



A new History Channel original. Premieres January 17, 2014

THE HISTORY CHANNEL

20th Anniversary of Northridge Earthquake: “Memories of Northridge” Newsletter Supplement

SEAOSC and Southern California prepare to remember the 6.7 earthquake that jolted residents awake in the morning darkness of January 17, 1994. There are several events happening throughout the region, and even The History Channel will be airing a documentary on the anniversary date.

SEAOSC’s members have compiled their memories and “lessons learned” from their experiences during and in the days, months and years following the historic events.

Some of our younger engineers were children during the earthquake and were inspired to pursue engineering as a life mission. Our senior engineers have been able to analyze plans and influence code changes making our buildings safer.

Please see the accompanying supplement to this newsletter issue entitled “Memories of Northridge” to read the insights of our members.

President’s Message

By Doug Thompson, S.E.



A Reflection Back – The Northridge Earthquake Plus 20 Years

Early Monday morning January 17, 1994, Southern California was rocked by a magnitude 6.7 earthquake. At that time

John Shipp was our SEAOSC president and SEAOSC had recently entered into contract with a new Executive Director, Donald Gilbert. The phones were ringing off the hooks everywhere.

Many of us were assessing the damage to buildings. This was at several different levels; buildings your own firm had designed, buildings your clients owned, buildings assigned to your team through the Safety Assessment Program (SAP) with the California Office of Emergency Management (CalEMA), or even “cold calls” to look at buildings.

Shortly after the event SEAOSC and the Los Angeles Department of Building and Safety (LADBS) collaborated together in forming several Joint Task Force Committees with members from many organizations such as L.A. County Building and Safety, the Division of the State Architect (then Office of), industry representatives and FEMA to investigate structural damage to buildings. The committees were tasked with investigating the damage and formulating opinions on the probable causes for the damage including:

- ✓ Inadequate code design provisions
- ✓ Inadequate structural design
- ✓ Inadequate building maintenance
- ✓ Inadequate construction (workmanship or not built per plans)
- ✓ Inadequate testing and inspections

(Continued on Page 2)

UPCOMING EVENTS

(See inside newsletter for reservation forms and details.)

Los Angeles Dinner Meeting

Wednesday, January 8, 2014

2013 CBC for Concrete Anchorage Emphasizing Post-Installed Adhesively Bonded Anchors

Location: Luminarias Restaurant, 3500 W. Ramona Blvd, Monterey Park, CA

Networking: 5:30 pm

Dinner & Program: 6:30-8:30 pm

Cost: \$35; Students: \$25; Table: \$245; Walkins: \$45

Webinar

Tuesday, January 14, 2014

Topic: SE Firms Can Benefit From Tax Incentives

Speaker: Vinil Ramchandran, Acu-Solutions

Time: Noon - 1:00 pm

Cost: Members: FREE, Nonmembers and Member of any SEA: \$75

Los Angeles Dinner Meeting

Wednesday, February 5, 2014

Student Awards Night

Location: Luminarias Restaurant, 3500 W. Ramona Blvd, Monterey Park, CA

Job Fair: 3 pm, **Networking:** 5:30 pm

Dinner & Program: 6:30-8:30 pm

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Visit our website:
www.seaosc.org

President's Message

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- ✓ Inadequate structural observations
- ✓ Inadequate materials and/or testing of materials

The various Joint Task Force committees then wrote reports detailing their findings and recommendations for changes in the code requirements. In almost every construction type, the building damage started research and testing programs from wood sheathed shear walls to steel moment frame connections. The City of Los Angeles decided to mandate many of the recommendations as emergency changes to the code so as to not have to wait for the next code cycle(s).

Code changes included:

- ✓ Ductile column detailing for all concrete columns
- ✓ Welded steel moment frame connections
- ✓ Removal of stucco and drywall from the lateral force resisting systems
- ✓ Limit of the aspect ratio for wood sheathed walls
- ✓ Tie-down displacement and sill plate anchorage
- ✓ Higher anchorage forces and better detailing for Concrete and masonry to wood diaphragms
- ✓ Increased structural observation

In the 1980's the Existing Buildings Committee which included several individuals from LADBS and the County of Los Angeles, developed procedures for retrofitting un-reinforced masonry (URM) buildings. These procedures were adopted by the City of Los Angeles and when the Northridge Earthquake came, there were no deaths associated with URM buildings that had been retrofitted. This is truly a retrofit success story.

In the early 1990's the Existing Buildings Committee spent a considerable amount of effort analyzing and developing retrofit procedures for concrete tilt-up wall anchorage. The City of Los Angeles and the County of Los Angeles adopted the procedures as *voluntary*. These retrofit procedures then become *mandatory* a day or two after the Northridge Earthquake. That was twenty years ago. Likewise, there are *voluntary* retrofit procedures for wood framed-soft story buildings, non-ductile concrete buildings and pre-Northridge steel framed buildings as well as several other building types. Is it going to take another disaster to get these procedures adopted?

At the expense of the "big tobacco" industry, we watch public service commercials about professionals learning about the unhealthful effects of second hand smoke that can exist in places that we live and work in. Yet we have life-threatening buildings that do exist in places we live and work in. Professionals have determined these types of buildings need retrofitting and all we have are *voluntary* procedures because we don't have a "big industry" to help pay for it? Hello, is anybody listening?

Northridge Personal Experiences:

We sent out a request for those that would like to share their personal experience from the Northridge event. The results were overwhelming. Obviously, this event still has long lasting memories with us all. We have included them in this Newsletter. Please take the time to read these personal experiences as they truly tell the stories as they occurred.

As for myself, yes I visited many damaged buildings. Being the SEAOSC Wood Committee chair at the time, I was asked to, and accepted to be part of the SEAOSC/COLA Wood Frame Construction Joint Task Force and worked on ways to improve the building code for wood construction.

Northridge 20 Symposium:

On January 16-17, there is a two day symposium on the 1994 Northridge Earthquake that will be held at UCLA. Topics include "impacts, outcomes and next steps" as well as sessions on resilience case studies, insurance, steel structures, wood-frame buildings and more. You are encouraged to attend and a flyer for this event is included in the Newsletter.

Damaged Buildings vs. Buildings-At-Risk:

We as structural engineers like it when a plan "comes together". We derive satisfaction when a building we have designed is put thru the test of an earthquake event and performed as it was expected to perform. We as structural engineers also want to fix a building when it is damaged. More importantly, we have the knowledge and ability to save lives by retrofitting buildings that are vulnerable to significant damage or even collapse from an earthquake.

The SEAOSC Board of Directors is looking for engineers with a passion and inclination to seeing that buildings-at-risk are retrofitted. If you are one of these engineers and would like to be on our next year's Buildings-At-Risk Summit, or would like to be in a leadership role for this event, we encourage you to contact our SEAOSC office and let us know.

