



EQUILIBRIUM

Newsletter of the Seattle Chapter
Structural Engineers Association of Washington

April 2012

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www.seaw.org



AMERICA'S CAR MUSEUM

April 2012 Joint Southwest Chapter and Seattle Chapter Meeting

Come hear about the design and construction of Tacoma's newest museum from the Architect and Engineer in charge of LeMay, America's Car Museum. Alan Grant from Grant Architects and Greg Briggs from MKA will discuss the unique facility that will house more than 500 cars, trucks and motorcycles. Built out of concrete and wood framing, the museum is approximately 165,000 square feet in size and extends four stories.

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April 24th, 2012 6–9 PM

The Hub Tacoma

203 Tacoma Avenue South, Tacoma, WA 98402

Registration will be available on the SEAW Website this week. Final details are being arranged.

**SEAW
Wind Seminar**

Coming in June

Watch for details!

From the Board: SEAW and the Future

-by Steve Dill

I have the pleasure of writing to you today while on vacation in Florence, Italy. My choice of reading material for the trip was *Boomerang* by Michael Lewis (a rather dramatic treatise on the banking and debt crisis arising from the mortgage mess—whew). The contrast has stimulated some lively discussions over grappa with my wife (the banker), and with my daughters, who like most of us at the age of twenty-one, know absolutely everything.

Florence is the home of the architectural renaissance, a stunning and enduring tribute to 14th century civilization. The financial crisis on the other hand, while certainly stunning, is neither enduring nor a tribute to anything, except perhaps stupidity and greed. I find it comforting to remember that, as engineers, our profession is part of a long and honorable tradition—using our minds and abilities to make a lasting contribution to society by solving the problems that they face. We should be proud.

On a different topic, a few months back many of you participated in a survey that was put together to inform an SEAW planning session. (To those who participated, thanks!) As a new board member, I found the information very helpful. In considering what I read and heard, it became clear to me that the broad scope of our activities masks the simplicity of our goals. It seems to me that, quite simply, SEAW exists to advance the profession of structural engineering through pursuit of three

broad objectives:

The first objective is to elevate the standards of professionalism associated with structural engineering. It is in each of our interest that the practice of engineering meets the highest possible standards. While we can try to convince ourselves that maximizing our personal capabilities while minimizing professional standards is to our competitive advantage, it is simply not true. Experience has taught us repeatedly that in the absence of adequate standards, economics will diminish our services to the least common denominator—a result that is both financially ruinous and personally and professionally demoralizing.

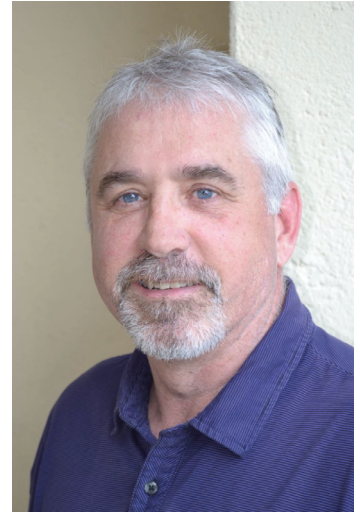
A second related objective is education. Structural engineering is an experience-based profession that spans an impossibly broad scope of expertise. Relevant experience occurs in design offices, in laboratories, in code hearings, and on construction sites around the world. Sharing our experiences, both good and bad, offers each of us the opportunity to bring far more to the practice of engineering than the sum of our personal accomplishments.

The final objective is to expand professional relationships. In our profession, like many others, it is not simply what you know, but whom you know that matters. Knowing the solution to a problem is only marginally better than knowing where (or from whom) to find a solution quickly. Whether seeking a job opportunity, a second opinion on an interpretation of code, or the

right construction technique for a unique jobsite condition, none of us can afford to go it alone.

As a practical matter, all of these objectives are interconnected. Our professional standards are, to a large degree, set by the quantity and quality of the education we obtain. Relationships are built through our efforts to learn, to educate, and to share our experiences, and so on. With the exception of the few administrative tasks required to run our organization, all of its other activities are arguably intended to pursue one or more of these objectives.

