



# CONNECTIONS

April 2014 Volume 14 Issue 7

Newsletter of the  
Structural Engineers  
Association of Oregon

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## Upcoming SEAO Meetings and Events:



### Wednesday, April 30, 2014: SEAO Lunch Meeting

Speaker: Lara Simmons from the Structural Engineers Association of Washington  
Topic: Engineering After a 2,500 Year Earthquake—Lessons Learned While Working in Christchurch  
Location: Portland City Grill, 111 SW Fifth Avenue, 30th Floor, Portland, Oregon  
Time: 11:30 am check-in and buffet lunch, 12:00 pm lunch and program  
Sponsors: Daily Journal of Commerce (DJC Oregon) & International Code Council (ICC)  
See Page 3 for additional information.

### Tuesday, May 13, 2014: SEAO Seminar

Topic: The 2012 IBC & ASCE 7-10 Code Changes for Wind Design  
Speaker: Ed Huston  
Location: Sheraton Portland Airport Hotel, 8235 NE Airport Way, Portland, Oregon  
Time: 7:30 am check-in, Seminar 8:30 am to 4:30 pm  
Register early. Spots are available for the first 120 people to register.  
PDH Credits: 6 hours (4 PDH credits available for viewing the video)  
See Pages 10 and 11 for additional information.



### Thursday, May 29, 2014: SEAO Dinner Meeting

Speaker: Joseph Tortorella with Structural Engineers Association of New York  
Topic: 9/11 Responders and the Structural Risk Involved — Post 9/11 Lawsuits of SEAO NY Members and the Path Forward Through a National Good Samaritan Act  
Location: Sentinel Hotel, 614 SW 11th Ave, Portland, Oregon (formerly named the Governor Hotel)  
Time: 5:30 am check-in and social; 6:00 pm dinner; 6:15 pm program  
Sponsor: The International Code Council (ICC)

### Wednesday, June 25, 2014: SEAO Meeting

Save the Date! More information will follow in May's newsletter.  
Sponsor: Daily Journal of Commerce (DJC Oregon)

### Wednesday, July 23, 2014: SEAO/OACI Annual Golf Tournament

Location: Pumpkin Ridge Golf Club, 12930 NW Old Pumpkin Ridge Road, North Plains, Oregon  
Time: 1:00 pm shotgun start, 6:00 pm social, 6:30 to 7:30 pm dinner & awards  
See Pages 13 and 14 for additional registration and sponsorship information.

**STATE OF OREGON OSSC 2014 ADOPTION:** The date for adoption of the 2014 OSSC has been modified to July 1, 2014. The State of Oregon Building Codes Division will allow at least a three-month transition period for implementation of the new code from July 1 to September 30, 2014. During the transition period an applicant has the option to submit for permit a structure that is designed either to the OSSC 2010 **OR** the new OSSC 2014. The structure must be designed completely to one or the other code. The applicant shall not mix and match the two codes. For instance, the OSSC 2014 code for life safety cannot be mixed with the OSSC 2010 for structural design. If you are submitting for permit after September 30th, only the OSSC 2014 shall be used.

CONNECTIONS is a monthly publication of the Structural Engineers Association of Oregon, published to disseminate current news to our membership and others involved in the profession of structural engineering. The opinions expressed reflect those of the author and, except where noted, do not represent a position of SEAO.

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## PRESIDENT'S MESSAGE: REFLECTIONS ON CODE CHANGES

By: Amit Kumar, S.E., P.E.



Welcome to the not-so-brief April's newsletter complete with a President's message this time!! Last month's 14 page "In-brief" newsletter was packed with information. To those of you who have commented on its length, I wanted to say that I did my part in keeping it brief, as you may have noticed that the issue did not have a President's message . . . All kidding aside, we appreciate your input. We will try to keep the newsletter as brief as possible, at the same time provide you the information you need in a timely manner. Thank you for reading and paying attention and I hope you will enjoy this edition of the newsletter and find it useful.

For this month's President's message, I want to highlight an issue that has been in the back of my mind for some time now. I had read an opinion piece on this topic in the September 2013 issue of the STRUCTURE magazine. The following is adapted from that opinion piece.

Structural Engineering is probably one of the oldest professions and has been around since man lived in caves. Civilizations are often identified by the grand structures that were built during their times. They represent the greatest wonders around the world from the Pyramids of Giza built during the Egyptian civilization, to the Acropolis that echoes the grandeur and the power of the Athenian empire, to the great viaducts built by the Roman Empire, the Great Wall of China from the Chinese civilization and the Taj Mahal of the great Indian civilization. The modern civilization can boast of a large number of amazing feats of engineering from the Hoover Dam to the Sydney Opera house to the tallest building in the world today, the Burj Khalifa in Dubai to name just a few. Yet today we find that there is a growing perception that structural engineering is a dying profession. With this

amazing legacy such a notion seems unthinkable but is sadly true. So why is that?