To all of you, thank you for being a part of this association.

Doug Thompson



An apartment building in Reseda, CA in January of 1994 after the Northridge Earthquake. Photo: Eric Gelinias via Flickr Creative Commons

SEAOSC Calendar



DECEMBER

17	6:00 pm	Seismology Committee	UCLA & GoToMeeting
17		Scholarship Submissn Deadline	YM Scholarship Awards Night
19	Noon	Education Committee	GoToMeeting
31	2:00 pm	Existing Buildings Committee	GoToMeeting

JANUARY 2014

8	3:00 pm	Board of Directors Meeting	Luminarias Restr., Monterey Park
8	5:30 pm	L.A. Dinner Meeting	Luminarias Restr., Monterey Park
10		Newsletter Deadline	February 2014 Issue
14	Noon	Webinar	GoToMeeting
18		Donation Submissn Deadline	YM Scholarship Awards Night
18		Younger Member Committee	MakeItRight, Arcadia
21	7:00 pm	Seismology Committee	TBD
28	2:00 pm	Existing Buildings Committee	GoToMeeting

*Mark your calendar now or save this page. Don't miss your favorites!
Topics and dates subject to change — for the latest seminar details and registration
go to www.seaosc.org*



Northridge Earthquake: Interstate 10 bridge collapse at La Cienega Blvd
(photo from Stewart et al., 1994; EERC Report 94/08)
Northridge20 Symposium at UCLA on Jan. 17, 2014.

SEAOSC ANNUAL EVENTS: 2014

- Feb. 5: Student Awards Night Night
- Mar. 21 & 22 Winter Educational Programs, Long Beach
- Apr. 30.: Deadline to Submit Excellence in Structural Engineering Posterboards
- June 4: Excellence in Structural Engineering Awards Dinner & Past Presidents' Night
- August: Golf Tournament, Whittier
- September: SEAOC Convention, Indian Wells, CA
- October: Buildings At Risk Summit,
- October: Great CA Shakeout Event

Information regarding these events can be found on the SEAOSC website.

Seminar Registration How-To

Please go to www.seaosc.org for secure online registrations or use the enclosed registration flyers. Be sure to remember to log in to the website as a member to take advantage of SEAOSC's member benefit of member pricing. It is advised to register early to ensure a seat. Please note that confirmations will only be given to those people who register via the SEAOSC Website.



Next SEAOSC
Newsletter Deadline:
January 10
for the February Newsletter

The US Resiliency Council (USRC)

A Building Rating System for the Earthquake Performance of Buildings

By: Ronald L. Mayes, Ph.D., Simpson Gumpertz & Heger

The earthquake and structural engineering communities have made major progress over the past three decades to develop and deploy guidelines for the design of new buildings and the retrofit of existing buildings.

However one elusive goal has been communicating expected earthquake performance to the general public. At two recent National Earthquake Hazards Reduction Program (NEHRP) workshops (2008 and 2012) on meeting the challenges of existing buildings, one of the major recommendations was the development of a rating system that communicates risk in consistent, reliable terms understandable to tenants, owners and other stakeholders. Such a rating system would inform the public about the condition of the buildings they live and work in and would bring market forces to bear on the seismic rehabilitation of hazardous buildings.

Over the past six years, the Structural Engineers Association of Northern California (SEAONC) Building Ratings Subcommittee has been developing an Earthquake Performance Rating System. In 2011 FEMA funded an ATC organized stakeholder’s workshop to gather input on implementation of the SEAONC system. Two major workshop recommendations were the long term integrity of the system and the need for the system to be implemented by a non-profit private sector entity.

As a consequence the US Resiliency Council® (USRC) was formed as a 501(c) 3 nonprofit organization to facilitate the use of technical standards and systems such as those developed by SEAONC and ARUP as a basis for owners, lenders, communities and other stakeholders to evaluate and communicate building resilience objectively and consistently. A long term goal of the USRC will be to consider a broad range of perils beyond earthquakes (e.g. hurricane, flood, blast).

The USRC is modeled after the US Green Buildings Council (USGBC®), which has successfully, although not overnight, transformed the issue of environmental sustainability into one that has been broadly established within the public consciousness. The USGBC has succeeded in making environmental sustainability a standard consideration within the building industry.

The USRC will award Earthquake Resilience Ratings, much like the US Green Building Council® issues

USRC CoRE RATING SYSTEM			
USRC CoRE Rating	Safety	Reparability	Functionality
*****	Safe	Loss <5%	Occupiable Immediately Functional < 72 hours
****	Safe	Loss <10%	Occupiable Immediately Functional < 1 month
***	Safe	Loss <20%	Occupiable < 1 month Functional < 6 months
Certified	Safe	Not estimated	Downtime not estimated
Not Certified	Safety Hazard	Not estimated	Downtime not estimated

View more at www.usrc.org

LEED® ratings. The USRC will establish an accreditation program for professional engineers who wish to employ the rating system. The USRC will also include peer review and validation of ratings. These features of the USRC rating process are a direct response to stakeholders’ perceived need to ensure integrity of the system.

A key principle of the USRC is that it will not develop technical standards for assessing risk. Rather, the USRC’s board and technical advisory committees will identify existing or developing technical standards (e.g. SEAONC and ARUP systems) that can be used to generate a rating.

At this time the USRC is looking for firms and/or individuals to become Founding Members of the organization. Founding members will demonstrate industry leadership to create widespread interest in greater earthquake resilience. In addition, founding members will help establish initial priorities and long-term strategy of the USRC, including specific benefits of membership.

If you have such an interest please contact Ron Mayes (rlmayes@sgh.com; 415-343-3031) for further details.

An ASCE 7 White Paper The Issue of Serviceability Requirements in Building Codes and Standards

The General Structural Requirements Subcommittee of ASCE 7 is reaching out to the engineering community for input on the idea of serviceability limit states as they relate to ASCE 7. In order to make an informed decision, respondents are encouraged to study how serviceability is currently treated in ASCE 7-10; study the points raised in this white paper including a review of some or all of the references included; and finally, [complete a brief survey](#) that addresses this topic.

Currently, the [ASCE 7-10 Standard, Minimum Design Loads for Buildings and Other Structures](#), requires that a designer address both *strength limit states* (Section 1.3.1 in general and 1.3.1.1 specifically) and *serviceability limit states* (Section 1.3.2). Section 1.3.2 on serviceability states “Structural systems, and members thereof, shall be designed to have stiffness to limit deflections, lateral drift, vibration and any other deformations that adversely affect the intended use and performance of buildings and other structures”. ASCE 7-10 Appendix C “Serviceability Considerations”, a non-mandatory appendix, also contains guidelines (but no specific limits). Current building codes primarily address life safety and strength limit states, and also have addressed some, but certainly not all, important serviceability limit states affecting building performance.