Our meetings, seminars, and committee activities are the main vehicles through which SEAW does its work and pursues its goals. Obviously none of these activities can occur without our effort. The idea that as an association we have only a few goals makes accomplishing them sound simple—it clearly isn't. Hopefully, however, it also helps us to ask some of the right questions: Can we find a way to turn a committee's code activity into an education opportunity? Can we leverage our design expertise into better codes and standards? Are there important professional practice issues associated with the industry's movement to BIM? Are we doing enough to manage the statutory environment in which we operate? The list is endless and endlessly evolving. It is our responsibility to find the next crucial question and to see that it gets answered. If your interest (or concern) leads you in the direction of



an established committee, go to the next meeting and see where it goes from there. If your interest doesn't align with an existing committee, find a couple of colleagues that share your interest and then take it to your chapter leadership (or the SEAW state board) — they like crazy ideas). If you are involved in a committee and your interest is waning, look for another. Committee participation is not intended to be a life sentence. The point is for each of us to engage and to enjoy the ride. Remember that engineering is a great profession. On our worst day it will be way better than being a politician in Greece or a banker in Iceland.

Ciao - Steve

Steve Dill is a principal, board member, and the chief financial officer for KPFF Consulting Engineers. A 2011-2014 Seattle Chapter board member, Steve has been a member of SEAW for more than twenty years and teaches the "Masonry Design" component of SEAW's Refresher Course.

Company Spotlight: Jacobs Associates

Jacobs Associates provides practical, cost-effective, and innovative solutions for difficult underground projects in the water, wastewater, and transportation sectors. With an emphasis on tunnels and shafts, we offer a full range of design and construction management capabilities and provide the broader heavy civil construction industry with a robust package of claims and dispute resolution services.

Jacobs Associates engineers have specialized education and practical knowledge in a variety of disciplines required for underground projects, including engineering geology, geotechnical engineering, rock mechanics, structural engineering, construction contracting, and disputes resolution. We provide a full array of design services, including tunnel design, shaft design, excavation support, rail clearance improvements, deep foundations, dewatering, slope stabilization, foundation design, and geotechnical characterization. Jacobs Associates also is a formidable ally in claims resolution and dispute cases.

Our locations throughout the United States and Australia, include offices in Seattle, Portland and Vancouver, B.C. to be responsive to clients in the Northwest region. Our design projects currently under construction include: Sound Transit's University Link Capitol Hill Station in Seattle, excavations at Lower Baker Dam in Skagit County for Puget Sound Energy, and the Port Mann Water Supply Tunnel in Vancouver, BC.

SEAW members who work in Jacobs Associates' Seattle office include Andrew McGlenn, Marika Hjert-Bernardi, Paul Mockus, Sean Peterfreund, and Chelsea Snodgrass.

Jacobs Associates
1109 First Avenue, Suite 501
Seattle, WA 98101
206.588.8200
www.jacobssf.com

Cale Ash, SEAW Member since 2005, is our Company Spotlight Coordinator. If you would like to see your company in the spotlight, e-mail Cale at cash@degenkolb.com.

PROJECTS

Port Mann Water Supply Tunnel Vancouver, BC

The Port Mann Main Water Supply Tunnel for Metro Vancouver consists of two 215-foot deep circular shafts (on either side of the Fraser River) with a 0.6-mile long bored tunnel between them which will house a 78-inch diameter steel pipe. The ground is temporarily supported by unreinforced concrete slurry walls with 8-foot and 15-foot thick tremie-poured base slabs. The 11.5-foot diameter tunnel will be driven with an earth pressure balance tunnel boring machine under groundwater pressures of up to 6 bar. Lateral spreading of the ground due to liquefaction potential made this a challenging design. Jacobs Associates completed the detailed design of the shafts and tunnel, and is currently delivering engineering services during construction. The project is scheduled for completion in early 2014.



Photo courtesy of Andrew McGlenn

Capitol Hill Station Seattle, WA

As part of Sound Transit's University Link Light Rail extension from downtown Seattle to the University of Washington, Jacobs Associates designed the excavation support and permanent structural elements of the station. The excavation is approximately 75 feet deep, 60 feet wide and 580 feet long. Excavation support consists of steel soldier piles and wood lagging with temporary tiebacks, as well as internal bracing in the central zone where utilities cross and make tieback installation difficult. The finished station structure is cast-in-place concrete, with concrete-filled steel pipes serving as internal bracing over the platform area and reinforced concrete slabs providing internal bracing at either end of the station box.

