



Structural Engineers Association of Idaho

P.O. Box 8733, Boise, ID 83707

www.seaidaho.org

SEAI Mission Statement:

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

BOARD OF DIRECTORS & AND COMMITTEE CHAIRS

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SEAI MEETING — OCT 20TH — THURSDAY

Please **RSVP** to **Brian Sielaff** at brian.sielaff@tamarackgrove.com by **noon** the **Monday** before the meeting with your **entrée selection**. We will turn no one away at the door, but if we do not receive your RSVP on time we cannot guarantee that there will be any food for you to eat! Please note that, regardless of whether you eat or not, you will still need to pay meeting fees, so get those RSVP's in! **Also, if you RSVP and decided not to show, Murphy's will still charge SEAI for your lunch and SEAI will politely pass this charge on to you.**



Meeting Location:

Murphy's Seafood & Steakhouse
1555 Broadway Ave.
Boise, ID 83706
www.primedine.com

Food Entrées:

- 1) Chicken Caesar Salad
- 2) Whiskey Chicken
- 3) Beef Chop Burger
- 4) Chicken Stir-Fry w/ Noodles

Meeting Focus:

Heavy Timber
Rehabilitation, Inspection,
Analysis, & Repair

Speaker:

Paul Gilham, P.E., S.E., Chief
Engineer, Western Wood
Structures, Inc.

Schedule:

Social:	11:45 am – 12:00 pm
Lunch:	12:00 pm – 1:00 pm
Program:	12:00 pm – 1:00 pm

Cost Per Person:

Member:	\$15
Non-Member:	\$20
Full Time Student:	\$10

GET INVOLVED WITH YOUR NEWSLETTER!

The SEAI Newsletter is a monthly publication. Newsletter submissions are encouraged from the SEAI community. If you have a suggestion, feature, link, product review or anything else that may be of interest to the newsletter readers, please email them to our newsletter editor, David Sansotta, at david.sansotta@core-engineering.net

Announcements:

SEAI LUNCHEON PRESENTATION

*Paul Gilham, P.E., S.E., Chief Engineer
Western Wood Structures, Inc.*

Paul Gilham is the Chief Engineer at Western Wood Structures, Inc., and will be presenting on the rehabilitation of timber structures. The following is the outline for his presentation:

1. Common reasons for reinforcing timber members.
 - a. Changes in code prescribed loads
 - b. Changes in allowable stress
 - c. Change in end use of structure
 - d. Reduced cross section
 - e. Damaged structures
2. Truss Rehabilitation: Parrish Middle
 - a. Changes to snow load criteria
 - b. Reduction of allowable stresses
 - c. Limitations of classical truss analysis
 - d. Repair methods
 - i. Remove/replace broken members
 - ii. Stiffen compression members
 - iii. Post-tension tension members
 - e. EOR/Specialty contractor teamwork
3. Beam Rehabilitation: Reynolds High
 - a. Reduction of allowable stress
 - i. No tension laminations before 1970
 - ii. Change from Cf to Cv
 - iii. Comparison of 1966 and 2008 beam design
 - b. Use of cable post-tensioning
 - c. Reinforce beams for shear failures
 - i. Common causes of shear failures
 - ii. Design of shear dowels

- iii. Installation of shear dowels
- d. Increasing member stiffness
 - i. Adding laminations
 1. Shored vs. un-shored construction
 - ii. Adding side members
 - iii. Limitations to adding steel plates or sections

STRUCTURAL MASONRY DESIGN WEBINAR

The Northwest Concrete Masonry Association will be conducting a three-session webinar focusing on the design of reinforced concrete masonry construction. Both working stress and strength design methods of the 2009 IBC and 2008 MSJC codes will be covered.

The updated webinar will cover 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. Continuing education credit (up to 7.5 PDH) can be earned. Certificates of attendance will be issued.

The webinar dates are:

- November 29th
- December 6th
- December 8th

Sessions will run from 4:00 6:00 pm (Pacific).

Additional information can be obtained from the Northwest Concrete Masonry Association at 425.697.5298 or www.nwcma.org.

SEAI BOARD MEETING

The SEAI board meetings are held at 11:00 am, right before the SEAI luncheon. The meeting agenda is attached on page 6 and all members are welcome to attend and participate, or just listen in if they are interested. The meeting is public so we hope to see you there!

A WORD FROM THE SEAI BOARD

By: Brian Garner, SEAI Vice President

Has anyone had to explain to a contractor or building owner why your plans for a 2x6 wood wall specify sill plate anchor bolts at 16" on center with 5" x 5" plate washers? I have. I also agonized over these anchors during design. In this article I would like to share what I have learned though this experience.

The 2009 IBC now references the AF&PA SDPWS (Special Design Provision for Wind and Seismic: I hate acronyms.) This document added many new requirements for wood buildings including the anchors I mentioned above. These are required anytime there is combined wind uplift and shear forces or uplift only forces.

In addition to 16" on center sill plate anchors SDPWS includes requirements that usually add multiple rows of edge nailing into top and bottom wall plates and added field nailing or sheathing splices at horizontal sheathing joints. See Section 4.4 of the SDPWS.

During the design and detailing of my first building using these requirements I knew I had

some explaining to do when the contractor and building owner each would see these things added. So first I wanted to make sure I hadn't missed something. After asking around and carefully re-reading the code I concluded that my first interpretation of the code was correct.

Second, I examined our standard construction details to see if the new code requirements were addressing a real problem. Where we may not see damage to wood buildings in this area due to wind uplift, the new requirements do address items such as cross-grain bending at sill plate anchors, cross-grain tension at sheathing splices, and induced moments at the top of the wall when hurricane ties are not installed on the sheathing side.

