



CONNECTIONS

April 2012 Volume 12 Issue 8

Newsletter of the
Structural Engineers
Association of Oregon

SEAO

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Upcoming SEAO Meetings and Events:

April 25, 2012: SEAO Dinner Meeting

Speaker: Dr. W. Gene Corley, PE. Senior Vice President, CTL Group

Topic: Forensic Structural Investigations of the Murrah Building Bombing & 9/11 WTC Collapse.

Location: Governor Hotel, Portland / 5:30 pm check-in & social, 6:15 pm dinner; 6:45 pm program.

Videocast Locations: Corvallis & Eugene

Sponsors: Carlson Testing, Inc. & In Line Commercial Construction, Inc.

See page 3 for more information.

May 30, 2012: SEAO Dinner Meeting

Speakers: Civil Engineering Department Chair Representatives from OSU, PSU, UofP and OIT

Topic: Today's Civil Engineering Education in Oregon

Location: Governor Hotel, Portland / 5:30 pm check-in & social, 6:15 pm dinner; 6:45 pm program.

Sponsors: Available for sponsorship.

July 18, 2012: SEAO/OACI Annual Golf Tournament

Location/Time: Stone Creek Golf Club, Oregon City/1:30 pm, shotgun start

See flyer on pages 15 and 16 for sponsorship and sign up info.

July 26 – 28, 2012: SEA NW Conference

Location: Kah-Nee-Ta Resort & Casino, Warm Springs, OR.

Theme: Shake It Up Again: Gambling with Seismic Vulnerability

See flyer on page 10. Be sure to check the SEAO website in coming weeks for the latest information.

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SEND IN YOUR QUESTIONS NOW FOR OUR MAY MEETING

We are excited for our May 30th dinner meeting, which will include a panel of representatives from the civil engineering departments of Portland State University, University of Portland, Oregon State University, and Oregon Institute of Technology to discuss the current status of structural engineering education in the State of Oregon. Each panel member will briefly update us on their school's program, then the panel will respond to questions from the SEAO membership. To have your question or suggestion presented to the panel, please email your question or suggestion to brandon@ericksonstructural.com as soon as possible. Please include "SEAO May meeting" in the subject line.



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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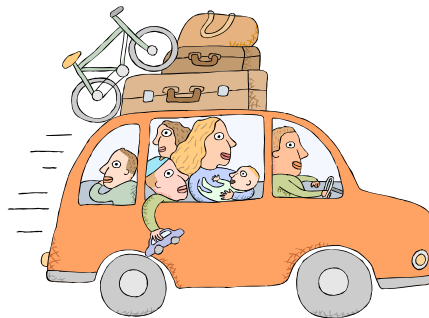
PRESIDENT'S MESSAGE: FIRST IMPRESSIONS

By: Ed Quesenberry, P.E., S.E.



My daughter has reached that age where we are starting to look at colleges to try to find one that appeals both to her interests and to our checkbook. We recently took a trip on which we visited three universities to take campus tours. Prior to embarking on this journey, my wife and I advised her to keep an open mind when touring each of the campuses, and to reserve comparisons, judgments or decisions until she had all the information gathered. We were confident that our imparting of this nugget of top notch parental advice would ensure a smooth rational analysis of options, thereby leading to the right decision.

We executed our plan wonderfully on the first campus visit, taking diligent notes and making observations, all perfectly impartial and without bias. Our plan was tested a bit on the second campus, as we found it difficult not to compare it with the one we had visited days before. Nonetheless, we reserved from making judgments and were feeling pretty good about ourselves and our uncanny ability to remain open minded.



The wheels totally came off of our plan at the third campus. As with most campus tours, the prospective coeds and nervous parents gathered in a conference room for a presentation on the campus, curriculum, and oh-so-enjoyable tuition and expense matrices. This particular introduction was given by a representative of the Admissions Office, a perky 20-something woman who introduced herself as a proud graduate of the university and one of the lucky ones to still be on campus working for the university. Every sentence after the first one was riddled with verbal pauses, her favorite of

which was "um". My wife was so impressed with the frequency of her use of the word "um" that she started a tally. This talented college graduate managed to fit in over 300 "ums" in her 15 minute presentation. Needless to say, we found her claim that the university held a "...um, top 100 ranking in, um, the nation..." hard to believe. All of our attempts to remain neutral, non-judgmental and open minded went down in, um, flames. As we exited the conference room for the walking tour of the campus, I whispered to my daughter, "There is no way I am paying for you to go to this school". To my surprise, I didn't get the typical teenage eye roll from her; she agreed that the horrible presentation had soured the experience.

This whole incident reminded me of the importance of first impressions and the lasting impact they can have on our lives. If we all look back at our lives, I think you will agree that most of our perceptions of life were formed to some extent by a first impression. These initial impressions stick with us, and it usually takes a dramatic event or shift in thought to change our perceptions once they are established. I am still looking for the name of the Structural Engineer that left that "I've been building buildings for 30 years..." contractor with a bad first impression. It doesn't matter how well detailed and thought out your design is, this particular contractor is convinced that you are dumber than the hammer in his tool belt, and nothing you do or say is going to change that perception.

So, what can you take from this message? The knowledge that the impression each one of us leaves on the clients, contractors and owners we deal with can have a lasting impact on our profession as a whole. While it may be difficult to deal with unending design changes, difficult personalities, or unrealistic project schedules, we have to be diligent about preserving the integrity and reputation of our profession. So, the next time someone cold calls you saying they are looking for an engineer's stamp, take a breath, and say, "Um... I would love to help you, but there is, um, a little more to it than that."

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APRIL DINNER MEETING ANNOUNCEMENT

Sponsored by: Carlson Testing, Inc. & In Line Commercial Construction, Inc.