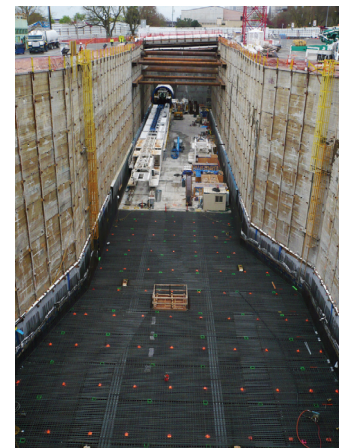


Photo courtesy of Andrew McGlenn

Airport Link Brisbane, Australia

The Airport Link Project includes construction of more than 12.5 km (7.8 mi) of tunnels as well as surface highway works that consist of a 750-m (2,461-feet) long flyover bridge and a major upgrade to the airport roundabout. The underground works include twin three-lane mainline tunnels; five one- to three-lane on- and off-ramp tunnels; and a two-lane busway tunnel. The finished span of the mainline tunnels is approximately 13 m (43 feet), and where the ramp tunnels intersect with the mainline tunnels, the spans of the resulting caverns are up to 26 m (85 feet). The maximum cover over the tunnels is approximately 40 m (131 feet), and much of the tunnel alignment underlies residential neighborhoods and light commercial properties. Jacobs Associates led the design effort for the permanent lining for all the mined tunnels as well as designing the initial support systems for sections of the ramp tunnels and caverns.



Photo courtesy of Andrew McGlenn

March Meeting Recap

-By David Sommer

On Pi day, March 14, the Seattle Section of the American Society of Civil Engineers and the Seattle Chapter of the Structural Engineers Association of Washington held a joint meeting to learn about the Aberdeen Pontoon Construction Facility designed by KPFF Consulting Engineers. The facility is being used to construct pontoons supporting the new floating bridge in part of a four-stage reconstruction project of WA-520. The program was presented by Bob Riley, the Engineer of Record for the casting basin, and Trevor Lighty, a design engineer heavily involved in all stages of the design and construction of the facility. The casting basin was built for the construction of the thirty-three pontoons to be used to support the new floating bridge; the largest pontoon measures 75' x 360',

covering almost an entire football field.

Mr. Riley gave an overview of the entire project. The casting basin was constructed in Aberdeen, Washington, with a hydraulic gate that can flood the facility or pump it dry in about four hours. The pontoons will be cast in the basin six at a time, then the hydraulic gate will open, flooding the basin with water, and the pontoons will be towed out of the basin. They will then be transported through the ocean up around to Puget Sound and into Lake Washington. The schedule was fairly rapid, with the project bid just before Christmas 2009 and construction of the facility completed in February 2012. The first six pontoons are scheduled to be transported in May of this year, so watch for those at the Ballard Locks.

Mr. Lighty then walked the audience through many of the design and construction challenges the design team encountered and how they dealt with them. The design codes used for the project were a combination of the WSDOT Bridge Design Manual, UFC documents 4-152 and 4-213, the IBC and various material codes. The two-way slab was thickened with drop caps at the pile locations to resist punching shear. The crane beam design had to accommodate both the tower and crawler cranes. The gate support had to withstand 2000 kips of hydrostatic pressure; the resulting structure is a space truss using HSS members which distributes the force to the piles using the casting basin concrete slab as a diaphragm. The gate wall itself has constructed in three sections, so deflection com-

patibility had to be accounted for. Seismic design was performed using nonlinear soil springs and displacement based design; demands were calculated for a 1,000-year return period event. On the construction side, the sequencing was critical; the pontoon construction was started before the gate and launch channel were completed.

The speakers concluded with a time lapse video of construction (available at <http://oxblue.com/open/SR520Pontoon>) and a lively question and answer session.

David Sommer is a designer with Degenkolb Engineers. David received his MSCE from University of Illinois at Urbana Champaign in December of 2009, and joined SEAW as an Associate member in March, 2011.