Perhaps the answer starts with our high schools and colleges where the future generations are often advised to pursue fields of engineering such as computer science and electrical or electronic engineering. Writing software or designing web pages, learning HTML etc. are considered not only glamorous but also more economically rewarding. Students quickly realize that entry into our profession generally requires earning a master's degree followed by a 4-year internship followed by an 8-hour Fundamentals of Engineering exam then a 16-hour Professional Engineers exam--all this eventually leading to a job with modest income. Would you want to go through all this or right after high school pick up some "High Tech" skills and start earning a boatload of money? This perception has got to change. Structural Engineers are often at the bottom of the food chain being paid rather meagerly compared to the skill, knowledge, and liability they assume. Last week I was watching a Blazers game with my 11 year old when they were discussing player salaries. She asked me, "Why do these athletes get paid millions of dollars for just running around the court and throwing the ball through a hoop, whereas engineers like you who design buildings where people can live safely in and be protected from rain and wind and snow or doctors who save people from diseases don't get paid enough?" She declared, "I think engineers and doctors should be the highest paid people." Amen to that. Now, only if the general public understood the gravity or importance of the work that the structural engineers do, we will not have the problem of our profession being perceived as obsolete. Unfortunately, the general public does not know who we are or what we do. Based on media reports, it seems obvious that buildings are designed by architects and bridges by state highway engineers. The problem is not that we suffer from a poor public image, rather that we have no image whatsoever.

(Continued on Page 7)

## SEAO COMMITTEES

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### CONTINUING EDUCATION COMMITTEE

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#### Professional Development

Open

### MEMBERSHIP COMMITTEE

#### Newsletter

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## APRIL LUNCH MEETING ANNOUNCEMENT WEDNESDAY, APRIL 30, 2014

**Topic: Structural Engineering After a 2500-Year Earthquake—Lessons Learned While Working in Christchurch.** As structural engineers, we spend a lot of time thinking about earthquakes. We are experts on them and intrinsically understand how they will affect the buildings around us. But are we really prepared for the reality of engineering after a design-level event? In 2011, SEAW member and past Seattle Chapter board member Lara Simmons, SE, moved to New Zealand to work as a Senior Project engineer for Holmes Consulting Group. Lara led work at the Arts Centre, one of the most significant historic retrofit repair projects in Christchurch following the earthquakes. At this presentation, Lara will share her professional and personal experiences, and cover lessons learned while working in Christchurch following (and during) the Canterbury Earthquake Series. The presentation will focus on what the engineering community might not be adequately prepared for. It will be divided into the following topics:

- The key details of the events: How big was it, what were the key failures, building performance level, and damage.
- The engineer's role in the post-earthquake environment and how the city and that role evolved over time
- The public/engineering interface
- What we can do to be better prepared

#### **Speaker: Lara Simmons, S.E.**

Lara Simmons graduated from the University of Minnesota in 1999. She spent two years working in Minneapolis before transplanting to the Northwest immediately following the Nisqually Earthquake. She spent nine years working for Swenson Say Fagét on retrofit and new construction projects. In 2010, she moved to KPFF's Civil Structural department where she did early work on the Roosevelt light rail station and the Mercer west corridor project. In 2011, she moved to New Zealand to work for Holmes Consulting Group (HCG). Lara returned to Seattle last spring and has her own company, LRS Engineering, offering consulting engineering services to other engineering firms.



*This month's meeting is proudly sponsored by DJC Oregon & the International Code Council (ICC). Reference Page 6 for additional Information.*



**DJC Oregon**  
Oregon's Building Connections

#### **Location and Times:**

Portland City Grill, 30th Floor, U.S. Bancorp Tower, 111 SW 5th Avenue, Portland, OR  
*The MAX Light Rail System stops on SW 5th & 6th Avenues at SW Pine Street near the U.S. Bancorp Tower. Parking is in the lower level of the U.S. Bancorp Tower, entrance at SW 5th & SW Pine, or across the street in the parking garage tower at SW 4th & SW Pine. Parking is free for the first 2.5 hours with validation at Portland City Grill.*

**Check-in, Social & Lunch Buffet Opens:** 11:30 am

**Program:** 12:00 pm

**Cost: Lunch and Program**

\$32 — Prepaid Members, \$40 — Prepaid Non-Members

\$18 — Students

**Reservations:** Pre-registration is required. **You can register and pay online at [www.seao.org](http://www.seao.org) before noon, Friday, April 25.** You can also register with Jane Ellsworth via phone at (503)753-3075 or via Email: [jane@seao.org](mailto:jane@seao.org). Note: No-shows will be billed.

**PDH Credit:** One PDH has been recommended for this program.

**Videotaping:** This month's presentation will be videotaped and will be available for purchase to view for those who are not able to attend. The cost for obtaining access to the video is \$16 for members and \$22 for non-members. Please contact Jane Ellsworth at (503)753-3075 or via Email:



## YOUNG MEMBER FORUM ACTIVITIES

By: *Phil Davis & Seth Thomas*

**SEAO YMF PE and SE Library:** The YMF is currently compiling a library of materials for the PE and the SE exam. To make the testing process as easy as possible, the YMF is putting together a reference library of useful study materials for the PE and SE exam that members will be able to check out and borrow. In addition, the YMF will also be putting together a document helping explain the application process and providing helpful tips for taking the tests. Check the website soon for these documents. Please contact Phil Davis ([Phillip.davis@kpff.com](mailto:Phillip.davis@kpff.com)) or Seth Thomas ([setht@wrkengrs.com](mailto:setht@wrkengrs.com)) if you are interested in borrowing any of these materials.