Wednesday, April 25, 2012

Topic: Forensic Structural Investigations of the Murrah Building Bombing and 9/11 WTC Collapse

Speaker: Dr. W. Gene Corley



Our speaker this month is Dr. W. Gene Corley, who will address the structural investigations following the Oklahoma City bombing and 9/11 terror attacks. Mr. Corley is currently Senior Vice President of Construction Technology Laboratories, Inc., in Skokie, Illinois. He received his B.S., M.S., and Ph.D. degrees in Structural Engineering from the University of Illinois in Urbana. Dr. Corley is an active member of the National Academy of Engineering, an Honorary Member of ASCE, and member of several other engineering societies. He is Past President of the National Council of Examiners for Engineers and Land Surveyors, Past President of the National Council of Structural Engineers Associations, and Past Chairman of the ASCE Council on Forensic Engineering. He has authored over a hundred eighty articles and books dealing with the subject of structural design and behavior.

For more than four decades, Dr. Corley has served as a researcher and consultant for building and bridge construction. His expertise includes material behavior; fatigue of structural concrete; and earthquake and blast effects on buildings and bridges.

Dr. Corley was Principal Investigator for the ASCE and FEMA on the investigation of the Oklahoma City Bombing and has done investigations of earthquake damage in Central America, South America, Japan, and California. He is a Licensed Structural Engineer in Illinois and holds Professional Engineer licenses in 15 states.

Following the September 11, 2001 attack, Dr. Corley was asked by ASCE to lead teams to do Building Performance Studies of both the World Trade Center and the Pentagon. ASCE and FEMA sponsored the WTC study. His team produced FEMA Report 403 (available free of charge from FEMA). The report noted many items that needed further research.

Location and Times:

Governor Hotel, 2nd Floor
614 SW 11th Ave, Portland OR

The MAX Light Rail System stops just a block away from the hotel (The Galleria stop) and Portland's Streetcar stops right outside the hotel. Smart Park is located at SW 10th and Yamhill about two blocks from the hotel.

Check-in: 5:30 pm

Dinner: 6:15 pm

Program: 6:45 pm

Cost: Dinner & Program

\$32 – Pre-paid Members
\$40 – Pre-paid Non-members
\$18 – Students

Cost: Videocast Locations

\$20 – Members
\$33 – Non-members
\$13 – Students

Videocast Venues:

Corvallis: CH2M Hill, 1100 NE Circle Blvd., Suite 300, (541)752-4271

Eugene: Artisan Engineering, 325 West 13th Avenue, (541)338-9488

Reservations:

Pre-registration required. **You can register and pay online at www.seao.org before noon, Friday, April 20.** You can also register with Jane Ellsworth via phone at (503) 753-3075 or via Email: jane@seao.org. Note: No-shows will be billed.

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

(Continued on page 4)

APRIL MEETING SPONSORS

(continued from page 3)



Firm Profile

In Line Commercial Construction Inc. is a full service, minority-owned General Contractor. Since 1983, In Line has been committed to client satisfaction and delivering projects that consistently exceed our clients' expectations. Our superior track record and steady growth has recently increased our bonding capacity to \$20 million. Today's ownership management team chart the company's future growth but also work 'hands on' managing projects and serving client needs. In Line's well established culture delivers the strength of longevity, dedicated long-term employees and the promise of a construction team that is quick to respond and committed to deliver only the best.

Services

In Line performs general construction services in both the private and public sector throughout Oregon and SW Washington. From concept to closeout and tenant improvement to new construction; In Line's diverse project types provide comprehensive construction knowledge, making our team capable and qualified to handle any project.

Special Projects Division

Seeing a client need for a specialty trained crew to manage a multitude of smaller, yet equally challenging projects, our SPD was established in 1996. Managing over a hundred of these unique projects each year, this highly-trained crew utilizes our in-house workforce along with outside consultants to maximize our clients' resources and quickly turn around projects.

Philosophy

At In Line, we believe in a management philosophy which fosters communication among all team members and throughout the firm. We strive to create an atmosphere of trust and team collaboration through honesty and quality workmanship. Our goal is to continually exceed expectations, showcase our intense dedication and create lasting relationships with our clients.



Carlson Testing, Inc. (CTI) provides a broad range of construction inspection, materials testing, and geotechnical engineering services in Oregon and Washington.

Founded in 1976, CTI now employs over 180 people. We are certified by the Oregon Building Officials Association, Washington Association of Building Officials, the City of Portland, the City of Corvallis and the Oregon Department of Transportation.

Our Tigard, Bend and Salem CTI laboratories are nationally accredited by the American Association of Laboratory Accreditation (A2LA). We offer rapid response, practical design, and reasonable fees.

If you would like more information on how we can assist you with your future projects, please visit our website at <http://carlsontesting.com> or contact our main office in Portland at (503)684-3460.

JOB OPPORTUNITY

Mid-sized engineering company in the Portland, Oregon area is seeking an experienced licensed structural engineer or licensed civil engineer with structural design experience. Projects will be primarily heavy civil and heavy industrial projects. The structures to be designed will be primarily steel and concrete but wood, masonry, aluminum and other materials will be used to a lesser degree. Knowledge of conveyors, heavy equipment support, water-front structures, earth retaining structures, temporary structures, and other industrial structures will be considered a benefit. Good oral and written communication skills are essential, as well as the ability to work with others. Wages and benefits to be negotiated and will be consistent with experience of candidate. Please forward resumes to smg@smgengr.com.

WELCOME NEW MEMBERS!

February:

Christina Charvat, PSU Student
Cameron Carroll, BMGP Engineers
Geoff Gore, TM Rippey Consulting Engineers
Kyle Dillon, Nishkian Dean
Seth Davis, Froelich Engineers
Ethan Martin, WoodWorks
Sarah Knoles, PSU Student
Richard Johnston, I.S.A.T. Seismic Bracing
Josh Richards, KPFF Consulting Engineers
Jason Prins, Structural Solutions
Anthony Peterson, PNA Construction Tech
Christopher Young, DYK Incorporated
Josh Wetterlin, TM Rippey Consulting Engineers
Robert Turvey, PSU Student
Cheng-Min Pao, Associated Consultants

QUESTIONS & ANSWERS: WOOD FRAMING OVER PODIUM

By: Amit Kumar, Sr. Structural Engineer, Bureau of Development Services, City of Portland.