Also, I found other publications that address these new requirements. See page 16 in the June 2011 issue of *Structure* magazine for an article titled "Use of Wood Structural Panels to Resist Combined Shear and Uplift from Wind" and page 40 in the August 2011 issue of *Structural Engineer* magazine for an article titled "Anchorage of Wood Shear Walls to Concrete for Tension and Shear".

After detailing several buildings according to SDPWS and explaining myself to individuals who thought I had lost my mind, I felt beat up and started to dread the next time this happened.

Fortunately I later had the privilege of attending David Swanson's presentation

“Earthquake Reconnaissance, Benefits to Our Region” at the 2011 SEA NW conference in Spokane, WA.

In his presentation, David showed many instances of recent earthquake destruction in Haiti, Chile, New Zealand, and Japan. I was struck by the differences in performance of buildings that were designed and built in accordance with good codes as in Japan compared to buildings not so constructed as in Haiti.

Mr. Swanson’s presentation made it readily apparent that we *are* making buildings safer and therefore protecting lives with our building codes. David said, “We need to stick to our designs,” when he mentioned how contractors or others can make you feel if you have to defend things like more steel in a connection, or in my case more sill plate anchors than someone is used to.

Now, I am more confident when I design a building using code requirements such as SDPWS and I will also be more confident when I explain my “madness” to a contractor or building owner.

LET YOUR MEMBERSHIP WORK FOR YOU!

We are looking for more speakers for our SEAI luncheon meetings. If you have any suggestions for future speakers, items of discussion or anything else that you think would be beneficial to the structural engineers attending SEAI meetings, please send your comments and ideas to Brian Sielaff at brian.sielaff@tamarackgrove.com.

STRUCTURES MAGAZINE!

As part of your SEAI membership you should be receiving **STRUCTURE® magazine** in the mail every month. If you are not, please verify that you have paid your SEAI dues this year and then send your name and mailing address to Sarah McClendon at sarah@mcclendonengineering.com



EVENT CALENDAR

Oct. 20, 2011	Paul Gilham, Heavy Timber Rehabilitation
Oct. 25, 2011	Tim W. Mays, Out-of-Plane Wall Anchorage: Fall Seminar
Nov. 17, 2011	Alan Brown, Nail Fasteners

PAST EVENTS

Sept. 15, 2011	Tom Young, Concrete Masonry Construction
May 19, 2011	Cliff Paul: PK Associates; high rise building/tower design
May 6, 2011	Concrete Floor Deflection ASCE Web Seminar
Mar. 17, 2011	S.K. Ghosh/Susan Dowty: S.K. Ghosh Assoc. Inc: 2009 IBC changes
Feb. 17, 2011	Ian, Romain: Chance Helical Piers, Rocky Mnt. Steel Fdns.
Jan. 20, 2011	Jeremy Kroll: The Hartwell Corporation; contracts, insurance, and risk
Nov. 18, 2010	Sunup Mathew: Interstate Brick Company; structural brick
Oct. 21, 2010	Stoltz Marketing Group, marketing your company
Sept. 16, 2010	Mark Gordon, RedBuilt

WISH TO PLACE AN AD IN THE NEWSLETTER?

If so, please contact our Treasurer, Patrick Bird, at patrick@riverstonesc.com or at 343-2092.

Monthly Rates for Advertising

Standard Business Card.....	\$50
Quarter Page.....	\$90
Half Page.....	\$120
Full Page.....	\$150

10% discount for ads running multiple months



STRUCTURAL ENGINEERS ASSOCIATION OF IDAHO

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Boise, ID 83707

Board Meeting Agenda

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SEER Committee Chair

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342-2919

October 20, 2011 – Murphy's

11:00 am Meeting Starts

President's Report

- We invited David Bennion & John Elle from Idaho PE&PLS committee to discuss Structural Engineer licensing.

Vice President's Report

-

Treasurer's Report

- Status of Chase Account; signers.

Director's Report (1)

-

Director's Report (2)

-

Committee Chair Reports

- QBS Chair
 - xx
- Program/Seminar Chair
 - October seminar status
 - Ideas for spring seminar
- Newsletter Editor
 - xx
- Website Editor
 - Renewal of website Domain
- Membership Chair
 - xx
- Bldg Code Chair
 - xx
- Technical and Education Chair
 - xx
- SEER Committee Chair
 -
- NCSEA/NWSEA delegate

Adjourn

STRUCTURAL ENGINEERING LINKS

FEATURED LINK: *Pisa Expert says Big Ben Leaning*
http://www.nzherald.co.nz/world/news/article.cfm?c_id=2&objectid=10758005

Applied Technology Council - <http://www.atcouncil.org>

Idaho Board of Professional Engineers and Land Surveyors - <http://www2.state.id.us/ipels/>

City of Boise Sp. Insp. Checklist – http://www.cityofboise.org/pds/applications/Building/Special_Inspections.pdf

Design Build Magazine (McGraw-Hill) - <http://www.designbuildmag.com/>

Engineering & (Bi-Weekly Newsletter) - <http://www.engineeringand.com>

Engineering Forum - <http://www.eng-tips.com/>

Structural Engineers Association International - <http://www.seaint.org/>

Structural Engineers Association of Utah - <http://www.seau.org/>

Structural Engineers Association of Washington - <http://www.seaw.org/>

Structural Engineers of Oregon - <http://www.seao.org/main.htm>

Structural Engineers of Idaho - <http://www.seaidaho.org>

Design Load Guidelines – <http://www.idabo.org/loads.htm>