Specification and code writers face the challenge of how to address serviceability issues going forward, recognizing that the profession is moving forward with an emphasis on *Performance Based Design* concepts in codes and standards. The debate centers around whether codes and standards should address serviceability issues faced by designers in a more general way with performance based guidelines as is currently done; or, should they contain more specific minimum limits on deflections, drift, floor vibration, thermal effects, etc. Clearly, the issue can be argued from both sides. With the profession developing performance based design approaches, this issue is important to setting the direction that code and standards will take in the future.

Factors being raised that *support* a more thorough treatment of serviceability issues include the following:

1. The current general language in Section 1.3.2 can be used in a legal argument on design performance against the designer for perceived performance problems raised by a Client.
2. Specific minimum limits or targets on serviceability (deflections, drift, floor vibration, etc) would allow a designer defend his/her design against challenges about whether serviceability design has been addressed. In effect, engineers could “check the box” saying that such minimum serviceability limits are met and therefore, the design is adequate.
3. Some designers do not adequately address serviceability or are not knowledgeable about serviceability requirements; specific limits in the standard would help improve serviceability performance of buildings.
4. Some international standards (e.g. The Canadian Code, Eurocodes, etc) place serviceability requirements in their standards and the US should as well.
5. With more emphasis by some clients and stakeholders on maintenance, loss of operation and repair costs after hazard events, serviceability should be more thoroughly addressed in codes and standards.

Factors being raised *against* a more thorough treatment of serviceability issues include the following:

1. Serviceability requirements can be very complex and simplified minimum targets are highly dependent on the manner in which the analysis is carried out and the assumptions that are made.
2. Serviceability requirements vary widely among stakeholders. Serviceability targets and goals are a matter that should be addressed at the beginning of the design process between the designer and client being served.
3. Strength limit states are a matter of life safety and are properly addressed in a code and standard; serviceability limit states are a contractual matter between the designer and the client and have no place in a code or standard.

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An ASCE 7 White Paper The Issue of Serviceability Requirements in Building Codes and Standards

4. Serviceability limit states are more properly addressed in design guides where more detail and controlling factors can be discussed by experts in the field. The topic is too complex to place simplified limits in a code or standard without significant commentary to back it up.
5. Calculations on serviceability limits can vary widely depending on the analysis approach and assumptions made. Putting specific limits in a code or standard without a significant attention to the matter of how the limits are calculated and the proper assumptions to be made for different conditions would only serve to complicate the issue and invite legal disputes in cases where serviceability performance is being challenged by a client.
6. Placing minimum or target serviceability requirements in a code or standard with the necessary commentary to explain it serves to increase the size and complexity of a standard that is already being criticized for its size and complexity.
7. Placing more serviceability requirements in the standard seems to contradict the goals of performance based design, which seek to place more flexibility on design approaches that are less prescriptive, lead to a specific target performance for a given project, and place a greater emphasis and respect on the contributions of structural engineers in society.

Other arguments can be made on both sides of this issue as well. The [public survey](#) created in conjunction with this white paper seeks your input on addressing serviceability in future editions of the ASCE 7 Standard.

Suggested References on Serviceability Requirements

1. Ad Hoc Committee on Serviceability Research.(1986). "Structural serviceability: A critical appraisal and research needs." *J. Struct. Engrg.*, 112(12),2646–2664.
2. ASCE Task Committee on Drift Control of Steel Building Structures. (1988). "Wind drift design of steel-framed buildings: State-of-the-art report."
3. Ellingwood, B. (1989). "Serviceability guidelines for steel structures." *Engineering J.*, 26(1), 1–8.
4. West, Michael, Fisher, James, Griffis, L.. (2003). *Serviceability design considerations for steel buildings*, second ed., Steel Design Guide No. 3, American Institute of Steel Construction, Chicago.
5. ANSI/AISC 360-10, Specification for Structural Steel Buildings, AISC, Chapter L and Chapter L Commentary, Design for Serviceability.

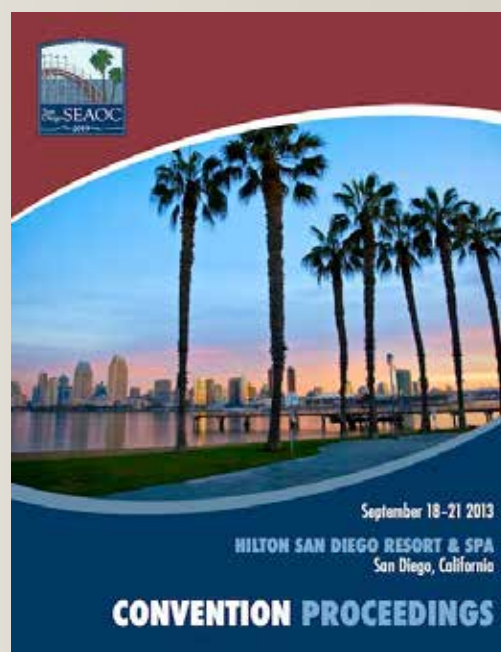
2013 SEAOC Convention Proceedings

Get your FREE SEAOSC Member Benefit!

SEAOSC members are eligible to receive a free download of the proceedings from the **2013 SEAOC Convention on September 18-21** in at the Hilton San Diego Resort & Spa in San Diego, CA from the SEAOC bookstore.

For access, visit www.seaoc.org and log-in with the SEAOC username and password. This is different than your log-in for SEAOSC! If this is the first time logging in, you must first request to change your password- an automatic email will be sent to you with a link to enter a personal password.

Once logged in, click on the tab Publications, then from the sub-menu select "Bookstore". Scroll down until you see the cover image listed.



Oliver G. Bowen SEAOSC Founding Member, 1929



The design and structural work for the Navy's China Lake Pilot Plant (extruded propellant for rockets and missiles) at the Naval Ordnance Test Station (NOTS), Inyokern (California) in 1944 were undertaken by architect Palmer Sabin and structural engineer, Oliver G. Bowen. Bowen is identified on the design drawings for these structures, and Sabin put his name in the "approved by" entry. Earlier research into Oliver Bowen revealed little other than that he was a Los Angeles-based structural engineer, appointed to a special panel to discuss the rebuilding of Long Beach after the 1933 earthquake. This citation was from the August 1933 edition of Civil Engineering.

Born and raised in Michigan, Oliver G. Bowen completed his undergraduate and graduate degrees at the University of Michigan from 1907 to 1912.[1]

Bowen was a key figure in the creation of the Structural Engineers Association of Southern California (SEAOSC).