Frequently Asked Questions for Typical 5 Stories of Residential Use in Wood Construction (Type IIIA) over Concrete Podium Construction within the Jurisdiction of the City of Portland

With a recent increase in popularity of “podium” buildings, typically four or five stories of wood frame construction over a concrete podium slab, we have received several inquiries regarding City of Portland’s policies related to this type of construction. The following are responses to some of the most frequently asked questions. Please note that these policies are only applicable to structures within the jurisdiction of the City of Portland. For structures sited outside the City of Portland, please contact the local building official to determine what their policies may be.

Q1. What are the height limitations for typical five stories of residential use in wood construction (Type IIIA) over one story of concrete (Type 1A) construction?

A1. The total building height is limited to a maximum of 85 ft above grade plane when using Type IIIA construction in accordance with sections 503, 504 and 509 of OSSC 2010. In addition, where lateral resistance is provided by light-framed walls sheathed with wood structural panels rated for shear resistance or steel sheets or flat strap bracing, the maximum height of this lateral system is limited to 65 ft measured from top of the concrete (Type 1A) construction, provided the engineer can demonstrate through calculations that the entire structure meets the requirements for a two-stage analysis of section 12.2.3.1 of ASCE 7-05.

See Q2 and Q3 below for further restrictions that may apply to building heights.

Q2. May non-fire-retardant-treated wood be used in Type IIIA construction?

A2. When using Type IIIA construction, the Bureau of Development Services may allow non-fire-retardant-treated wood on a case-by-case basis through the building code appeals process (<http://www.portlandonline.com/bds/index.cfm?c=34196>). Additional safety measures may be proposed to offset this reduction in fire resistance including but not limited to limiting the maximum building height to 75 feet from the point of lowest fire apparatus set up to top of roof parapet. A Preliminary Life Safety Meeting is recommended to discuss options for appeals (<http://www.portlandonline.com/bds/index.cfm?c=45054&a=94545>).

Q3. Can the concrete podium, Type 1A construction, be two or more stories in height?

A3. Section 509 of OSSC 2010 restricts the number of stories of concrete (Type 1A) construction to one story above grade plane. City of Portland *may* consider additional stories of concrete construction on a case-by-case basis through the building code appeals process (<http://www.portlandonline.com/bds/index.cfm?c=34196>), provided the total number of stories does not exceed 6 stories. Additional safety measures may be proposed to offset this reduction in fire resistance, including but not limited to limiting the maximum building height to 75 feet from the point of lowest fire apparatus set up to top of roof parapet. A Preliminary Life Safety Meeting is recommended to discuss options for appeals (<http://www.portlandonline.com/bds/index.cfm?c=45054&a=94545>).

In addition, where lateral resistance is provided by light framed walls sheathed with wood structural panels rated for shear resistance or steel sheets or flat strap bracing, the maximum height of this lateral system is limited to 65 ft measured from top of concrete (Type 1A) construction, provided the engineer can demonstrate through calculations that the entire structure meets the requirements for a two-stage analysis of section 12.2.3.1 of ASCE 7-05.

Q4. What Special Inspections or Structural Observations are required for the wood framed structure?

A4. Special inspections are required for key elements of the lateral force resisting systems of the wood framed structure including, but not limited to, the following:

1. The grade of structural wood panels used in the sheer walls and horizontal diaphragms;
2. Nail size and pattern of the sheer walls and horizontal diaphragms;
3. Framing, location and length of all shear walls;
4. Holdown installations at all shear wall locations;
5. Diaphragm chord, drag strut and related details;
6. Blocking to top plate nailing.

(Continued on page 9)

AGC LEADS LEGAL DEFENSE OF STATE STATUTES OF REPOSE

From AGC of America's Monday Morning Quarterback:

In conjunction with the AGC of Minnesota, the American Council of Engineering Companies, the American Society of Civil Engineers and the Construction Industry Roundtable, AGC of America is encouraging the U.S. Supreme Court to take and review a potentially landmark case on state statutes of repose.

The name of the case is *Jacobs Engineering Group, Inc. v State of Minnesota*. It arose out of the widely reported collapse of the I-35W Bridge in Minnesota in August of 2007. Following the collapse, the state carved out a retroactive exception to its longstanding statute of repose, permitting the state to seek compensation for the victims from the companies that had designed and constructed the bridge back in the 1960's. The legal question that the case presents is whether that state action violated the Due Process Clause of the 14th Amendment to the U.S. Constitution.

In November of 2011, the Minnesota Supreme Court held that it did not, asserting that the state merely needed to show that its action was "rationally related" to its interest in providing compensation to the victims. On March 2 of 2012, Jacobs Engineering – the successor to the firm that designed the bridge – petitioned the Supreme Court to review that decision, and today, AGC of America filed a friend-of-the-court brief in strong support of the company's position.

The brief makes the following points:

- Unless reversed, the decision below will cast great doubt on the statutes of repose that 48 states and the District of Columbia have all enacted.
- It is unfair to force design and construction companies to defend themselves long have key documents and witnesses have disappeared.
- The standards of care that apply to design and construction professionals change over time, and it is difficult if not impossible for today's courts to apply standards dating back to an earlier era.
- Negligent maintenance is as likely to cause the failure of an aging structure as any defects in either design or construction.
- The insurance industry has no way to price the risk of a retroactive change in a statute of repose, and the other risk management tools currently available to design and construction professionals are equally inadequate to the task of managing such a risk.
- This situation is all too likely to recur, given the deterioration in the nation's infrastructure.