**Already taken the PE or SE?** If anyone has already taken the PE and/or the SE and has leftover study materials they would like to donate please contact Phil Davis or Seth Thomas, and we will get the materials from you and add them to the library. Any donations are greatly appreciated.

### Upcoming YMF Events:

**Thursday, April 24<sup>th</sup> – Happy Hour** – The Thirsty Lion, 71 SW 2nd Avenue, Portland, OR—5:30 to 7:30 pm. Bring a friend, coworker, or both and enjoy a beer and some food while getting to know some other young professionals in our area.

**Thursday, May 1<sup>st</sup> – YMF Lunch Meeting** — KPFF Consulting Engineers office, 111 SW 5th Avenue, 26th Floor Training Room, 12:00 to 1:00 pm. Join us for our bi-monthly lunch meeting to discuss and plan future events and activities. Anyone interested is welcome to attend and find out more about the YMF and help plan our next activities. This is a great way to get involved.

**Thursday, May 15<sup>th</sup> – Happy Hour** – Location TBD — 5:30 to 7:30 pm. Bring a friend, coworker, or both and enjoy a beer and some food while getting to know some other young professionals in our area.

**YMF Website Info:** <http://www.seao.org/committees/youngmembers/>. Please visit our website for more information on YMF events and information.

## SNOW COMMITTEE NEWS

The new Oregon Snow Load Design Manual has been printed and is available for purchase. Visit the SEAO website at [www.seao.org/publications/snowload/](http://www.seao.org/publications/snowload/) for information on how to order or contact Jane Ellsworth at [jane@seao.org](mailto:jane@seao.org). The design ground snow load map is also available online on the SEAO website at <http://snowload.seao.org/lookup.html>. See Page 12 for a hard copy of the order form.



## NEW MEMBERS

Welcome to our newest members:

Jay Collins- Peterson Structural Engineers  
Collin Bundy – VLMK Consulting Engineers

## MEMBER OF THE MONTH MICHELLE CHAVEZ

*SEAO Representative for Engineers' Week*



The Board of Directors of the Structural Engineers Association of Oregon takes great pleasure in honoring and recognizing **Michelle Chavez** for all of her work in service of SEAO and the engineering community with the Member of the Month award for the month of April.

Michelle is the chair of SEAO's Engineers Week Committee and has done a tremendous amount of work completing this year's Engineers Week earlier this year. We appreciate her enthusiasm and dedication to SEAO and Engineers Week.

The last Engineers Week event celebrated its 50th annual event in Portland and had just over 600 attendants consisting of students, teachers, and local engineers. The event provides afternoon field trips, college/professional organization fair, seminars, problem-solving activities, and an evening banquet where local engineers are paired with high school students. Michelle has chaired this SEAO committee for the last two years after seeing a decline in SEAO's participation at the event. Michelle has been on the local overall planning committee for Engineers Week for the last 7 years and worked on developing the seminars and problem-solving activities for students. SEAO congratulates Michelle for this amazing effort!

Michelle attended Oregon State University and after graduating joined Miller Consulting Engineers where she has been for almost eight years. Michelle is now an Associate Engineer at Miller with her PE. She is currently studying for her SE exam. Outside the office, Michelle enjoys gardening and cooking. She loves dancing (in particular line dancing and salsa dancing) and playing Legos with her nephew.

The SEAO Board would like to thank Michelle for her dedicated service to our organization and the engineering community. CONGRATULATIONS Michelle for a well-deserved honor!

## NEWSLETTER COMMITTEE

**NEWSLETTER COMMITTEE CALL FOR VOLUNTEERS—** TO ASSIST WITH WRITING MEETING RECAPS: David Tarries is looking for assistance with writing meeting recaps. If you are interested in helping SEAO out with this service, please contact David Tarries ([david.tarries@kpff.com](mailto:david.tarries@kpff.com)) or JoMarie Farrell ([jomarie@equilibriumllc.com](mailto:jomarie@equilibriumllc.com)). You will earn PDH hours for writing the articles and will have the inside track on information presented at the meetings. There are approximately five to seven presentations a year. Even helping out for two or three would be greatly appreciated.

## FISH TRIP RAFFLE

For every SEAO event that you have attended this fiscal year, you have been entered a chance to win a trip to FishCamp for two days of fishing on the Rogue River in Southern Oregon. Fish-



Camp is located along the banks of one of the most scenic rivers in the State, just outside the town of Shady Cove. Accommodations, meals, gear and guide are all provided. No previous fishing experience is required. Your guide will teach you the proper methods for catching a fish on the Rogue. The drawing for the trip will occur during the June meeting. Attendance is not required, but we do encourage you to join us. This trip has been donated by Mike Bair of Weyerhaeuser (a fellow SEAO member and current SEAO Board Director). Attend the three remaining year's meetings

(April, May & June) and the spring seminar and have four more chances to win.