The connection with Caltech is explained in a 1997 Earthquake Engineering Research Institute (EERI) interview with retired Caltech professor, George W. Housner. Housner explains that one of his professors, R.R. Martel, was very interested in earthquake engineering, and was frequently sought out by engineers for his counsel.

Bowen was one such engineer, "an early figure in structural engineering here [Los Angeles]." Martel suggested that Bowen get together with local prominent engineers to discuss their problems. Twelve engineers gathered regularly for lunch

and dubbed themselves "The Dirty Dozen." [2]

The group was formalized in 1929 with Bowen as its first president; Bowen himself recommended the name of the organization.[3] The Joint Technical Committee on Earthquake Protection for the Long Beach study was chaired by Caltech physicist Robert A. Milliken.[4] It is likely that Bowen's expertise and strong connections to Caltech played a role in his firm being retained for design work for the China Lake Pilot Plant.

The China Lake Pilot Plant is eligible for listing on the National Register of Historic Places.

Submitted By:
Phillip Seven Esser, Architectural Historian
Epsilon Systems Solutions, Inc.

Phillip Seven Esser, Architectural Historian specializing in historic preservation has spent over a decade documenting and evaluating historic buildings, structures, neighborhoods, and sites for state and National Register of Historic Places individual and historic district designation. Qualified as a historian and architectural historian under the U.S. Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61), he conducts intensive surveys and prepares documentation for State Historic Preservation Officer (SHPO) review. View more: <http://cthousehistories.com/home/phillip-seven-esser-architectural-historian/>

[1] *The Michigan Alumnus*, Volume 31, Number 30, May 23, 1925, p. 677.

[2] Stanley Scott, *Connections, The EERI Oral History Series, Interview with George W. Housner*, 1997, p. 7. Accessed at <https://www.eeri.org/site/images/projects/oralhistory/housner.pdf> <<https://www.eeri.org/site/images/projects/oralhistory/housner.pdf>>

[3] Jon P. Kiland, SE, *SEAOSC 75th Anniversary Presentation, Monterey, California 2004*. Accessed at <http://seaosc.org/documents/2004%20JPK%20Convention%20Presentation%20.pdf> <<http://seaosc.org/documents/2004%20JPK%20Convention%20Presentation%20.pdf>> ; Minutes of the Structural Engineers of Los Angeles, February 20, 1929.

[4] *Joint Committee on Earthquake Protection, Long Beach Earthquake and Protection Against Future Earthquakes*, June 7, 1933. Accessed at <http://authors.library.caltech.edu/12455/1/MILberpt33.pdf> <<http://authors.library.caltech.edu/12455/1/MILberpt33.pdf>>

WELCOME, New Members!



Associate

Alek Harounian, AMEC, Los Angeles, CA alek@ucla.edu, grad UCLA MS 2010

Associate- AS1

Belinda Li, Insight Structural Engineers, El Segundo, CA bli@insight-se.com, grad UC Berkeley 12/12
Jimmy Chang, Payan surveying, Inc., Corona, CA jchang709@gmail.com, grad Cal Poly Pomona 12/12

Associate- AS2

Sean Norville, Simpson Gumpertz & Heger, Newport Beach, CA sean.norville@gmail.com, grad U of TX, Austin MSCE 12/2011

Member

Jennifer Cover, WoodWorks, San Marcos, CA jennifer.cover@woodworks.org

'Tis the Season of Giving... and Getting! Did you know there are several ways to give and get with SEAOSC?

GIVE: A Scholarship donation to "SEAOSC" by check or credit card
GET: A tax deduction as a "business expense" (* IRS restrictions apply.)

GIVE: A donation to "SEAOSC Foundation" by check or credit card
GET: A tax deductible charitable donation

GIVE: A donation of time as a volunteer on one of SEAOSC's many committees. Have an unpredictable schedule? Don't worry, SEAOSC has many other "one-time" volunteer tasks!
GET: Respect, professional growth, networking.

GIVE: An advertisement in SEAOSC's monthly newsletter
GET: Exposure to over 1000 members in Southern California



Aerial view of Interstate 5 collapse at Gavin Canyon in Los Angeles County, January 1994.



The Kaiser Permanente Building after the Northridge Earthquake. Photo taken on Saturday, January 22, 1994 by Gary B. Edstrom.



Los Angeles Dinner Meeting

Wednesday, January 8, 2014

Program: “2013 CBC Requirements for Concrete Anchorage with an Emphasis on Post-installed Adhesive Anchors”

Abstract: As California adopts the 2013 CBC, understanding the new concrete anchorage requirements is essential for those who specify and/or approve anchors used for structural and nonstructural attachments. There have been significant changes made to Appendix D of ACI 318-11 as well as ASCE 7-10. Similarly, changes made to the testing requirements of ICC-ES AC 308 for adhesive anchors have recently been adopted by ICC-ES. This presentation will elaborate on the relevant changes in the reference standards & evaluation criteria, as well as explore the effects from these changes to the design, detailing and performance of adhesive anchors under the 2013 CBC.

Speakers: Lorena Arce, P.E., Hilti; Jason Oakley, P.E., Simpson Strong Tie; Howard Silverman, P.E., ICC-ES

View speaker biographies at www.seaosc.org.

Location: Luminarias Restaurant, 3500 Ramona Blvd, Monterey Park, CA

Networking Time: 5:30pm **Dinner:** 6:30pm Chicken entree **Program:** 7:30-8:30pm

Cost: Online registrations before 10 pm Jan. 7: \$35; Students: \$25; **Walk-ins: \$45**

Reserve a Table: \$245 That’s 8 seats for the price of 7! Please provide name of primary attendee below; additional attendee names not required. Advance registration only.

Reservations: Make advance reservation before Tuesday, Jan. 7 via SEAOSC.org, fax or email. **Please provide advance notice if you prefer a vegetarian entree.** Full refund for cancellations received prior to registration deadline; sorry, no refunds on or after the event date.

LOS ANGELES DINNER RESERVATION FORM: JAN 8, 2014

Reservations Due By: Jan. 7, 2014

Name: _____ Phone: _____

Your email: _____

Individual Attendees: ___ @ \$35 = \$ _____

Number of Tables: ___ @ \$245 = \$ _____ Number of Students: ___ @ 25 = \$ _____

Table group or firm name(s): _____ TOTAL = \$ _____

Credit Card Number: _____ Expiration: _____

Signature: _____ 3 digits on back of card: _____

Billing Address: _____ Zip Code: _____

WEBINAR



Vinil Ramchandran

Mr. Ramchandran, is the President and founder of AcuSolutions, a diversified Long Beach, CA consulting company. He is an Industrial Engineer by training, and now specializes in improving clients' profitability through various specialized tax incentives, and expense audits.

with

Jim Foster, J.D.