The state's response to the petition is due on or about May 2. The Court is likely to decide whether to take the case by the end of its current term (in mid to late June). The Court has broad discretion to grant or deny the petition, and typically, it grants only 2% of the petitions presented to it. On the other hand, the Minnesota Supreme Court has set a very dangerous precedent.

For more information, or a copy of the AGC brief, contact Michael E. Kennedy at (703) 837-5335 or kennedym@agc.org.

STATE OF WASHINGTON PASSES INDEMNIFICATION ACT

An update by Bill Garrity, ACEC Washington

On March 29, 2012, Governor Gregoire signed into law Substitute House Bill 1559, an Act relating to indemnification agreements involving design professionals; and amending RCW 4.24.115. I attended the signing ceremony along with ACEC Washington Chairman of the Board Steve Johnston. Also attending were Bill Sponsors Representative Bruce Dammeier (R-25) and Representative Roger Goodman (D-45), along with Senate Labor and Commerce Chair Senator Jeanne Kohl-Welles (D-36). (Prime Sponsor, Representative Kathy Haigh (D-35) was in Ohio visiting her 91 year-old father.)

A big thank-you goes out to all of them, but especially Representatives Dammeier and Goodman, who worked tirelessly to shepherd the bill thru the legislature, and of course, to Cliff Webster, our lobbyist who executed our game plan like the pro he is.

Others who deserve special thanks are Senator Nick Harper (D-38), Senator David Frockt (D-46) and Senator Janea Holmquist Newbry (R-13); and in the House, Representative Matt Shea (R-4), Representative Jay Rodne (R-5) and Representative Jamie Pedersen (D-43).

If you live or work in any of these districts, or know any of these people, please send them a nice note thanking them for their support!

A copy of the final bill can be found at

<http://apps.leg.wa.gov/billinfo/summary.aspx?bill=1559#documents>

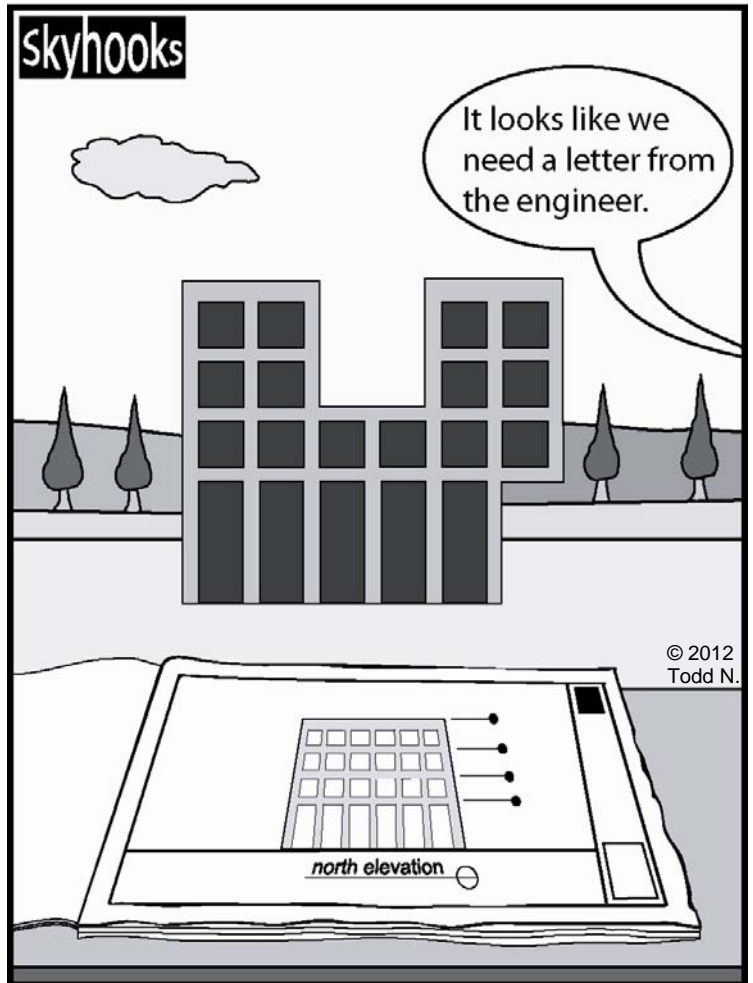
SEISMIC QUIZ

This seismic quiz has been put together by the Seismic Subcommittee of SEAO. This month's quiz is focused on Masonry. Enjoy!

1. What ASCE 7-05 seismic force must be used to design the reinforcing in masonry wall cantilevered parapets at roof height of an office building at a site with $S_{DS} = 1.0$?
2. What is the maximum permitted height for an office building with Intermediate Reinforced Masonry Shear Walls at a site with Seismic Design Category D?
3. What is the maximum spacing of vertical reinforcement for a special reinforced masonry shear wall (running bond)?
4. What are the requirements for lateral tie anchorage hooks for Seismic Design Category D?
5. True or False. Type N, M, or S mortar can be used in a special reinforced masonry shear wall in Seismic Design Category D.



See page 8 for answers



MEMBER OF THE MONTH

The SEAO Member of the Month for April is Justin Fenton. Justin is in charge of setting up and administering the webcasts of SEAO's monthly meetings. This behind the scenes job involves contacting the remote hosting locations in Medford, Eugene, Klamath Falls, Bend and Corvallis prior to the meeting to determine if they are going to participate, and then executing the webcast using the internet and cell phone at the meeting. It may seem routine, but as you all know about technology, there are always bugs and problems that come up. Justin has kept a level head in these stressful times and has always found a quick solution that has allowed the show to go on. He is currently working with OIT and OSU to establish webcast connections so that their students may attend our meetings remotely along with the others.