## SEISMIC EVENTS

ASCE Webinars ([www.asce.org](http://www.asce.org))

Tuesday, April 29, 2014, 8:30 – 10:00 AM PST. [Seismic Screening of Buildings Using ASCE 41-13.](#)

Tuesday, May 20, 2014, 8:30 – 10:00 AM PST. [Seismic Evaluation and Retrofit of Unreinforced Brick Masonry Buildings Using ASCE 41-13.](#)

## EDUCATIONAL OPPORTUNITIES

### Structural Masonry Design Seminar

The Northwest Concrete Masonry Association will be conducting a full-day seminar focusing on the design of reinforced concrete masonry construction. Both working stress and strength design methods of the new 2012 IBC and 2011 MSJC codes will be covered.

The seminar will include the explanation of new code provisions and step-by-step design examples of masonry building elements by manual and automated methods. It is aimed at practicing engineers who want to learn how to design masonry in a practical and efficient manner. It will be presented by two professional engineers at each location. The seminar will consist of 7.5 hours of continuing education. Certificates of attendance will be issued.

Seminar date and location:

**June 17, 2014 - Portland, OR**

Additional information can be obtained from the Northwest Concrete Masonry Association at 425.697.5298 or [www.nwcma.org](http://www.nwcma.org). See pages 15 and 16 for more information.

## APRIL MEETING SPONSOR ICC ANNOUNCES AVAILABILITY OF 2014 OREGON STRUCTURAL CODES

The International Code Council® (ICC®) has released new Structural Specialty, Mechanical Specialty, Energy Efficiency and Fire codes for the State of Oregon. Codes are effective July 1 but available for order now at [www.iccsafe.org/oregon](http://www.iccsafe.org/oregon) or by calling 1-800-786-4452.

Find even more great tools online, including the [2012 International Building Code Handbook](#), Building Code Basics, Significant Changes, Study Companions and more.

Get all your codes, amendments, and popular references at ICC today!



## APRIL MEETING SPONSOR

# DJC Oregon

Oregon's Building Connections

DJC provides subscribing professionals with the critical news, business leads, and analysis they need to succeed in Oregon's architecture, engineering, and construction industries. Focused coverage from project concept to completion, insightful analysis, plus bid and RFP leads, help DJC subscribers make successful connections to build their business. For more information about DJC (or to subscribe), please call 1-800-451-9998 or visit [DJCOregon.com](http://DJCOregon.com).

## PRESIDENT'S MESSAGE (CONT. FROM PAGE 2)

The reality is that structural engineering is a wonderful profession with the potential to be an inspiring and rewarding career. We have all felt that amazing feeling and incredible sense of achievement at the successful completion of a significant structure that we have nurtured from concept. Then there is that satisfaction of serving society. As President Herbert Hoover said “. . . That is the engineer's high privilege . . .”

We provide structural engineering services by exercising considerable professional judgment. We are continually challenged with ever increasing size and complexity of structures. With advanced materials, computing power and construction techniques, we are able to build taller, stronger and more unique, cutting edge structures than the world has ever seen. One can argue that structural engineering is not only challenging but is fun! And it does not have to be a poorly paid profession either. While fee pressure will never be eliminated, it can effectively be remedied by emphasizing value of our services.

What about the future? Under sustained pressure from automation and globalization, the role of the structural engineer is certainly not guaranteed. Will we sit quietly on the sidelines and accept whatever society crafts for us, including obsolescence, or will we actively work to steer the profession toward a thriving future? All structural engineers, especially the younger structural engineers, must step beyond the workplace. One good place to start would be active involvement in your SEA0!!

Talking about active involvement, we have an exciting presentation coming up for our monthly lunch meeting on April 30th. Lara Simmons, from Seattle, spent a couple of years in Christchurch, New Zealand, working for a local structural engineering firm in the aftermath of the 2011 earthquake that destroyed the city. Christchurch's building stock is very similar to that of Portland. She will be talking about the lessons learnt from the earthquake. She gave this presentation to members of Structural Engineers Association of Washington. The event was well received and I hope will be equally interesting to our membership. I hope to see you all at the lunch meeting.

In addition, in response to requests from membership, we have scheduled a full-day seminar on designing structures for wind loads using the provisions of IBC 2012. As most of you know, the wind provisions have undergone extensive revisions compared to the previous code. We got a taste of these changes in our last seminar in February. Now is the chance to dig deep and understand the changes in detail. Details on the seminar and how to register are included in the newsletter.

I look forward to seeing you there as well, and remember we are still entering names of those that attend the monthly meeting or the seminar for a chance to win a fishing trip in the fall this year. Do not miss out on the chance to win!

## EMPLOYMENT OPPORTUNITY

### STRUCTURAL ENGINEER, CORVALLIS, OREGON

Pillar Consulting Group, Inc. is a long established engineering firm located in beautiful Corvallis, OR. We provide civil and structural engineering services, as well as project management and facility design services throughout the Willamette Valley. Clients consist of architects, facility owners, and contractors.

We are looking for a well-qualified structural engineer with 2+ years of structural engineering experience. Experience with steel design and applicable building codes is a requirement. Experience with design in other materials as well as Revit is a plus. We offer healthcare including dental and vision as well as an IRA plan with company matching.

Please visit [www.pillar-inc.com](http://www.pillar-inc.com) for more information on our company. Please send resumes to [HR@pillar-inc.com](mailto:HR@pillar-inc.com).