Mr. Foster, J.D., is the National Tax Director with Houston, TX based Paradigm Partners. He specializes in tax law, with a proven record of successful R&D tax credit studies, and tax cases ranging from general filings to IRS audits, IRS appeals, and various state-level tax audits and appeals.

Structural Engineers Association of Southern California

Webinar: *Structural Engineering Firms Can Benefit from Lucrative Tax Incentives*

Date: Tuesday, January 14, 2014

Time: Noon-1:00 pm

Price: SEAOSC Members: FREE as a member benefit!
Nonmembers or Member of any national SEA: \$75

Abstract: The rules have evolved over the years to further benefit a wide range of businesses on the Research and Development (R&D) tax credit, and the definition of what constitutes "Qualified Research Expenditures" is quite broad. Several Structural Engineering firms successfully take advantage of these lucrative tax incentives each year, however, many more are missing out on potentially six-figure tax benefits simply because they assume they do not qualify.

Learn more about:

- How your Structural Engineering firm can qualify for R&D tax credits
- Technical documentation requirements before your CPA can claim this credit for you
- Potential Federal & State tax benefits
- Eligibility for 199 Domestic Production Deductions for Engineering Firms

To Register: (Online registration only.)

1. SEAOSC Members: **LOG IN** with your username & password to access the member discount.
2. Everyone: Click on tab "**Store/Webinars**"
3. Click on "**SEAOSC Webinars**" in left column
4. Locate the item under "**Featured Presentations**" and click "**Add to Cart**"

Notes (if available) will be emailed to the address provided.



Student Scholarship & Job Fair Donations

Please submit your donations and program content by January 24, 2014.

SEAOSC will present scholarships to outstanding undergraduate students from Southern California that are pursuing degrees in Civil Engineering with an emphasis in Structural Engineering. The financial awards are contingent upon the donations received by SEAOSC members and local engineering firms.

**Scholarship Awards Ceremony will be held on Wednesday, February 5, 2014,
At Luminarias Restaurant, 3500 Ramona Blvd, Monterey Park, CA 91754
Registration available online at www.seaosc.org.**

Silver: \$150-499

- Text recognition of your name or firm in the program
- A compilation of participating student resumes on a CD

Gold: \$500-999

- Text recognition of your name or firm in the program including your choice of a short firm biography or short descriptions of up to 2 open job positions
- A compilation of participating student resumes on a CD
- Your choice of a job fair table for 2 company representatives (does not include dinner) OR a sponsored dining table including 2 dinner entrees

Platinum: \$1000+

- Logo recognition of your name or firm in the program including your choice of (1) a short firm biography or (2) short descriptions of up to 2 open job positions
- A compilation of participating student resumes on a CD
- Both a job fair table for 2 company representatives AND a sponsored dining table including 2 dinner entrees

Please direct questions to Event Chair: Preston Nirattisai, preston@safetyfactorzero.com, 818-273-9980

Please return form with payment and attachments via email: seaosc@seaosc.org, fax: 562-692-3425, or mail: 1105 S. Euclid St. #D409, Fullerton, CA 92832. Please make checks payable to "SEAOSC".

STUDENT SCHOLARSHIP DONATIONS

Scholarship Donation Amount = \$ _____

Contact Name: _____ Phone: _____

Email: _____

Donor Name To Appear in Program: _____

Firm Name To Appear in Program: _____

Mailing Address to receive Resume CD: _____

Please select:

Program Inclusion: _____ Firm Bio (text) _____ 2 Job Positions (text) _____ Company Logo (.jpg)
Please email to Paul St. Pierre, paulleonstpierre@gmail.com by Jan. 24, 2014.

Table Choice: _____ Job Fair Table AND/OR _____ Dinner Sponsorship Table
Company Representative Names (2): _____

Card number: _____ Expiration date: _____



**STRUCTURAL ENGINEERS ASSOCIATION
OF SOUTHERN CALIFORNIA**
A Non-Profit California Corporation

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FULLERTON, CALIFORNIA 92832

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KELSEY PAROLINI
RYAN SMITH
DOUGLAS THOMPSON
DANIEL TRAUB

November 15, 2013

2014 Student Scholarship Awards

Dear Student Scholarship Supporter:

On **Wednesday, February 5, 2014**, the Structural Engineers Association of Southern California (SEAOSC) will host its annual **Student Scholarship Awards Ceremony** to award outstanding students from the universities in the Southern California area. SEAOSC scholarship recipients in past years have gone on to become leaders in the Southern California structural engineering community, from managers of prominent structural engineering firms to leaders within SEAOSC. The scholarship awards are a tool for outstanding engineering students to further their education and pursue the challenging profession of structural engineering.

We cordially invite you and your firm to join us in contributing to the **2014 Scholarship Fund**. Your generous contribution will undoubtedly support the development of our talented and motivated structural engineering students.

The 2014 scholarship recipients will be awarded on **Wednesday, February 5, 2014** at Luminaries Restaurant in Monterey Park. The awards ceremony will begin with the annual **Structural Engineering Job Fair** for our student guests. In previous years, the job fair was attended by nearly 200 students with 13 structural engineering firms participating.

This year, we are offering three levels of sponsorship, each with the following benefits:

- Silver: \$150–499
 - Text recognition of your name or firm in the program
 - A compilation of participating student résumés on a CD
- Gold: \$500–999

2014 Student Scholarship Awards (Continued)

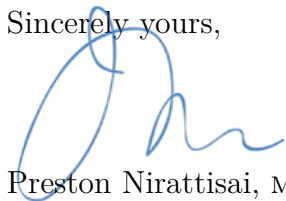
- Text recognition of your name or firm in the program including your choice of a short firm biography *or* short descriptions of up to 2 open job positions
 - A compilation of participating student résumés on a CD
 - Your choice of a job fair table for 2 company representatives (does not include dinner) *or* a sponsored dining table including 2 dinner entrées
- Platinum: \$1000 and more
 - Logo recognition of your name or firm in the program including your choice of a short firm biography *or* short descriptions of up to 2 open job positions
 - A compilation of participating student résumés on a CD
 - Both a job fair table for 2 company representatives *and* a sponsored dining table including 2 dinner entrées

You can easily make your donation online with a credit card at www.seaosc.org in the amounts of \$150, \$500 or \$1000, or by mailing in the enclosed donation form for any other amount. Either way, your contribution is greatly appreciated, and will strengthen and enhance the structural engineering community.