It is time to get this on your calendars
SEAO Proudly Presents!!!

SHAKE IT UP AGAIN
GAMBLING WITH SEISMIC VULNERABILITY

SEA NORTHWEST CONFERENCE
JULY 26-28, 2012
KAH-NEE-TA HIGH DESERT RESORT
WARM SPRINGS, OREGON

Check out the attached Video from Youtube on the Resort. <http://youtu.be/1XvERNUwafg>

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Day of Remembrance

Japan Remembrance Event Marks One Year Anniversary of Tohoku Earthquake and Tsunami Disaster

-By Greg Hess

At exactly 2:46 pm local Seattle time, a minute of silence was observed to remember the victims of the earthquake and tsunami that killed nearly 20,000 people and left communities in ruin along the Tohoku (northeast) coast of Japan.

The event drew hundreds of Seattleites to Fisher Plaza in the Seattle Center to offer condolences and learn from local relief volunteers and engineers who visited the Tohoku region. Along with the SEAW Tohoku Recon Team, City and State emergency planning and response organizations were on hand to share lessons learned from Tohoku and help educate the public on emergency preparedness and natural disaster hazards in Washington.

One such hazard lies just off our coast along the Cascadia Subduction Zone where a potential M9.0 earthquake scenario could cause similar long-duration shaking and trigger a massive tsunami much like the Tohoku event.

There is little doubt that Japan is the most prepared country in the world for earthquake and tsunami. Unlike the 2004 events in Indonesia which surprised residents, educational awareness and meticulous public planning including evacuation routes, early warning systems, and civil defenses saved countless lives.

Still there were many lessons to be learned. Most coastal structures were overwhelmed by the scale of the tsunami. Civil defenses and evacuation facilities, designed to withstand modern events like the 1960 Chile Tsunami, were under-designed.

As experience is the best teacher, policy makers and engineers in Japan have now realized the importance in preparing for the worst-case scenario. For example, vertical evacuation structures in many Japanese localities are now required to be five stories tall instead of the previously mandated three stories, and must be designed to meet performance criteria for both shaking and tsunami impact. Similarly, tsunami hazard mapping throughout coastal regions in Japan is being revised to include a broader historical record and worst-case probabilistic hazard modeling.

The day's educational exhibitions were concluded by the remembrance ceremony attended by politicians and dignitaries and emceed by Lori Matsukawa of King 5. During her keynote Lori reiterated three of the lessons the SEAW Tohoku Reconnaissance Team brought back from their June 2011 reconnaissance trip: 1) seismic retrofit works, 2) vertical evacuation structures are critical in low-lying tsunami regions; and 3) early tsunami warning systems saves lives. The SEAW hopes that these and other lessons learned from Tohoku will facilitate forward thinking and help push public policy for worst-case disaster preparedness in the Pacific Northwest. A full summary of the SEAW Tohoku Reconnaissance Team's summary report is available online at www.SEAW.org.

Greg Hess is an Associate with KPFF Consulting Engineers. An SEAW member since 2011, Greg was a member of the Japan Earthquake Reconnaissance team.



SEAW members (left to right) Paul Brallier, Greg Hess and Andy Taylor staff the Earthquake Reconnaissance Team exhibit



Andy Taylor and Jon Siu talk with attendees



Andy Taylor and Dave Swanson in front of SEAW's exhibit

YMF Corner

Upcoming YMF Elections

-By Natalie Low

It's hard to believe it's already time to start looking for new YMF leadership. This coming May, we will be holding elections, and I'll be accepting self nominations now through May 1 for all YMF leadership positions.

I encourage you to consider volunteering for a position. It's a great avenue for developing relationships with valuable members of the structural community. Additionally, it's a great way to learn more about how SEAW works and all that the organization is involved with.

YMF Leadership Positions and a description of typical activities for each are:

President—Develops and leads YMF activities. The president typically:

- Attends monthly meetings with the SEAW board
- Coordinates two tours such as a building project or steel mill
- Sends announcements to YMF
- Contributes a monthly column to the Equilibrium Newsletter

Vice-President—Assists President with YMF activities. This may include:

- Coordinates two service projects, such as our YMF Habitat build days
- Coordinates SEAW's booth for the PSEC Engineering Fair

Outreach Chair—Liaises between university students and YMF and develops programs to encourage young engineers to join and participate in SEAW.