## 1607.7 Heavy Vehicle Loads

**CHANGE TYPE:** Modification

**CHANGE SUMMARY:** Provisions relating to the design of structures that support heavy vehicle loads in excess of 10,000 pounds gross vehicle weight (GVW) have been updated.

**2012 CODE:**

~~**1607.6 Truck and Bus Garages.** Minimum live loads for garages having trucks or buses shall be as specified in Table 1607.6, but shall not be less than 50 psf (2.40 kN/m<sup>2</sup>), unless other loads are specifically justified and approved by the building official. Actual loads shall be used where they are greater than the loads specified in the table.~~



Heavy vehicle (Courtesy of Albuquerque Fire Department)

~~**1607.6.1 Truck and Bus Garage Live Load Application.** The concentrated load and uniform load shall be uniformly distributed over a 10-foot (3048 mm) width on a line normal to the centerline of the lane placed within a 12-foot-wide (3658 mm) lane. The loads shall be placed within their individual lanes so as to produce the maximum stress in each structural member. Single spans shall be designed for the uniform load in Table 1607.6 and one simultaneous concentrated load positioned to produce the maximum effect. Multiple spans shall be designed for the uniform load in Table 1607.6 on the spans and two simultaneous concentrated loads in two spans positioned to produce the maximum negative moment effect. Multiple span design loads, for other effects, shall be the same as for single spans.~~

~~**Table 1607.6 UNIFORM AND CONCENTRATED LOADS**~~

**1607.7 Heavy Vehicle Loads.** Floors and other surfaces that are intended to support vehicle loads greater than a 10,000-pound (44.5-kN) gross vehicle weight rating shall comply with Sections 1607.7.1 through 1607.7.5.

**1607.7.1 Loads.** Where any structure does not restrict access for vehicles that exceed a 10,000-pound gross vehicle weight rating, those portions of the structure subject to such loads shall be designed using the vehicular live loads, including consideration of impact and fatigue, in accordance with the codes and specifications required by the jurisdiction having authority for the design and construction of the roadways and bridges in the same location of the structure.

**1607.7.2 Fire Truck and Emergency Vehicles.** Where a structure, or portions of a structure, are accessed and loaded by fire department access vehicles and other similar emergency vehicles, the structure shall be designed for the greater of the following loads:

1. The actual operational loads, including outrigger reactions and contact areas of the vehicles as stipulated and approved by the Building Official, or
2. The live loading specified in Section 1607.7.1.



## EXCERPT FROM THE *SIGNIFICANT CHANGES TO THE 2012 IBC (CONT)*

**1607.7.3 Heavy Vehicle Garages.** Garages designed to accommodate vehicles that exceed a 10,000-pound gross vehicle weight rating shall be designed using the live loading specified by Section 1607.7.1. For garages the design for impact and fatigue is not required.

**Exception:** The vehicular live loads and load placement are allowed to be determined using the actual vehicle weights for the vehicles allowed onto the garage floors, provided such loads and placement are based on rational engineering principles and are approved by the building official, but shall not be less than 50 psf (240 kN/m<sup>2</sup>). This live load shall not be reduced.

**1607.7.4 Forklifts and Movable Equipment.** Where a structure is intended to have forklifts or other movable equipment present, the structure shall be designed for the total vehicle or equipment load and the individual wheel loads for the anticipated vehicles as specified by the owner of the facility. These loads shall be posted per Section 1607.7.5.

**1607.7.4.1 Impact and Fatigue.** Impact loads and fatigue loading shall be considered in the design of the supporting structure. For the purposes of design, the vehicle and wheel loads shall be increased by 30 percent to account for impact.

**1607.7.5 Posting.** The maximum weight of the vehicles allowed into or on a garage or other structure shall be posted by the owner in accordance with Section 106.1.

**CHANGE SIGNIFICANCE:** Structures intended to support heavy vehicles loads in excess of 10,000 pounds GVW must now be designed in accordance with the same specifications required by the jurisdiction for the design of roadways and bridges. The new requirements specifically apply to fire truck and emergency vehicles, heavy vehicle parking garages, forklifts, and movable equipment. The owner is required to post the maximum weight of the vehicles allowed in a garage or other structure in accordance with Section 106.1.

*This updated code provision is from the Significant Changes to the International Building Code, 2012 edition, authored by John Henry, PE, Doug Thornburg, AIA and Jay Woodward. The book is available at [iccsafe.org/store](http://iccsafe.org/store). Use ID # 7024S12.*



# Wind Design Using the 2012 IBC and ASCE 7-10 – Seminar

**Presented by the Structural Engineers Association of Oregon (SEAO)**

**Date:** **Tuesday, May 13, 2014 – 8:30 AM to 4:30 PM**  
Registration Opens at 7:30 AM (Lunch Included)

**Cost:** \$175 SEAO Member (Includes Class Notes) \$225 Non-member  
\$25 Late Fee (if registration received after May 6, 2014)  
Students \$55 (Includes Notes) – Must show current student ID  
No refunds after 12:00 noon Thursday, May 6, 2014