Please go online or mail your contributions to the SEAOSC office no later than Friday, January 24, 2014, so that your firm can be properly recognized.

We thank you in advance for your support and contribution to build a better future for our new and upcoming structural engineers. If you have any questions, please do not hesitate to get in touch with me at anytime.

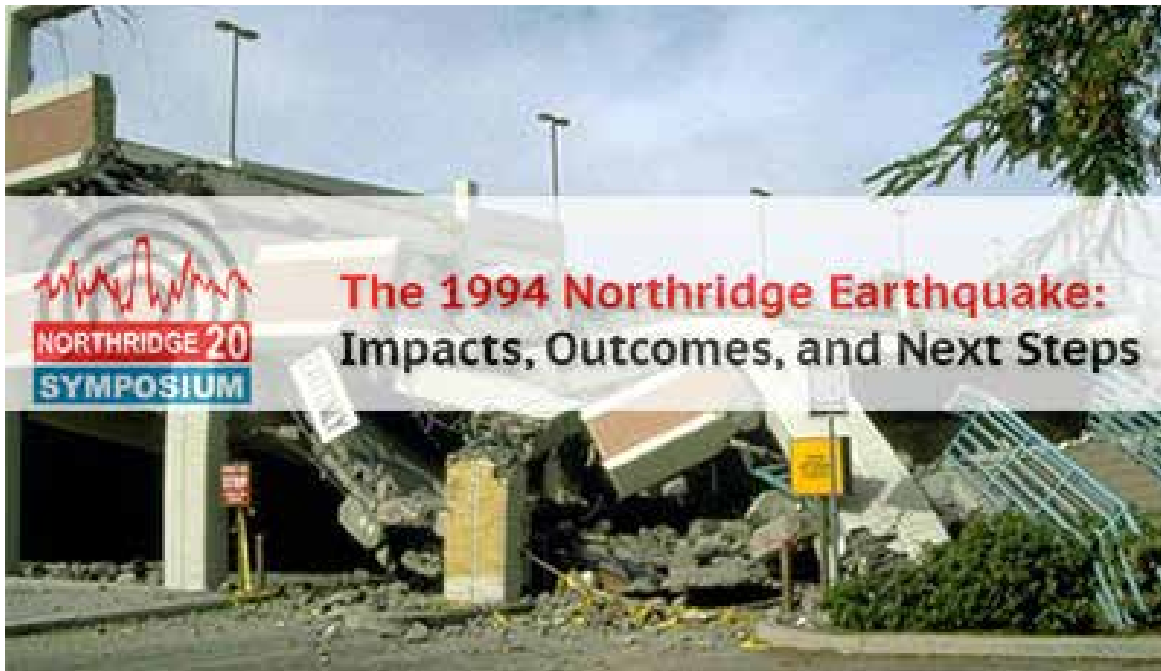
Sincerely yours,



Preston Nirattisai, M.S.C.E., E.I.T.
Chairman
SEAOSC Younger Member Committee
pnirattisai@gmail.com

with the 2014 Scholarship Coordinators:
Nathan Jo, nathanjo@gmail.com
Michael Makris, mpmakris@gmail.com
Paul St Pierre, F.E./E.I.T. paulleonstpierre@gmail.com

encl: Donation form



Register Now for Northridge 20

January 16-17, 2014 Symposium on 1994 Earthquake

Registration is now open for Northridge 20, a symposium on January 16-17, 2014 commemorating the twentieth anniversary of the 1994 Northridge, California earthquake.

Register Now: <http://www.northridge20.org/register/>

The two-day event at the University of California, Los Angeles will open on Thursday, January 16, 2014 with a multidisciplinary plenary session, "Northridge Earthquake: Impacts, Outcomes, and Next Steps." The symposium agenda on Friday, January 17, 2014 features concurrent sessions on resilience case studies, insurance, steel structures, wood-frame buildings, and more.

View Symposium Program: <http://www.northridge20.org/program/>

The Northridge earthquake spurred important changes in design, engineering, public policy, risk modeling, and insurance. Panel discussions at the Northridge 20 symposium will focus on challenges and necessary steps forward to make our communities more resilient to future earthquakes. Join policy makers, government officials, engineers, earth scientists, emergency managers, building owners, community leaders, and professionals from business and financial services industries at this special symposium on January 16-17, 2014.

Register Today for the Early Registration Discount of 20% off through December 1, 2013.

<http://www.northridge20.org/register/>

To learn more, visit <http://www.northridge20.org/>



SEAOC CONVENTION 2014

Indian Wells, CA

250 N Westlake Blvd #150 • Westlake Village, CA 91362 • 805.230.2888
tom@californiacodecheck.com

Convention Committee

Convention Chair
Tom Harris

Finance
Joe La Brie

Technical
Casey K. Hemmatyar

Registration
Lorena Arse
Lisa Willard

Exhibitors
Manny Vlachos
Tom Harris, Sr

Business Lunch
Doug & Diane Thompson

Welcome Package
Tran Le

Golf
Russell Kehl
Craig Chamberlain

House
David Johnson

Transportation
Andrew Parker

Young Members
Sara Means

President's Cup
Mike & Kim Thompson

Past Chair
Mike Cochran

Of Counsel
Rawn Nelson

Abstracts are requested for papers to be presented at the technical sessions of the 2014 SEAOC Convention.

We encourage the submissions to be based on this year's theme;

“BUILDING ENHANCEMENT: Past, Present, and Future“

It is the goal of the SEAOC Annual Conference Committee to select papers that deliver pertinent and useful information that the attendees can apply in their structural engineering practices. We Encourage submissions on recent projects, best design practices, new seismic system and components, next generation codes, advanced analysis techniques, high performance materials, results of recent experimental testing, and other topics that would be of interest to practicing structural engineers.

Abstracts of not more than **250 words** are due by **March 4, 2014**, and should be sent via e-mail to the 2014 SEAOC Convention technical Program Committee at the contact information provided below. Authors will be notified of abstract acceptance by April 4, 2014. Papers must be submitted for publication in the proceedings by 5:00pm June 9, 2014. Authors will be provided with required guidelines regarding paper format after acceptance of abstract.

Casey K. Hemmatyar, SE
SEOASC
Technical Committee Chair

Phone: (213) 261-6600
Email: ckh@psfeg.com

Technical Committee		
Ifa Kashefi, PhD, SE	Fred Schott, SE	Arnold Bookbinder, SE
James Lai SE	Mike Cochran, SE	Prof. Mikhail Gershfeld, SE
Mo Hariri, SE	Daniel Le, PhD, SE	Martin Hudson, PhD, GE
Spence Picket, SE	Casey K. Hemmatyar, SE	



NCSEA

National Council of Structural Engineers Associations

22nd Annual Conference

17-20 September 2014

New Orleans, Louisiana

Call for Abstracts

National Council of Structural Engineers Associations (NCSEA)

22nd Annual Conference

17-20 September 2014

Astor Crowne Plaza, New Orleans, Louisiana

Abstracts are requested for papers to be presented at the technical sessions of the 2014 NCSEA Annual Conference.