Justin is a Project Engineer at Equilibrium Engineers LLC, which he joined in 2011 after obtaining his Masters in Structural Engineering from Portland State University. He also holds a BS in Civil Engineering from Oregon State University. In his spare time, Justin enjoys skiing, wakeboarding and customizing his sports car. Congratulations, and thanks for all of your hard work Justin!

MEMBER ALERT

The National Council of Structural Engineers Associations, NCSEA, has made a request to all Member Organizations (MO) for each organization's membership email lists. SEAO currently provides the mailing addresses for each of our registered members to NCSEA so that they can send Structure Magazine to each of you. NCSEA's request for email addresses is part of their current effort to promote and enhance relationships with each of the MOs and their members. NCSEA will use the email addresses to send each of you information regarding their continuing education offerings, committee news and conferences on a regular basis so that you can stay up to date on their efforts. The SEAO Board has elected to honor NCSEA's request and provide them with our membership email database. If you would like your email address **withheld** from the database we give to NCSEA, please contact Jane Ellsworth jane@seao.org by April 30, 2012, and your email address will not be forwarded. NCSEA has promised not to distribute your email addresses to any other entities and to keep emails sent to a minimum.

The Board's decision was based on the desire to foster our relationship with NCSEA and to further our mission of providing excellent opportunities for educational and professional growth to our members.

MEMBER MEMORIAL SERVICE DIRK LOOIJENGA



DIRK NICO MICHIEL LOOIJENGA

August 10, 1927 - January 29, 2012

Please join us for a celebration of Dirk's life
Sunday, May 6 2012
twelve noon to three pm
Aquariva
4650 SW Macadam Ave
Portland, OR

WE MISS HIM SO

Feel free to share your favorite Dirk story or joke at
our celebration.

RSVP to Lisa Looijenga Hummel
lisalooijenga@hotmail.com
415-203-7842

WIND COMMITTEE - CALL FOR VOLUNTEERS

As our careers roll on and we get older and hopefully wiser, what Oregon engineer hasn't asked themselves, "Why do we need to perform a wind analysis when we know seismic loads and detailing control?" Okay, there is OSSC section 1603.1.4 that stipulates that we, at very least, perform a wind load analysis. But pretend that you are an engineer in Texas or Florida, and you can only guess that the question gets reversed. There are instances when wind loading here in Oregon can create controlling lateral design loads and sometime in the future, our building code will adopt the 2010 ASCE-7 provisions, and we'll all be required to learn how to navigate through six different chapters and a new Appendix D which is not to be confused with ACI 318's Appendix D.



The Wind Committee is looking for new volunteers to:

- have an opportunity to get more involved in SEAO, a great professional organization;
- have a chance to get involved with current code review and future code development;
- and have a chance to learn and help others learn the wind code, possibly through a question and answer process, that could possibly lead future code proposals and perhaps to a white paper regarding general misunderstandings and overlooked items with our wind code.

Please contact Jim Riemenschneider at jimr@vlmk.com if you are interested in helping out.

ANSWERS TO SEISMIC QUIZ ON PAGE 7

1. $1.20W_p$ (per ASCE 7-05, 13.3.1, with $a_p=2.5$ & $R_p=2.5$ per Table 13.5-1)
2. Zero. Intermediate Reinforced Masonry Shear Walls are not permitted in Seismic Design Category D per ASCE 7-05, Table 12.2-1.
3. The smaller of $1/3$ the wall height, $1/3$ the wall length, or 48". ACI 530-08 Section 1.17.3.2.6(a).
4. "Standard hooks for lateral tie anchorage shall be either a 135-degree standard hook or a 180-degree standard hook [in Seismic Design Category D]." ASCE 530-08, 1.17.4.4.2.3
5. False. Neither Type N mortar nor masonry cement mortar shall be used to construct [masonry shear walls in Seismic Design Category D]." ASCE 530-08, 1.17.4.4.2.2

QUESTIONS & ANSWERS: WOOD FRAMING OVER PODIUM

(continued from page 5)

Special Inspections may be required for other elements of the structure including but not limited to concrete, steel, anchors installed in concrete, etc.

Structural observations are required and shall be provided by the engineer of record. The engineer of record is required to submit copies of the structural observations report to the Bureau of Development Services.

- Q5.** Does the podium slab supporting the discontinued wood shear walls and the connections of the wood shear walls to the podium slab be designed for the seismic overstrength factor (Ω_o)?
- A5.** Section 12.3.3.3 of ASCE 7-05 requires that "...Columns, beams, trusses or **slabs** supporting discontinuous walls shall have the design strength to resist the maximum axial force that can develop in accordance with the load combination with overstrength factor of section 12.4.3.2...." This requirement therefore requires that the podium slab be designed for forces due to overturning considering the seismic overstrength factor (Ω_o).

Section 12.3.3.3 further states that "... The connections of such discontinuous elements to the supporting members shall be adequate to transmit the forces for which the discontinuous elements were required to be designed." This section requires that the connection between the podium slab and the wood shear walls be designed for the forces for which the discontinuous elements (wood shear walls) are designed for. Since typically wood shear walls are not designed for the overstrength factor (Ω_o), unless required by other provisions code, connections of the wood walls to the podium slab are not required to be designed for the overstrength factor.

SEO proudly presents!



- ◇ **State Seismic Resiliency Plans for Oregon and Washington.**
- ◇ **Latest Changes from the ATC.**
- ◇ **Christchurch Earthquake Damage and Response**
- ◇ **BRB Standardized Design Method**

10

2012 SEA Northwest Conference, July 26 - 28



History About Kah-Nee-Ta Resort

The Warm Springs Reservation was established by The Treaty of 1855 on a small reserve of land where our ancestors lived for thousands of years. In 1937 the Wasco, Paiute and Warm Springs Tribes organized as the Confederated Tribes of Warm Springs and became a sovereign, self-governing nation.