Register early; Maximum 120 people

**Program to be Taped  
by Limelight Video**

**Location:** **Sheraton Portland Airport  
Hotel and Conference Center**  
8235 NE Airport Way  
Portland, Oregon  
(503) 249-7606

**Continuing Education:** **SEAO has recommended this seminar for 6 PDHs  
(4 PDHs for Viewing Video)**

**Speakers:** **Ed Huston, PE, SE, Principal, Smith & Huston** Graduate of the  
University of Washington, Past President of NCSEA Board of Directors,  
Chair of the Code Advisory Committee and Co-author of the SEAW  
Commentary on Wind Code Provisions

This seminar will provide an overview of the wind provisions in the IBC and ASCE 7-10, including the Alternate All-Heights provisions. This method is a much faster, simpler method for wind design of typical buildings and has been published in the IBC. Trial designs of this method indicate that it improves accuracy and greatly reduces the time it takes to calculate the wind forces. Recent trial designs of wind provisions have shown that practicing engineers have great difficulty applying the lateral load provisions of ASCE 7 and that they often get unconservative answers. A detailed presentation of code wind requirements will update attendees on this complex loading protocol and explain the reasons and history of the development of many of the provisions. The seminar will discuss how wind flows around a building and how the flow of wind is taken into account by ASCE 7. A detailed example of lateral loads on an actual building will illustrate the use of the provisions. This material has been developed by practicing structural engineers for practicing structural engineers. The seminar is intended for both recent graduates and experienced practicing engineers.

**Speaker is from SEAW Questions: Andy Stember (503) 657-9800**

# 2012 IBC & ASCE 7-10 Wind Design Seminar

## Registration Form

Register Online at [www.seao.org](http://www.seao.org) or email to Jane at [jane@seao.org](mailto:jane@seao.org)

Send to: SEAO  
PO Box 2958  
Vancouver, WA 98668  
(503) 753-3075

Make Checks Payable to:  
SEAO

Firm Name: \_\_\_\_\_

Firm Address: \_\_\_\_\_

Phone \_\_\_\_\_

Name of Attendee(s) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# of Attendee(s) \_\_\_\_\_ @ \$175.00 / each = \$ \_\_\_\_\_  
(Nonmember \$225.00)

# of Late Fees \_\_\_\_\_ @ \$25.00 / each = \$ \_\_\_\_\_

# of Students \_\_\_\_\_ @ \$55.00 / each = \$ \_\_\_\_\_

# of Videos \_\_\_\_\_ @ \$150.00 / each = \$ \_\_\_\_\_

**Total Enclosed =** \$ \_\_\_\_\_

### Credit Card Info

Name (as appears on card) \_\_\_\_\_

Credit Card # \_\_\_\_\_

exp \_\_\_\_\_ 3-digit code \_\_\_\_\_ billing zip code \_\_\_\_\_

Cardholder Signature \_\_\_\_\_

Email address \_\_\_\_\_

If mailed or emailed registration will send email confirmation



# STRUCTURAL ENGINEERS ASSOCIATION OF OREGON

9220 SW Barbur Blvd #119, PMB #336 PORTLAND, OREGON 97219  
503.753.3075  
www.seao.org E-mail: jane@seao.org

## SNOW LOAD MANUAL ORDER FORM

SEAO Members                      SEAO Non-Members

**Snow Load Manual**                      **\$70.00**                      **\$85**

---

Order Form: mail: SEAO, 9220 SW Barbur Blvd #119, PMB #336, Portland, OR 97219  
email: jane@seao.org

# \_\_\_\_\_ Snow Load Manual

Company Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ St: \_\_\_ Zip: \_\_\_\_\_

Mastercard/Visa/AmExp

Name on card: \_\_\_\_\_

Credit Card #: \_\_\_\_\_

Exp Date: \_\_\_\_\_ Security code \_\_\_\_\_

Billing Address of Card: \_\_\_\_\_ Billing Zip Code: \_\_\_\_\_

Cardholder Signature: \_\_\_\_\_

Email Address: \_\_\_\_\_

(for questions about order)



# 2014 SEAO / OACI GOLF TOURNAMENT



**\$20,000  
HOLE IN ONE  
PRIZE!**



**JULY 23<sup>RD</sup>, 2014**  
**Pumpkin Ridge Golf Club**  
**1:00 PM - SHOTGUN START!**

## EVENT DETAILS:

The S.E.A.O. and O.A.C.I. have joined together to hold another day of golf, fun and prizes for 2014! The biggest change this year? Location. We will be heading to the beautiful, **award winning course and facilities of the Pumpkin Ridge Golf Club!**

Only 20 miles West of Portland, OR, the Pumpkin Ridge Golf Club contains two championship courses, both beautifully etched into the landscape by renowned golf course architect Bob Cupp. The course we'll be playing on, **Ghost Creek, is a par-71, 6,839-yard classic course**, carefully carved through the natural and beautiful Portland wetlands, framed by lush stands of trees, and with dramatic mountain vistas.

We will have a shotgun start at 1:00PM, allowing us to all finish at the same time to share stories of the day's glory and despair, along with dinner, beverage and many prizes. We hope that you will come join us and support both organizations.

The course also offers a 17-acre practice facility to hone your skills prior to the tournament so come early. Power carts and range balls are included in the golf fee.