It is the goal of the NCSEA Annual Conference Committee to select papers that deliver pertinent and useful information that the attendees can apply in their structural engineering practices. We encourage submissions on best design practices, new codes and standards, recent projects, advanced analysis techniques, and other topics that would be of interest to practicing structural engineers.

Abstracts of not more than 500 words are due **11 April 2014** and should be sent via e-mail to me and the 2014 NCSEA Annual Conference Committee at my email address provided below. Authors will be notified of abstract acceptance by 23 May 2014. Papers must be submitted for publication in the proceedings by **25 July 2014**. Authors will be provided with required guidelines regarding paper format after acceptance of abstract.

NCSEA serves to advance the practice of structural engineering and, as the autonomous national voice for practicing structural engineers, protect the public's right to safe, sustainable and cost effective buildings, bridges and other structures.

Ben Nelson, P.E., SECB
NCSEA Past President
Annual Conference Chair

PHONE: 303-431-6100 x400

EMAIL: bnelson@martinmartin.com

National Council of Structural Engineers Associations
(312) 649-4600 | FAX (312) 649-5840 | www.ncsea.com



Los Angeles Tall Buildings Structural Design Council

SEMINAR ANNOUNCEMENT

DIRECT DISPLACEMENT-BASED SEISMIC DESIGN OF BUILDINGS

by *Dr. Nigel Priestley, Dr. Michele Calvi, and Dr. Mervyn Kowalsky*

Space is limited. Early registration is highly recommended.

**FIFTH FLOOR CONFERENCE FACILITIES
FEDERAL RESERVE BANK OF LOS ANGELES
950 SOUTH GRAND AVENUE AT OLYMPIC BOULEVARD
LOS ANGELES, CALIFORNIA**

Convenient pay parking is available south of the building on the Olympic Boulevard

FRIDAY, February 21, 2014

7:00AM to 6:00 PM

This seminar will introduce participants to displacement-based seismic design (DDBD) and demonstrate how it can be implemented in the design office as a simple and rational alternative to current prescriptive methods of seismic design. The course will show that serious conceptual problems exist with current force-based seismic design and will demonstrate how these deficiencies are resolved when a simple displacement-based design approach is adopted. DDBD approach results in structures with uniform seismic risk for a given performance level, which is compatible with uniform risk spectra. This is not achieved with current force-based design procedures. For more information and the seminar schedule and topics, visit: www.tallbuildings.org.

The companion textbook (Displacement –Based Seismic Seismic Design of Structures) by Priestley, Calvi and Kowalsky if ordered as a part of early-bird registration for the seminar, can be obtained for the price of \$120, including shipping, and will be available for pickup at the seminar. Note that current prices for the textbook on Amazon are \$206.

=====REGISTRATION FORM=====

DIRECT DISPLACEMENT-BASED SEISMIC DESIGN OF BUILDINGS

FEBRUARY 21, 2014

Name _____

Firm or School _____

Address _____

City, State, Zip, Country _____

Phone _____ Fax _____ E-mail _____

Early-Bird Registration Fee (if received by January 31, 2014)..... \$280
 Early-Bird Registration Fee + Textbook (if received by January 31, 2014)..... \$400
 Registration Fee (if received after January 31, 2014) – No textbook option available with late registration.....\$350

It is possible to register at the door, but late registrants cannot order the textbook at a discounted price. Please pay by check in U.S. currency; the Council is unable to accept credit cards or purchase orders for payment. Company checks for multiple registrations must include the name of each person being registered.

Make checks payable to: Los Angeles Tall Buildings Structural Design Council
 c/o John A. Martin & Associates, Inc.
 950 S. Grand Avenue, 4th Floor, Los Angeles, California 90015
 Tel.: (213) 483-6490; Fax: (213) 483-3084 Internet Address: <http://www.tallbuildings.org>;
 E-mail Address: phedges@johnmartin.com

Earn 6 AIA/CES HSW LUs or PDH credits free

Southern California Wood Solutions Fair

FEBRUARY 26, 2014
Long Beach Convention Center

With a full day of seminars and a trade exposition, the Southern California Wood Solutions Fair offers a unique professional development opportunity for architects, engineers and anyone else interested in wood's exciting design possibilities.

Choose up to six seminars from topics such as:

- Mid-rise wood design
- Cross laminated timber (CLT) and wood high-rises
- Designing for fire protection
- Energy-efficient enclosures
- Offset diaphragm design
- Wood and occupant environment

Attendance is free to design and building professionals. For more information and to register, **visit woodworks.org**.



WoodWorks is an initiative of the Wood Products Council.



Scan here to register at woodworks.org

WoodWorks is an approved AIA provider. 

Photos: David & Lucile Packard Foundation, EHDD Architects, photo Jeremy Bitterman; Arena Stage at the Mead Center for American Theater, Bing Thom Architects, photo Nic Lehoux, University of Washington West Campus Student Housing, Mahlum Architects, photo Benjamin Benschneider

TENURE TRACK FACULTY POSITION AVAILABLE

Civil Engineering and Construction Engineering Management Department at California State University, Long Beach invites applications for two positions in Civil Engineering at the Assistant Professor level to begin in August 2014. One position requires expertise in Geotechnical Engineering and the other requires expertise in Structural Engineering. The full position announcement is available at <http://www.csulb.edu/divisions/aa/personnel/jobs/coe/>

KPFF Consulting Engineers

KPFF Portland is looking for motivated Structural Project Engineers interested in opportunity for growth.

Qualifications

- 3+ years of structural engineering experience
- PE & MS/MEng engineering degrees
- Revit Structure experience
- Strong verbal/written communication skills
- Creative, proactive, & detail-oriented
- Individuals who thrive when working with architects, contractors & engineers

Apply: Please submit a cover letter and resume to our website <http://www.kpff.com/contacts-7/40> via our Career Opportunities online listing for a Structural Engineer

Location: Portland, OR

Find More Job Postings at
www.linkedin.com/SEAOSC



Place your Job Ad Here!
1/4 page ad
1 month
\$100
Easy!

SEAOSC NEWS: Advertising & Sponsorship Opportunities

SEAOSC publishes an electronic newsletter, SEAOSC News, which is posted online at www.seaosc.org in a color .pdf format. It is published monthly except for July/August, which is a combined issue. It is available on the public-facing section of the website, making the newsletter available to both SEAOSC members and non-members alike, thereby increasing its readership. We expect the number of people visiting the site to rise as non-members become aware of this new offering.