Kah-Nee-Ta Village was completed in 1964 and named for the Indian woman Xnitla, "Root Digger" who had owned the property. Xnitla was a scout and spiritual leader who used the natural hot springs and indigenous plants and roots for medicinal purposes and religious ceremonies. The Lodge and Convention Center opened in 1972, followed by the Casino in 1995.

There is a lot of history to be found in the area and plenty of fun to be had by all.



Make your reservations now for Kah-Nee-Ta

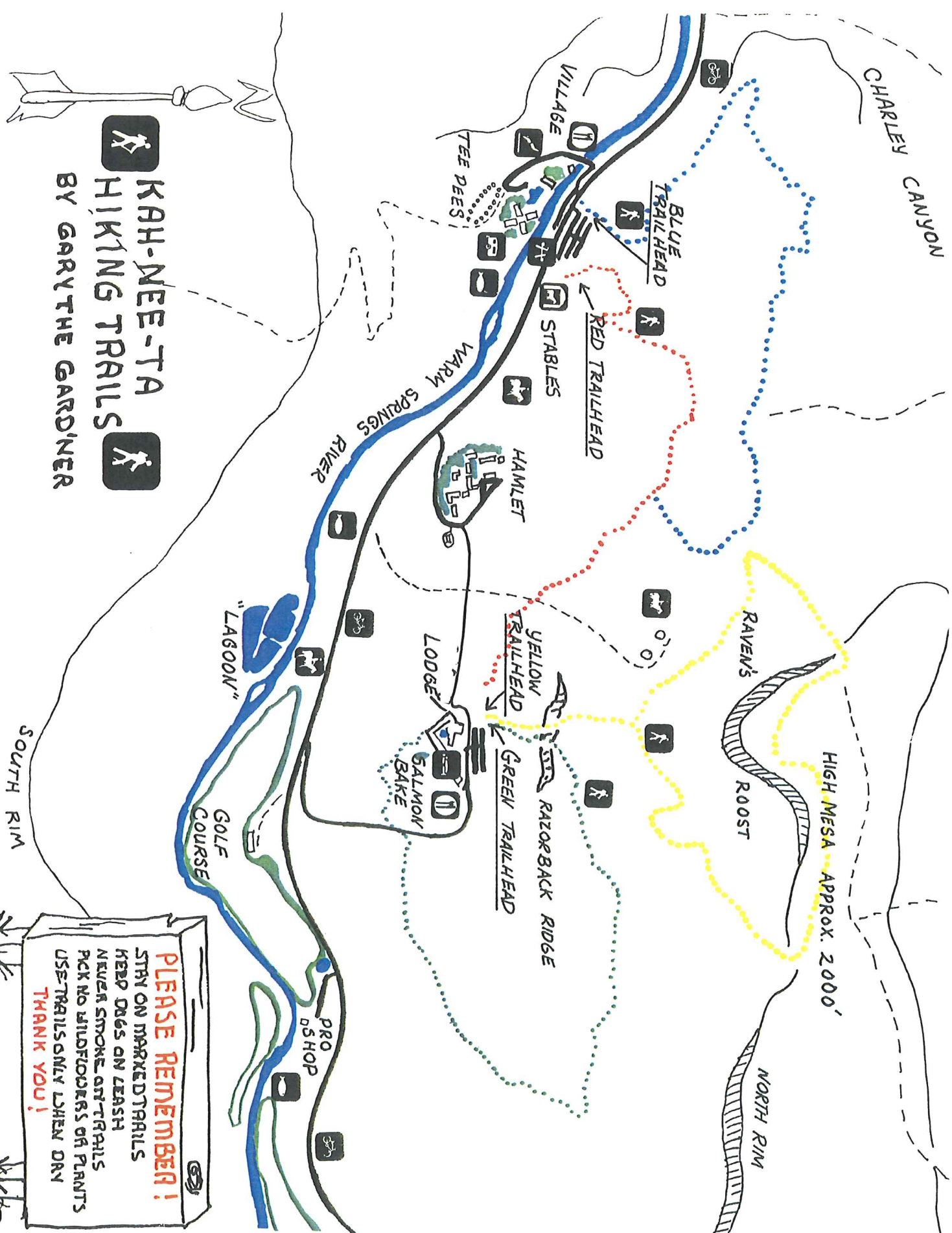
6823 Hwy. 8, Post Office Box 1240, Warm Springs, OR, 97761, USA

Tel: 541-553-1112

reservations@kahneeta.com

Take a look at this video on some of the fun things to do at the resort: <http://youtu.be/1XvERNUwafg>

It is time to mix some fun with learning. Be on the lookout for a mailer about some of the technical presentations. There is more to be added. When you make your reservations, be sure to tell them you are with the Structural Engineers Northwest Conference to get the room discount. You need to stay at the lodge in order for us to get our room block count.



