of false starts, the political shenanigans, and far-reaching social, economic, and environmental impacts of the canal's construction and operation. She'll explore how lowering a lake, raising a bay, and drying up a river created space for industry and recreation and shaped King County's communities over the past century.



Jennifer Ott, assistant director of HistoryLink, is an environmental historian who has explored how people have shaped and been shaped by landscapes across the Northwest for the Oregon Historical Quarterly, HistoryLink.org, and Seattle magazine.

[Register Now!](#)

SEAW Announcements

By Darrell Staaleson

WA Board of Registration for Professional Engineers and Land Surveyors.

The Board is reaching out to licensed professionals for the recruitment of their Executive Director. SEAW believes that the position will be better served by a licensed PE or SE or PLS.

If you are interested, more information can be found [online](#).

Post-Earthquake Rapid Safety Assessments for Bridges

By Paul Brallier

The joint WSDOT Bridge/ACEC Committee has prepared training materials for post-earthquake rapid safety assessments for bridges. These materials are intended for public works employees that have general understanding of structures and construction. Local jurisdictions can provide their own training, or alternatively, private consultants may want to provide the training to their public works clients.

The training materials are available for download at:

<http://www.wsdot.wa.gov/bridge/acec/>

There is no copy write on the training materials, but it is requested that the following be given credit for the materials in the program:

WSDOT Bridge Preservation

Washington State Ferries

WSDOT/ACEC Bridge Structures Committee

King County Road Services Division - Structural Design and Bridge Inspection Unit

EERI

SEAW

Applied Technology Council

California Office of Emergency Services

Save the Date: Southwest Chapter Party with the Tacoma Rainiers

By Bill Sandbo

[View the flyer!](#)

Seattle Chapter May Dinner Meeting Recap

By Gino Mazzotti



At the May Dinner Meeting, SEAW members were treated to a special presentation from the Washington Alliance for Better Schools (WABS) by Emily Yin, Executive Director; Shereen Henry, Director of Instructional Leadership and Cindy Sacket, Director of Operations and Expanded Learning. Their organization has been serving the community since 1995 and currently serves over a quarter of a million students in 11 school districts. Until now, the main partner and source of volunteers for WABS has been Boeing. After meeting with SEAW Outreach Committee members, WABS identified the network and expertise of

Southwest Chapter News

By Bill Sandbo

The Southwest Chapter is wrapping up the 2016-2017 year with a few fun events. On Friday, June 2nd, we will be touring the still under construction "Grand on Broadway" project in downtown Tacoma for our joint meeting with the local AIA chapter. We'll conclude the tour at Dystopian State brewing with some networking and socializing. Our first annual Summer Social will be held on Thursday, June 29th at the Tacoma Rainiers vs. the Las Vegas 51s game. SEAW-SW has reserved a party deck and all tickets will include admission, a BBQ buffet dinner and beer/wine/drinks during the game. Spots are limited so please RSVP soon! Finally, our scholarship application is live. Applications are due June 15th and the winner will be announced at the Summer Social on June 29th. Additional information for all events is available on the SEAW website. We hope to see you at these fun upcoming events!

YMF Corner

By Sean Augustino



SEAW members as a great partnership opportunity. [Read more](#)

Spokane Chapter News

Future home of Spokane Chapter News.

South Central Chapter News

Future home of South Central Chapter News.

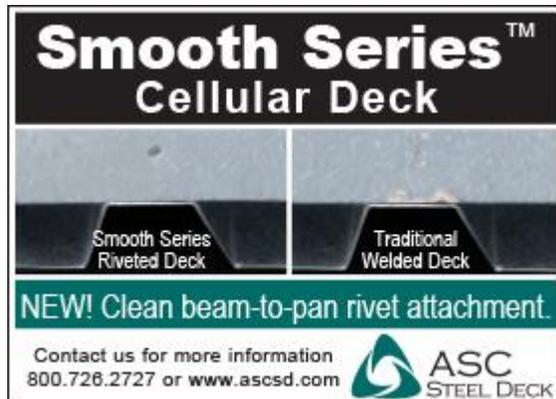
UW YMF Update

By Daniel Rich



The UW student chapter of SEAW has successfully transitioned into their new leadership team after elections held earlier in 2017. Outgoing President Begum Birsoz is excited to hand the reigns over to Kamal Ahmed who will lead the chapter for 2017-18. The new leadership has already completed a successful office visit to DCI

On May 30th, the YMF hosted a tour of the 970 Denny Project in South Lake Union, with a Happy Hour immediately afterward. The tour was led by Brian Nielsen of Cary Kopczynski and Co. and Brian Gledhill of Holland Construction, and the Happy Hour was sponsored by Hilti. We had a total of 12 people on the tour, and we learned more about the design and construction of the 40-story concrete tower. Some notable aspects of the project were the steel fiber reinforced coupling beams, large transfer elements at grade level, the self-climbing form system, and the slab edge working platforms. In fact, this building is the first in Seattle to be approved for the use of steel fiber reinforced concrete in the whole building. [Read more](#)



SEFW News

By Angela Gottula Twining

Engineers in mid-May where they had were able to discuss potential career pathways, typical structural analysis tools, and the important final stage of a project, construction administration. The new leadership team is as follows:

Kamal Ahmed, President 2017-18
Andres Yepez, Vice-President 2017-18
Ron Boutilier, Logistics Researcher 2017-18
Yiran Zhang, Advertisement Chair 2017-18
Michael Bonus, Treasurer. 2017-18

The SEAW YMF thanks the 2016-17 leadership team for their successful inaugural year.