Members and those who have opted-in to our email notifications (approx. 2100 email addresses) receive 2-3 emails each month announcing the newsletter has been posted and highlighting content. The average open rate for these emails is 35%, higher than the average open rate of 20% among other associations.

SEAOSC is open to editorial ideas, article submissions, advertisements from the public. Please contact editor Lynn Hanger, Executive Director, at seaosc@seaosc.org, 562-908-6131 if you have questions or wish to submit content.

Display Ad Rates:

One time: ¼-Page: \$330 / ½-Page: \$550 Full Page: \$990

Six times per year in consecutive issues: (Discount is only given for 6-month advertisement.) ¼-Page: \$275/issue / ½-Page: \$495/issue / Full Page: \$880/issue

Dimensions:

¼-page: 3¼ inches (wide) by 4¼ inches (high)

½-page: 6¾ inches (wide) by 4¼ inches (high)

Full page: 7 inches (wide) by 9¼ inches (high)

Job Ads: ¼-page: 3¼ inches (wide) by 4¼ inches (high)

Persons seeking employment can post a brief job-wanted ad. Please submit a Word or .pdf document. Content may be edited as space allows. SEAOSC members: \$25; Non-members: \$50

Employers advertising an available position can post a brief text-only job posting for \$100, per month. No discounts for consecutive months. A Display Ad should be used if logos, graphics or other elements of design are preferred. Please submit a Word or .pdf document. Content may be edited as space allows.

Deadlines:

Deadlines are the first Friday following the first Wednesday of each month. Issues are usually posted mid-month.

Deadline	Issue Month	Approx. Posted Date
Dec. 7, 2012	Jan. 2013	Dec. 15, 2012
Jan. 11, 2012	Feb. 2013	Jan. 18, 2013
Feb. 8, 2013	Mar. 2013	Feb. 15, 2013
Mar. 8, 2013	Apr. 2013	Mar. 15, 2013
Apr. 5, 2013	May 2013	Apr. 15, 2013
May 10, 2013	Jun. 2013	May 17, 2013
Jun.7, 2013	Jul/Aug. 2013	Jun. 17, 2013
Aug. 9, 2013	Sept. 2013	Aug. 16, 2013
Sep. 6, 2013	Oct. 2013	Sept. 13, 2013
Oct. 4, 2013	Nov. 2013	Oct. 11, 2013
Nov. 8, 2013	Dec. 2013	Nov. 15, 2013

Sponsorships

SEAOSC has special opportunities for additional sponsorships, vendors, exhibitors, etc at additional seminars and programs throughout the year. Check the Calendar in this issue for up-to-date information and pricing.

Tabletop Displays:

Vendors are encouraged to purchase a tabletop exhibit at monthly dinner meetings, generally held the first Wednesday of each month except August. Cost of \$200 includes the admission of 1 person with the exhibit. Bring banners, give-aways, etc.



2013-2014 SEAOSC Officers & Committees

Get involved! Members and interested parties are invited to join a SEAOSC committee.
Contact the chairperson for information on current projects and meeting times, dates and locations.

SEAOSC Officers & Board Members

	Name	Phone	Email
President	Doug Thompson ^{1,2}	949-599-0320	dougt@stbse.com
President-Elect	Kevin O'Connell ²	310-323-9924	oconnell@structuralfocus.com
Treasurer	Michelle Kam-Biron ²	805-410-2877	mkambiron@awc.org
Immediate Past President	Joe LaBrie ²	626-445-0366	labrie@makeitright.net
Directors	Francisco Garcia	323-717-1303	fgarcia@fjengineering.com
	Ifa Kashefi	213-482-0440	ifa.kashefi@lacity.org
	Diana Nishi	323-733-6673	diana.nishi@englekirk.com
(¹ Delegate to SEAOC)	Ken O'Dell	562-985-3200	kodell@mhpse.com
(² Member of Exec. Cmte.)	James Parker	949-930-2157	jcparaker@sgh.com
	Kelsey Parolini	805-439-2110	kelsey@smithstructural.com
	Ryan Smith	949-305-7889	rsmith@sideplate.com
	Daniel Traub	310-254-1900	dtraub@walterpmoore.com
SEAOSC Executive Director	Lynn Hanger	562-908-6131	seaosc@seaosc.org

Committees

	*Board Contact Chair(s)	Phone	Email
Membership	Kelsey Parolini*	805-439-2110	kelsey@smithstructural.com
	OPEN		
Younger Members	Francisco Garcia*	323-717-1303	fgarcia@fjengineering.com
	Preston Nirattisai	818-273-9980	preston@safetyfactorzero.com
	Tarik Saoud	310-309-7439	tarik.saoud@gmail.com
Image & Public Relations	Ken O'Dell*	562-985-3200	kodell@mhpse.com
	Marcela Opie	949-494-0776	marcela@lawsonburke.com
	Emily Morris	626-793-7438	emily@taylorsofan.com
Technology	Lynn Hanger*	562-908-6131	seaosc@seaosc.org
	Casey Hemmatyar	888-889-5643	ckh@psfeg.com
Education	Michelle Kam-Biron*	805-410-2877	mkambiron@awc.org
	Herb Stockinger	909-595-0840	herbstock@aol.com
Sub Cmte: Webinars	Francisco Garcia	323-717-1303	fgarcia@fjengineering.com
Professional Bus. Practices	Ryan Smith*	949-305-7889	rsmith@sideplate.com
	OPEN		
Building Codes & Stds.	Doug Thompson*	949-599-0320	dougt@stbse.com
	Y. Henry Huang	562-865-0861	hhuangpe@gmail.com
Seismology	Ifa Kashefi*	213-482-0440	ifa.kashefi@lacity.org
	Bahram Zarin-afsar	949-261-6988	b@1zai.com
Sub Cmte: Research	Bahram Zarin-afsar	949-261-6988	b@1zai.com
Sub Cmte: Steel Bldgs.	Ashi Dhalwala	310-828-1422	ceginfo@verizon.net
Existing Buildings	Kevin O'Connell*	310-323-9924	oconnell@structuralfocus.com
	Methee Chiewanichakorn	213-596-5000	methee@labibse.com
Quality Assurance	Daniel Traub*	310-254-1900	dtraub@walterpmoore.com
	OPEN		
Disaster Emergency Svcs.	Diana Nishi*	323-733-6673	diana.nishi@englekirk.com
	Doug Litchfield	818-913-3558	dlitchfield@mwdh2o.com
Legislative	To Be Determined		
	OPEN		
Sustainable Design	To Be Determined		
	OPEN		