- Coordinates Student Outreach Luncheons in the Spring
- Serves on SEAW's Public Information Committee

Social Chair—Develops programs to encourage sustained involvement of young engineers in SEAW. This predominantly involves:

- Coordinating monthly happy hour events
- Coordinating the annual YMF Picnic
- Helping to maintain email list and budget

If you're interested in a position, please email me at gmatann@gmail.com with your name, email address, current company, alma mater, the position you'd like to run for, and a brief statement explaining why you'd like to hold this position.

Upcoming YMF Events

April 7	8:85 AM—4:30 PM Habitat Build Day
April 10	Happy Hour, 5:00 PM Mistral Kitchen, Downtown Seattle
April 18	Happy Hour, 5:00 PM Palomino, Bellevue, WA
April 26-28	ASCE's Pacific Northwest Regional Conference co-hosted by the University of Washington and Seattle University
May 8	Happy Hour, 5:00 PM Elephant & Castle, Downtown Seattle
June 12	Happy Hour, 5:00 PM Pike Place Brewery, Downtown Seattle

In Memoriam



Vernon Leroy Anderson

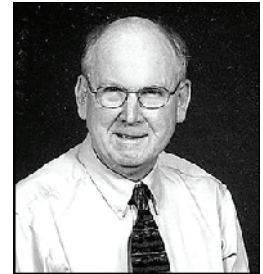
Founding member of SEAW South Central Chapter.

Vernon Anderson was born February 15, 1934 and died March 10, 2012. He lived most of his life within five miles of the land his grandfather settled on Green Valley Road, Mabton. In his youth he was active in 4-H and FFA. He received a Bachelor of Science in Agricultural Engineering from Washington State College and was an officer of the WSC class of 1956. While in college he was in Army ROTC and then served in Army Reserves.

Vern worked for the Bureau of Reclamation and Collier, Carbon, and Chemical Corporation prior to starting Anderson Engineering in 1971. He was licensed as a Civil and Agricultural Engineering in Washington, Oregon and Idaho. He worked as a consulting engineer for the rest of his life. He also served as the engineer for the Sunnyside Port District. Some of his projects included metal building design, potato storage facilities, and many industrial facilities where he provided the civil and structural design.

Vern was very active in the community. He was in leadership in Sunnyside United Methodist

Church, Elks, Masons, Rotary, and Lower Valley Squares. He was a member of Shriners, American Society of Agricultural Engineers, Structural Engineers Association of Washington, and Lower Valley Golf Club. Vern remained active attending almost all SEAW local chapter meetings during his life.



John Plimley

Longtime Spokane Chapter member John Plimley passed away peacefully at home on Saturday, March 10, 2012. John was born in England and lived in New Zealand, Australia, and Canada before settling in the United States, first in California and for the past 32 years in Spokane. He worked for Bovay Engineering and for Integrus Architecture and Engineering. John joined SEAW in 1979, and served as Spokane Chapter president in 1986-87. He was a passionate spokesperson for the mentally ill. John was a wonderful artist and a dearly loved husband, father and friend. Memorial gifts may be given to NAMI Spokane, Mid City Concerns or to First Presbyterian Church. **HAZEN & JAEGER FUNERAL HOME 1306 N. Monroe** entrusted with arrangements.

YMF Leadership

President:

Natalie Low
gmatann@gmail.com

Vice President:

Jennifer Ahlport
Jahlport@degenkolb.com

Outreach Representative:

Eric Pope pope.eric.w@gmail.com

Social Representative:

Anna Troeh
atroeh@gmail.com

Past Chair:

Dan Yeager
dyeager@dci-engineers.com

Created in 2007, the Younger Member Forum provides networking and social opportunities to SEAW members 35 and under, as well as new non-member engineers and students. All SEAW members are welcome to participate in YMF functions.

Meetings, Seminars, and Announcements

ASCE's Pacific Northwest Regional Conference (PNWRC)

Engineering students from around the region participate in this annual event, which features various presentations and competitions, most notably, the Steel Bridge and Concrete Canoe competitions. The 38th annual conference will be held April 26 to 28, 2012, here in Seattle and co-hosted by both Seattle University and the University of Washington. Winners of this competition then go on to compete at the National Conference, which will be held June 14 to 16, 2012, at the University of Nevada, Reno.