KAH-NEE-TA

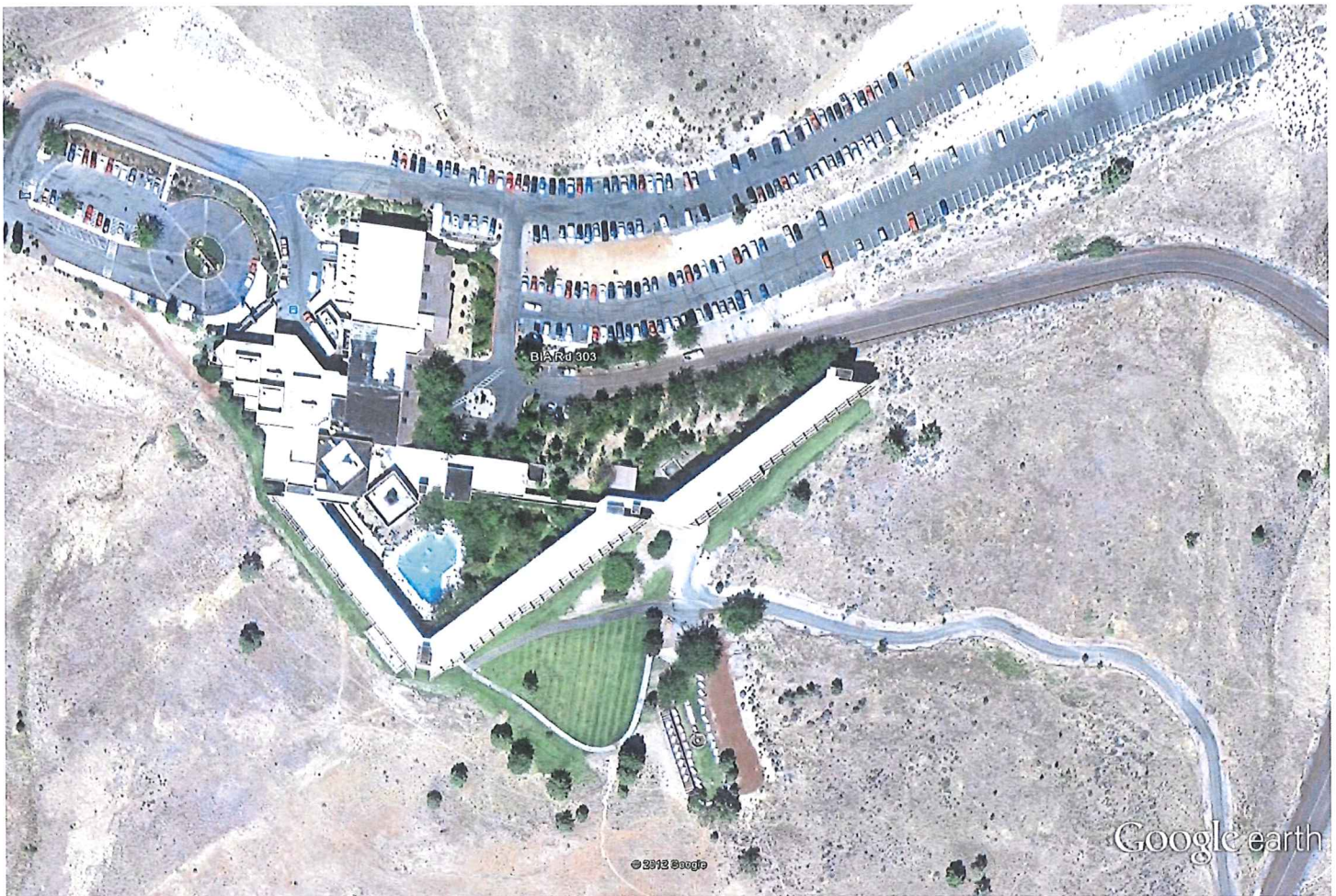


HIKING TRAILS

BY GARY THE GARD'NER

PLEASE REMEMBER!

STAY ON MARKED TRAILS
KEEP DOGS ON LEASH
NEVER SMOKE ON TRAILS
PICK NO WILDFLOWERS OR PLANTS
USE TRAILS ONLY WHEN DRY
THANK YOU!



Google earth

feet
meters

LODGE

200 800



Kah-Nee-Ta High Desert Resort & Lodge Information

Chinook Room Restaurant — Open daily for breakfast at 7AM. The Chinook Room serves Northwest cuisine and the lunch and dinner menus offer a variety of dishes, from burgers and hearty salads to steaks and seafood with menu prices ranging from \$4.95 up to \$30. A wine list and cocktail service are available. Ext. 3444.

Juniper Room Restaurant — Is open during the summer for dinner. The Juniper Room offers casual fine dining in an intimate setting. Entrees range from \$20 to \$40. Ext. 3445.

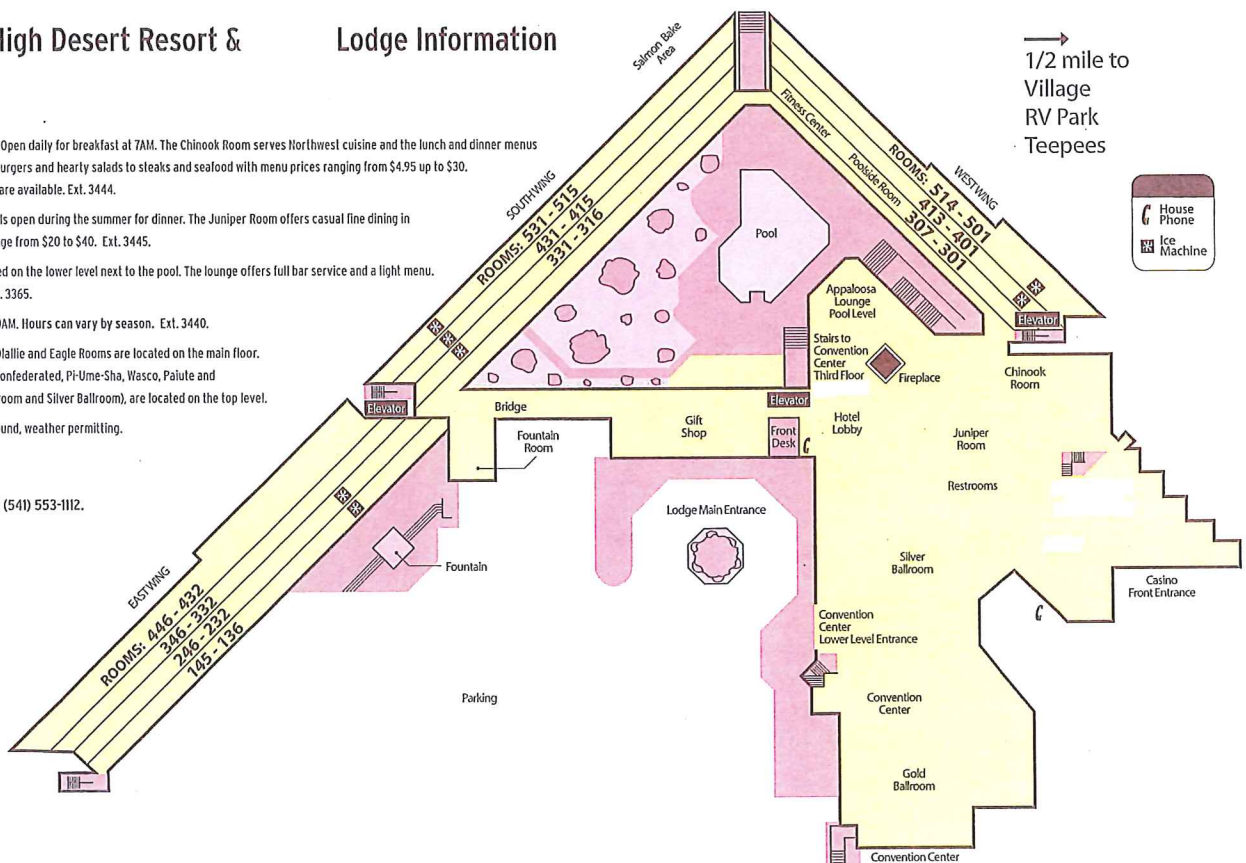
Appaloosa Lounge — Is located on the lower level next to the pool. The lounge offers full bar service and a light menu. Hours can vary by season. Ext. 3365.