Begum Birsoz, President 2016-17
Marissa Gelms, Vice-President 2016-17
Mark Galiza, Logistics Researcher 2016-17
Brian Hoover, Webmaster 2016-17
Rachel Tan, Advertisement Chair 2016-17
James Lee, Treasurer 2016-17

Outreach Committee Report

By Thomas M. Corcoran





It was a busy month for SEFW! Please read on to learn more about our **FilmWorks Competition, Mead School District Recognition, Scholarship Awards, and Fundraising Campaign: FilmWorks**

Congratulations to our first annual FilmWorks Initiative winners! The winners were announced at the very end of April, and as part of SEFW's fundraising campaign, "Foundation of the Future: Let's Raise the Bar," the videos are being premiered one at a time on Facebook and www.vimeo.com/sefw, the SEFW Vimeo page. The winners are:

- Third-place, tie, "The Structural Engineer," by Edison Shi, bridge engineer at HNTB
- Third-place, tie, "Civil Engineering," by Begum Birsoz, UW student and UW SEAW Chapter president
- Second-place, "Bring Concepts to Life," by Cleo Pineda, student at St. Martin University
- First-place, "Imagine a Better World," by Luke Heath, design engineer at PCS Structural Solutions.

[Read more](#)

For the past three years SEAW has been working with local area STEM high school programs. This year the newly formed Outreach Committee has continued this effort by participating in several STEM programs. The following is a summary of the Outreach Committee's accomplishments thus far:

For the third consecutive year YMF members Gino Mazzotti and Brent Olson supported the Mountlake Terrace HS Bridge Building class. Students designed, built, and then tested their bridges by subjecting them to increasing weight increments until failure; some bridges held several hundreds of pounds. [Read more](#)

Public Information Committee Report

By Darrell Staaleson

- Our focus is on continuing to make improvements to Equilibrium.
- Created a Review Checklist in Excel to collect articles submitted, give assignments for making reviews, and track that reviews are complete.
- Created a Newsletter Format in Word so that Sections are clear and articles are placed in the correct section.
- Basecamp is up and running for project management of the Equilibrium Publication. Great idea and deployment from Andrew our SEAW ED.
- Tim Nordstrom will be taking over as Chair as I assume the duties of V.P. of the Seattle Chapter. Good Luck!

Wind Engineering Committee Report

By Scott Douglas

Next Meeting: Thursday June 8 from 12:00 noon to 1:00 pm at MKA, 1301 5th Avenue #3200, downtown Seattle. The June meeting will again focus on the three design examples SEAW WEC members are authoring in cooperation with the SEAOC Wind Committee for the proposed SEAOC Wind Design Manual. In addition, there will be (1) an update on the publication of the wind sections of ASCE 7-16 and IBC 2018 and (2) progress on addressing ANSI AISI S240 Section B1.1.2 regarding wind load on wall studs combined with axial loads. A future effort will be development of Kzt maps for other jurisdictions in the Puget Sound area. All members are encouraged to participate either in person or via Go-to-Meeting. Please contact the WEC chair, Scott Douglas sdouglascott@gmail.com, to join the WEC and to receive information and announcements on Committee activities and actions.

Seminar: Engineering the Future

By IABSE

39th IABSE Symposium
September 21-23, 2017
Vancouver, BC, Canada

Themes:

1. Innovations in Structures
2. Existing Structures Into the Future
3. Performance Based Design

[View the flyer](#)

Disaster Preparation/Response Committee Report

By Joyce Lem

Next meeting: Tuesday June 20, Noon - 1pm. At the offices of Quantum Consulting Engineers, 1511 Third Ave, Suite 323, Seattle. Everyone welcome!

Meeting Topics:

- Post-mortem on the ATC-20/SAP class held on June 16. The class was filled in 7 days.
- WAsafe is our statewide database registry for volunteer emergency workers who can perform safety assessments of buildings. Updates and discussion of WAsafe integration with the Comprehensive Emergency Plan (CEMP), which is our post-disaster operating system for the Washington Emergency Management Division. Progress is being made!
- Governor's Resilient Washington Subcabinet (RWS), Gov. Inslee initiated the RWS in late 2016, with the goal of answering questions about Washington's current level of earthquake resilience. DPRC members are participating in the preparation of the report that the RWS will present to the Governor. Work is continuing through June. One section of the report is about a program for rapid building assessments. Thus, our goal is to advance the awareness and acceptance of WAsafe by promoting the program in the RWS report.
- Networking opportunities with the Emergency Management community: WASEMA conference, WASEMA meetings, WABO, contacting the emergency management offices for local agencies such as King County and Seattle.