Currently, UW and SU are in fundraising mode for the event. Their projected costs are around \$60,000, which will cover facility rentals, equipment, food, awards, and various other necessities. Sponsorship offers companies a great opportunity to gain exposure to students, as contributions are acknowledged through various means of marketing based on contribution level. For more information or to make a contribution, please contact Fundraising Co-Chairs Fawm Saefong tinys-fong2000@yahoo.com or Sherry Kim kimsherr@uw.edu.

Judges and volunteers will also be needed for the conference. If you're interested in helping out, please contact Volunteer Coordinator Amanda Neice at amanda.neice@gmail.com or Judges Coordinator Nina Mao ninamqx@gmail.com.



ASCE Sixth Forensic Engineering Congress

ASCE's Technical Council on Forensic Engineering is preparing the 6th Forensic Engineering Congress; it will take place

from October 31st through November 3rd, 2012, in San Francisco, California, at the Hyatt Regency Hotel in the Embarcadero area.

Washington's structural and civil engineers are encouraged to attend the Congress and to consider contributing a paper.

Please visit the Congress website at the following link:

<http://content.asce.org/conferences/forensics2012/index.html>

The deadline for abstracts was January 18, 2012 and the draft paper deadline is April 25, 2012.



WABO-SEAW Draft White Paper #7 Posted for Comment

The WABO-SEAW Liaison Committee has posted a draft of its White Paper 7-2011, "Seismic Design and Gravity Support Requirements for Nonstructural Components." This white paper establishes recommendations and guidelines for building officials, design professionals, contractors, and building owners relating to seismic anchorage and support of "nonstructural (NS) components" regulated by IBC Chapter 16 and Chapter 13 of ASCE 7-05.

The draft may be viewed at http://www.seaw.org/documents/WABO-SEAW_WP_7.pdf. Please address comments to Charlie Griffes, Charlie.lie@ctengineering.com



WASHINGTON EERI CHAPTER

Attention Washington EERI Members and Earthquake Professionals:

The EERI Board of Directors is interested in starting a regional

chapter in Washington. Washington has had a long history of being active in earthquake hazard mitigation activities. The Seattle fault earthquake scenario which was co-sponsored by EERI is an example of the Washington professional earthquake community getting together and making a great contribution to earthquake safety. The Board would like to see continued efforts in earthquake hazard mitigation in Washington and we feel that an EERI chapter would help facilitate those efforts. Creating a network and local organization of earthquake professionals provides opportunities to enact actions at the grass roots level. The recent occurrence of the Tohoku-Oki earthquake and tsunami attest to the urgency of addressing the earthquake problem in the Pacific Northwest.

Regional chapters have been recently started in Oregon and Utah and next year's EERI annual meeting will be held in Seattle. The Board would like to see a Washington Chapter and the Oregon Chapter help in the organization of the annual meeting.

If you would be interested in helping form the Washington chapter please email Ivan Wong at Ivan.Wong@urs.com for more information. He plans to have a kickoff meeting in Seattle soon.



International Concrete Sustainability Conference

The National Ready Mixed Concrete Association will hold its 7th annual *International Concrete Sustainability Conference* held May 7-10, 2012, in Seattle. Over 60 world-renowned experts will present the latest developments related to design, specifying, manufacturing, testing, construction, maintenance, and research of concrete as it relates to sustainability.

Keynote speakers for the plenary sessions include

Denis Hayes, president and CEO of Bullitt Foundation, national coordinator of the first Earth Day and honorary chairman of the Earth Day Network, will present a comprehensive and visionary view of sustainability coupled with building industry leadership demonstrated by the zero-carbon Cascadia Center in Seattle.

Dr. Franz-Josef Ulm, PhD, George Macomber Professor, Department of Civil and Environmental Engineering at Massachusetts Institute of Technology and director of the MIT Concrete Sustainability Hub, will discuss model-based life-cycle assessment for sustainable engineering design.