Gift Shop — Is open daily at 10AM. Hours can vary by season. Ext. 3440.

Convention Center — Helle, Olallie and Eagle Rooms are located on the main floor. The Deschutes, Mt. Jefferson, Confederated, Pt-Ume-Sha, Wasco, Paiute and Warm Springs rooms (Gold Ballroom and Silver Ballroom), are located on the top level.

Golf Course — Is open year round, weather permitting.
Tee Times: 541-553-4971

For information, please call (541) 553-1112.





GOLF COURSE



Google earth

feet 1000
meters 300



VILLAGE

2012 SEA0 / OACI Golf Tournament

JULY 18TH, 2012
Stone Creek Golf Course

1:30 PM
SHOTGUN START!

Donation / Hole Sponsor Form

Sponsor Information:

Company Name: _____

Contact Name: _____

Phone: _____ Fax: _____

Email: _____

Hole Sponsorship

- ☐ **GOLD - \$200** for tee sign and flag at the hole and recognition on banner at dinner
Hole Preference _____
- ☐ **SILVER - \$150** for tee sign, but stationed at putting green/driving range before golf and recognition on banner at dinner
- ☐ **BRONZE - \$125** recognition on banner at dinner

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)
- ☐ **19th 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)

Raffle Prizes*

- | | | |
|--|--|--|
| <input type="radio"/> 42" TV \$600 | <input type="radio"/> Ocean Salmon Fishing Trip for 2 \$250 | <input type="radio"/> 3-Wheel Golf Cart \$150 |
| <input type="radio"/> iPad \$500 | <input type="radio"/> Gym Membership \$300 | <input type="radio"/> Golf Club \$150 |
| <input type="radio"/> Kindle Fire \$200 | <input type="radio"/> Gift Cards \$50 & \$100 | <input type="radio"/> Power Washer \$500 |

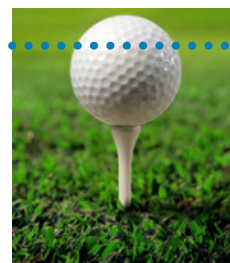
**Golf committee will purchase raffle prizes*

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

Contact Info:

Jane Ellsworth
(503) 753-3075
oaci@comcast.net



2012 SEAO / OACI Golf Tournament

JULY 18TH, 2012
Stone Creek Golf Course

1:00 PM
SHOTGUN START!

WHEN:

DATE: Wednesday, July 18th
SHOTGUN START: 1:00PM
SOCIAL HOUR: 6:00PM
DINNER & AWARDS: 6:30–7:30PM

TOURNAMENT:

4-Person Scrambles **ONLY**

CONTACT INFO:

Jane Ellsworth (503) 753-3075 jane@seao.org
Melissa McFeron (503) 246-1250 melissa@miller-se.com

NO REFUNDS FOR CANCELLATIONS AFTER JULY 6TH



WHERE:

STONE CREEK GOLF CLUB

14603 S. Stoneridge Dr.
Oregon City, OR 97045
Phone: (503) 518-4653

DINNER:

Chicken Buffet & Beverage

FEES:

Golf & Dinner: **\$95**
(Includes golf cart & driving range)

EVENT DETAILS:

Once again this year S.E.A.O. and O.A.C.I. combine forces for a return engagement of golf and merriment at **Stone Creek Golf Club**. Stone Creek is the newest golf course in the Portland area and is the pride of designer Peter Jacobsen. Participants will all enjoy the team spirit of playing a 4-person scramble.

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 offers a driving range, a large putting green to hone your skills prior to the tournament so come early. Power carts and range balls are included in the golf fee.

Appropriate "Country Club" attire is recommended:

- Collared Shirts
- No Denim
- Shorts must have a 6" inseam
- Soft spikes only.

Don't forget to bring money for the raffle prizes and mulligans!
This year's raffle prizes will be:
42" TV, iPad, Kindle Fire,
Ocean Salmon Fishing Trip for 2,
Gym Membership, Golf Club
and much more!

**PLEASE RETURN
THIS ENTRY FORM
BY JULY 5TH 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

Player Names	Membership		Payment Enclosed
	<input type="checkbox"/> SEAO	<input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> SEAO	<input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> SEAO	<input type="checkbox"/> OACI	\$ _____
	<input type="checkbox"/> SEAO	<input type="checkbox"/> OACI	\$ _____

☐ VISA / ☐ MC Accepted

Total \$ _____

Name on Card: _____

Card # _____ Exp. Date: _____