Contacts: Joyce Lem (joyce.lem@hdrinc.com), Paul Brallier (pbrallier@HNTB.com)

What do Contractors, Architects, and Building Officials Want Structural Engineers to Know?

By Matt and Natalie McCartney

In the field, it is imperative to have a line of communication between the contractor and the engineer(s) related to the project. More commonly, what we find is most engineers are unwilling to talk to the contractor in the field, or be "bothered" with questions. They want the contractor to "build" the project to plan and to not ask questions. Having an engineer be open to questions and to understand how things 'can' be built in the field is a huge bonus for any contractor. It is mutually beneficial, not only to the project but for everyone involved.

Communication is essential, especially for 'unforeseen' changes in the field that need to be addressed that weren't accounted for, i.e. pre-existing conditions that were not fully known prior to the project start date. Open communication allows the contractor to understand how the engineer intended the project to be constructed and to address any pre-existing conditions. Talking the process through between the contractor and engineer, from start to finish, helps each party understand what their expectations are and understand the reality of the current project. [Read more](#)

Facebook Update

By Darrell Staaleson

The SEAW Facebook Page has 2,370 'Likes' which is steady from last month.

The least liked recent post from our Facebook page was this attempt at humor from Groucho Marx. This reached 122 people. I had been waiting for anything about the "Viaduct" to use this video clip. I guess people just don't like Vaudeville anymore.

SEAW Technology Taskforce

By Morgan Wiese

Have you been on the SEAW webpage and thought it was missing something? Have you been on other association's websites and wished that SEAW had some similar features on its own website? Now is your chance to have a say in the direction of www.SEAW.org. The SEAW Seattle Chapter's board of directors has started a taskforce group to explore different features the webpage could and should have, and look at different layout options and website styles. If you have any input of your own for the direction of the SEAW webpage; please feel free to email it to me at mwiese@integrusarch.com. Please use the headline "SEAW Technology Taskforce" in the headline so it will be easier for me to sort out.



Acknowledgements and Member Achievements

By Darrell Staaleson

We are reprinting Kudos from last month because these contributions are noteworthy!

To: Michael Niehl, Member of Board of Directors-Southwest Chapter and Bill Sandbo, Southwest Chapter President

From: SEAW



Employment Opportunities

Sr. Structural Engineer - MLA Engineering, PLLC

Structural Engineer - CT Engineering, Inc.

Business Development/Sales - Structural Steel Industry
- American Institute of Steel Construction

Structural Engineer - Magnusson Klemencic Associates

Designer, Design Engineer, Project Engineer - SEFT
Consulting Group

Structural and Design Engineers - Lund Opsahl, LLC

[Read more](#)

Membership Postings

In accordance with SEAW bylaws, membership applications are vetted by the Executive Director, granted probationary

Outstanding work in organizing the Tour of the Seattle Tunnel and Big Bertha. This was a wonderful experience for our SEAW Members.

To: Tom Corcoran

From: Craig DeVine, Edmonds School District

"I'd like to thank you, too, for helping to arrange this trip for us! It was more work for you than I hoped it would be! :)

You continue to be a great advocate for MTHS as we work to provide a solid high school STEM education for our students. And I know you're advocating for STEM education broadly in our community, too. Thank you for all you do. It's always a pleasure to visit and work with you... I really enjoy it.

Thanks again, Tom!"

From the Editor

By Darrell Staaleson



Equilibrium publication Team:

Darrell Staaleson, Editor

Tim Nordstrom

Zohrah Ali

Allison Tran - Grammar, spelling, and watching out for you'll-never-believe-how-they-spelt-that!

ACTION ITEMS:

All members are welcome to submit articles to Equilibrium. To help you with your writer's block, here are a few topics:

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](#)

Upcoming Events

June 9 - [State Board Meeting](#)

June 11 - [Earthquake Engineering Committee \(ECC\) Meeting](#)

June 16 - [Post-Disaster Building Safety Evaluation Training](#)

June 20 - [Disaster Prep & Response Committee Meeting](#)

June 20 - [Seattle Chapter Board Meeting](#)

June 20 - [Annual Spring Social & Awards](#)

June 29 - [Southwest Chapter Summer Social](#)

Write Engineer's Notes from Afield, summarize an interesting technical design you worked on, write about how you have been successful and increased productivity with an accounting procedure or marketing technique, write about your experiences in community services, or share some construction site photos and talk about lessons learned.

"A Picture and a Paragraph." And please use the Article submittal form provided. Please note that when I say, "picture" I mean an actual "picture" and not a blank space where the "picture" should be. And the picture needs a caption along with the names of the people in the photo.

CORRECTIONS:

In the May Edition of Equilibrium we had a glaring spelling error. And it was in the headline, for the lead story no less. "Actos" should be "Acts." Although, "Actos" does sound a lot cooler. So, from a public information perspective that just might make it ok, but probably not.

'Equilibrium' is published monthly from September through June and is available online at www.seaw.org. Articles, letters, and announcements are accepted by e-mail to Editor @seaw.org.

Deadline for copy is the fourth Monday of the month prior to the publication month.

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