Dr. Michael Lepech, PhD, assistant professor, Department of Civil and Environmental Engineering at Stanford University, will explore "bendable concrete", a new class of high performance fiber reinforced concrete that exhibits mechanical properties similar to ductile metals.

A complete list of speakers and additional details about the conference is available online at www.concretesustainabilityconference.org. The conference provides learning and networking opportunities on the latest advances, technical knowledge, continuing research, tools and solutions for sustainable concrete manufacturing and construction. This year's conference will take place at the Seattle Renaissance Hotel and the University of Washington campus.

NRMCA, based in Silver Spring, MD, represents the producers of ready mixed concrete and the companies that provide materials, equipment and support to the industry. It conducts education, training, promotion, research, engineering, safety, environmental, technological, lobbying and regulatory programs.



Opportunities

Structural Staff Engineer

Integrus Architecture is an architectural/engineering firm committed to an integrated approach toward meaningful and lasting design. We are looking for a structural staff engineer to be part of the Seattle Integrus team.

In support of the team the successful candidate will meet the following requirements:

- Bachelor of Science in Civil Engineering with emphasis in structural engineering or Masters (preferred).
- An EIT certification with 3 years minimum experience working with building structures.
- Computer proficiency required; Familiar with engineering software applications such as RAM, ETABS, and RISA 3D with REVIT Structural experience a plus.
- Ability to meet deadlines and complete assignments.
- Commitment to customer service and ability to work in a team-oriented environment.
- Excellent written and verbal communication skills in English.

The successful candidate will conduct structural analysis and design of steel, concrete, masonry and wood building structures using governing codes including construction administration under the direction of the Principal or Project Engineer.

Integrus is a great place to work with opportunities for career development. We are an Equal Opportunity Employer and offer competitive benefits.

Please visit our website at www.integrusarch.com (learn more about us) to apply for this position.

Structural Engineer

LDC is looking for a licensed

Structural Engineer with an interest in leading projects and developing client relationships. Responsibilities will include managing and assisting/

overseeing structural design, interfacing with owners, architects and contractors. Managing timelines, budgets and support staff, and marketing structural expertise. Project design elements will include: steel, concrete, wood and masonry design of commercial, industrial, residential and telecommunication structures. Send resumes to jobs@ldccorp.com.

Senior Level Engineer

Seattle Structural is looking for a licensed SE with a minimum of six years of experience to help lead this growing firm located in downtown Seattle. This is a great opportunity to work on a variety of private, institutional, healthcare, educational and commercial projects both domestically and internationally.

Candidates must have experience in all building types. Experience in wood, steel and concrete buildings, lateral analysis, deep foundations and marine projects desired. The ideal candidate will have excellent communication and technical skills, the ability to lead other engineers, manage multiple projects and a commitment to quality client service. Big-firm experience would be a plus.

We offer a competitive salary and a variety of benefits including medical, retirement and many more.

Please address inquiries to:

Howard Burton, President,
Seattle Structural PS Inc.
1420 Fifth Avenue, Suite 425
Seattle, WA 98101
Phone: (206) 343-3000
Fax: (206) 343-3013
HBurton@SeattleStructural.com

Structural Engineer

DCI Engineers seeks qualified applicants for structural engineering positions with 3+ years experience in industrial and structural steel design. Strong communication skills and the ability to work within a fast paced team environment are a must. DCI Engineers is an energetic, dynamic, and highly motivated group of professionals

and provides great opportunities in career development and growth.

Please email your cover letter and resume to resumes@dc-engineers.com.

Structural Engineer

The Washington State Department of Transportation Ferries Division (WSF) is seeking a structural engineer to join its Terminal Engineering Department to implement the Seismic Retrofit Program at Washington State Ferries.

The WSF Terminal Engineering Department is responsible for the design, construction, and maintenance of ferry terminal facilities. These facilities are characterized by a variety of complex structure types including movable bridges, timber and concrete vehicle approach structures, berthing structures, and terminal buildings.

With the assistance of more senior engineers, the Seismic Retrofit Engineer will:

- Develop a screening process to identify and prioritize WSF Structures for seismic retrofit
- Determine Seismic Demand and Seismic Capacity on a variety of WSF Structures
- Develop alternative retrofitting measures of WSF Structures including cost and constructability considerations.