## WHEN:

DATE: Wednesday, July 23<sup>rd</sup>  
SHOTGUN START: 1:00PM  
SOCIAL HOUR: 6:00PM  
DINNER & AWARDS: 6:30-7:30PM

## WHERE:

**PUMPKIN RIDGE GOLF COURSE**  
12930 NW Old Pumpkin Ridge Rd  
North Plains, OR 97133  
Phone: (503) 647-4747

## TOURNAMENT:

4-Person Scrambles

## DINNER:

Dinner Will Be Served

## CONTACT:

**Jane Ellsworth**  
ph: (503) 753-3075  
em: jane@seao.org

## FEES:

**Golf & Dinner: \$110/person**  
(Includes golf cart & driving range)  
**SEAO Young Members Forum: \$85**  
**5' String \$20**  
**Mulligan: \$5/ea**  
**String & 5 Mulligans: \$35**

**Don't forget to bring money for the raffle prizes and string! This year's raffle prizes will be:**  
→ 42" TV  
→ iPad Mini  
→ Nike Wedge  
→ Ocean Salmon Fishing Trip for 2  
→ Ocean Halibut Fishing Trip for 2  
→ Power Washer  
→ Gift Cards  
→ Much more!

**Appropriate "Country Club" attire is required:**  
→ Collared Shirts  
→ No Denim  
→ Shorts must have a 6" inseam  
→ Soft spikes only

**NO REFUNDS FOR CANCELLATIONS AFTER JUNE 27TH**

## PLEASE RETURN THIS ENTRY FORM BY JUNE 27<sup>th</sup> TO:

### S.E.A.O.

9220 SW Barbur Blvd. #119  
PMB #336  
Portland, OR 97219  
(503) 753-3075 Phone  
(503) 214-8142 Fax

Check Enclosed

VISA /  MasterCard /  AMEX Accepted

Name On Card: \_\_\_\_\_ Card #: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Contact Number: \_\_\_\_\_ Billing Zip Code: \_\_\_\_\_ 3-Digit Code On Back Of Card: \_\_\_\_\_

Player Names	Green Fees	Membership	Payment Enclosed
	<input type="checkbox"/> Golf & Dinner - \$110	<input type="checkbox"/> SEAO <input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> Golf & Dinner - \$110	<input type="checkbox"/> SEAO <input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> Golf & Dinner - \$110	<input type="checkbox"/> SEAO <input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> Golf & Dinner - \$110	<input type="checkbox"/> SEAO <input type="checkbox"/> OACI	\$ _____
<b>String &amp; Mulligan Add-Ons (1 Mulligan = 1 Shot Per Person)</b>			
<input type="checkbox"/> 5' String - \$20 (Limit 5' Per Foursome) _____ Qty			\$ _____
<input type="checkbox"/> Mulligans - \$5 ea (Limit 5 Per Foursome) _____ Qty			
<input type="checkbox"/> 5' String & 5 Mulligans - \$35 (Limit 1 Per Foursome) _____ Qty			

Total \$ \_\_\_\_\_

# 2014 SEAO / OACI GOLF TOURNAMENT



**JULY 23<sup>RD</sup>, 2014**  
**Pumpkin Ridge Golf Club**

## Contact Info:

Jane Ellsworth  
(503) 753-3075

[oaci@comcast.net](mailto:oaci@comcast.net)

## Donation / Hole Sponsor Form

### Sponsor Information:

Company Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

### HOLE SPONSORSHIP

**GOLD** - \$200 for flag at the hole and recognition on banner at dinner.  
*Hole Preference* \_\_\_\_\_

**SILVER** - \$150 for tee sign stationed driving range before golf and recognition on banner at dinner.

**BRONZE** - \$125 recognition on banner at dinner.

### RAFFLE PRIZES

42" TV | \$600

iPad Mini | \$500

Gift Cards | \$50 & \$100

Ocean Salmon Fishing Trip for 2 | \$250

Ocean Halibut Fishing Trip for 2 | \$400

El Gaucho Gift Card | \$150

Ringside Restaurant | \$150

Nike Wedge | \$100

Power Washer | \$500

### SPECIAL SPONSORSHIP

**LD/KP/Long Putt Hole Sponsor**  
**\$150**  
*Hole Preference* \_\_\_\_\_

**On Course Drink Refreshment Sponsor**  
**\$375**  
*(Host drink cart for one beverage per participant to be redeemed during play)*

**19<sup>th</sup> Hole Sponsor**  
**\$250**  
*(Host keg of Micro-brew)*

**Golf Cart Sponsor**  
**\$200**  
*(Host the golf carts with a sign in each cart with your company name)*

**Scorecard Sponsor**  
**\$200**  
*(Host the scorecards with the name of your company on each card)*

### Please Return This Form A.S.A.P. to:

S.E.A.O.

9220 SW Barbur Blvd., Suite #119, PMB #336  
Portland, OR 97219

Fax: (503) 214-8142



## Structural Masonry Design Seminar

### Who Should Attend?

You should attend if you are involved in the design, construction or regulation of masonry structures. You will receive the latest information from the experts on how to use and interpret the masonry building code.