The successful candidate for this position has the ability to determine seismic loads and to determine the capacity of existing steel and concrete WSF structures per AASHTO, WSDOT, and FHWA retrofit criteria. This position will require strong organizational skills including use of standard personal computer software such as spreadsheets and document software.

For more information about this position and directions on how to apply, please visit:

<http://agency.governmentjobs.com/wdot/default.cfm?action=viewJob&jobID=443842>

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**STRUCTURAL ENGINEERS ASSOCIATION
of WASHINGTON • Seattle Chapter**

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Seattle Chapter Committees & Chairs

House/Program	Peter Opsahl
Refresher Course	Mark Moorlegghen
Membership	Cheryl Burwell
Newsletter	Lynnell Brunswig
Presentations/Awards	Howard Burton
Engineer of the Year	Ed Huston
Governance	Howard Burton
Committee Oversight	Tom Corcoran
YMF	Natalie Low

Statewide Committees & Chairs

Code Advisory	John Hooper
Earthquake Engineering	Tom Xia
Building Engineering	Scott Beard
Existing Buildings	Peter Somers
Professional Practices	John Tawresey
Wind Engineering	open
Exam Liaison	Ed Huston
Seattle Users of BIM Structural	Irina Wong

Scholarship	Bill Mooseker
Legislation	open
Education	Mike Wright (interim)
Finance & Auditing	Ted Smith
Disaster Prep/Response	Joyce Lem
Public Information	Cale Ash
Sustainability	Adam Slivers
Snow Load	John Tate
SEAW Historian	Don Northey

For Committee contact information, visit www.seaw.org and click the Committee page

SEAW Calendar

APRIL, 2012

Monday	2nd	Electronic Board Election (results by 4/20/12)
Saturday	7th	YMF Habitat Build Day
Tuesday	10th	YMF Happy Hour 5:00 PM Mistral Kitchen, Downtown Seattle
Wed	18th	YMF Eastside Happy Hour 5:00 PM Palomino, Bellevue
Friday	20th	May Newsletter Deadline
Friday	23th	Seattle Chapter Elections Close
Tuesday	24th	Seattle Chapter Board Meeting SW/Seattle Chapters Joint Dinner Meeting Election results announced at meeting
Thurs-Sat	26th-28th	YMF Involvement in ASCE PNW Conference co-sponsored by UW & SU

MAY, 2012

Tuesday	8th	YMF Happy Hour 5:00 PM Elephant & Castle, Downtown Seattle
Friday	18th	State Board Meeting State Newsletter Deadline
Wed	22nd	Seattle Chapter Dinner Meeting Seattle Chapter Board Meeting

JUNE, 2012

Thursday	17th	Spring Social and Awards Event Life Member/Spouse meeting, installation of officers, presentation of Engineer of the Year and other awards.
Tuesday	26th	Seattle Chapter Board Meeting
Tuesday	12th	YMF Happy Hour 5:00 PM Pike Place Brewery, Downtown Seattle

Membership

Membership Applications

Tim Mealy
Coughlin Porter Lundeen
BS 1995, MS 1997, Washington State University
Licensed SE, Washington
Class: Member SE

Dwight Burr Smith III
CH2M Hill
BA 2005, MS 2011, University of Washington
Licensed PE, Washington
Class: Member PE

William S Swigart
Swigart Engineering, PLLC
BA 1971 University of California
MSCE 1976, Stanford University
Licensed PE, Washington
Class: Member PE

Applications Accepted

Kevin Borth, Member SE
Kolby Burke, Associate

Membership Classification Changes

John McGlenn from Member SE to Life Member
Kenny Yip, from Member PE to Member SE

Dues Invoiced in January

INSTRUCTIONS FOR PAYING YOUR DUES ONLINE:

1. Go to www.seaw.org and Log in to the member area (Default login name is your email address; password is your first name).
2. Click on "My Membership" in the menu bar
3. Select "Membership Renewal" in the gray menu bar to see if there is an outstanding invoice.
4. Select the invoice and Follow the prompts to pay your dues online using your VISA or Mastercard.
5. When your payment has been made, you will receive an auto-mated receipt by email.