### About the Seminar

This full-day seminar will focus on the new requirements and revised provisions of 2012 IBC Chapter 21 and the referenced masonry material standard TMS 402/ACI 530/ASCE 5. Both working stress and strength design of reinforced concrete masonry will be covered. Masonry building elements will be designed per the new code by manual and automated methods. The seminar material is designed to provide the engineer and code user with practical design knowledge.

### Seminar Topics:

- Masonry Materials & Code Overview
- Beam and Column Design
- Anchor Bolts
- Walls Out-of-Plane
- Slender Wall Design
- Shear Wall Design
- Direct Design Method
- Crack Control
- Quality Assurance
- Constructability

*And including explanation of code provisions and step-by-step design examples*

### Seminar Times:

Registration begins at 7:30 a.m. The seminar will be presented from 8:00 a.m. to 4:30 p.m. Morning coffee service, lunch, and afternoon break refreshments are provided.

### Seminar Materials:

All participants will receive a seminar workbook, which includes a bound set of course notes and masonry technical bulletins.

Other design reference material and masonry design software will be available for purchase at special seminar prices.

### Continuing Education:

Certificates of attendance listing contact hours that can be used for continuing education PDH units will be issued. The seminar will be registered with the AIA.

### Instructors/Dates:

Ray Miller, S.E.	Miller Consulting Engineers, Portland, OR	March 13th Spokane, WA/June 17th Portland, OR
Jeff Mitchell, S.E.	Coffman Engineers, Spokane, WA	March 13th Spokane, WA
Ed Huston, S.E.	Smith and Huston Consulting Engineers, Seattle, WA	March 31st Bellevue, WA
Jill Shuttleworth, S.E.	Meier Architecture Engineering, Kennewick, WA	March 31st Bellevue, WA
Steve Hawk, S.E.	Coffman Engineers, Hood River, OR	June 17th Portland, OR (NEW DATE)

### Sponsors:



Northwest  
Concrete Masonry  
Association



Structural Engineers  
Association  
Of Washington



Structural Engineers  
Association  
Of Oregon



Portland Cement  
Association



Masonry Institute  
of Washington



Masonry Industry  
Promotion  
Group



Masonry Institute  
of Oregon

# Four Easy Ways to Enroll



**Internet:**

<http://www.nwcma.org/seminar>



**Phone:**

425.697.5298  
425.828.0433



**Mail to:**

NWCMA  
16300 Mill Creek Blvd, #208-C  
Mill Creek, WA 98012



**Fax:**

425.697.2679

## Seminar Registration Please check seminar location and date

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Spokane, WA - March 13, 2014<br>Instructors: Ray Miller, S.E.<br>Jeff Mitchell, S.E.<br><i>Register by Feb. 27, 2014</i> | <input type="checkbox"/> Bellevue, WA - March 31, 2014<br>Instructors: Ed Huston, S.E.<br>Jill Shuttleworth, S.E.<br><i>Register by March 17, 2014</i> | <input type="checkbox"/> Portland, OR - June 17, 2014<br>Instructors: Ray Miller, S.E.<br>Steve Hawk, S.E.<br><i>Register by June 3, 2014</i> |
|---|--|---|

## Fees and Sign-up

Space is limited, please register early! You may register by mail, fax, web, or phone. Registration will not be confirmed until registration fee is received. **Please complete one application per person.**

### Early Registration Fee - save by registering 14 days before your seminar

\$215.00 Early Registration Fee (\$195.00 Additional participants from same office location)

**Add \$35.00 to above fees for registrations received less than 14 days in advance.**

- Check or Money Order (payable to Northwest Concrete Masonry Association)
- Bill Me (copy of purchase order must be provided)
- Credit Card (check one)    Visa    Mastercard    Discover    American Express

Card Number \_\_\_\_\_ Name on Card \_\_\_\_\_

Billing Address: \_\_\_\_\_

Exp. Date \_\_\_\_\_ CCV # (last 3 digits on back of card) \_\_\_\_\_

## Masonry Design Aids Will be distributed at seminar

- |   |   |
|---|---|
| <input type="checkbox"/> \$100.00 2011 MSJC Masonry Code (TMS 402/ACI 530/ASCE 5) | <input type="checkbox"/> \$90.00 Reinforced Masonry Engineering Handbook (Amrhein-2012) |
| <input type="checkbox"/> \$110.00 Masonry Designers Guide - 2012 Code             | <input type="checkbox"/> \$45.00 Direct Design Handbook                                 |

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Company: \_\_\_\_\_

Email Address: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Registration Fee	\$	_____
Design Aids	\$	_____
Sales Tax	\$	_____
<i>Add 9.6% for Design Aids in WA only.</i>		
Total Due	\$	_____

## Refund Policy

*Substitutions are accepted at any time. If you notify us that you are unable to attend 7 or more business days before the seminar we will refund your registration fee. Cancellation requests received between 4-7 business days before the seminar will be subject to a \$75.00 administrative fee. No refunds will be given for cancellations received 3 business days or less prior to the seminar or for "no shows".*

## Confirmation

*You will receive confirmation of your registration, including the date, location, and address of your seminar. Please register early. If insufficient enrollment necessitates canceling the seminar, all paid attendees will receive registration refunds.*