



SEAU NEWS

The Newsletter of the Structural Engineers Association of Utah

Volume XII- Issue II October 2007

This newsletter is a monthly publication of the Structural Engineers Association of Utah.

Articles or advertisements appearing herein may be submitted by anyone interested in expressing a viewpoint on structural engineering.

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How much grout can I put under those columns?

Thanks to Jerod Johnson for submittal of this fun photo.

IN THIS ISSUE

- Message From The Board..... p 1
- Focus Article..... p 2
- SEAU News Deadline p 2
- Technical Article..... p 3
- Bulletin Board p 5
- Upcoming Events p 7

SEPTEMBER EVENT

SEAU MEETING

October 18, 2007

5:30 pm

EMCB at the University of Utah

2006 ICC Performance Code
For Building and Facilities

Presented by
Mark Mainridge, S.E., P. E.

See page 10

MESSAGE FROM THE BOARD

NEED OF PROFESSIONAL INTERACTION



By Glen Palmer,
SEAU President Elect

As I have gotten more involved the last few months with the SEAU Board I have been in awe at the work put in by the leadership of this organization. They are fantastic! Throughout my career I have always

felt that membership was invaluable in helping move both the profession and it's members forward to greater heights and better performance. And while I was always willing to put in my quick 2-cents worth, I typically let others do much of the legwork. After joining a precast producer and the precast industry in 1990, I began to take a much larger role in professional activities as they impacted my current role at work. I ended up getting involved in the Zone 3 vs Zone 4 debate for the Salt Lake area, and felt like I provided some valuable input that made a difference. I got involved with PCI (Precast/Prestressed Concrete Institute), and got both of the current local precasters to back me while I organized two educational seminars in Salt Lake City on the proper seismic design of precast concrete.

CONTINUED ON PAGE 4

Opinions expressed in the SEAU Newsletter are not necessarily those of the Structural Engineers Association of Utah. Technical information contained herein shall not be used without independent verification by an engineer. Advertising rates and information sent upon request. Acceptance of advertising and informational brochures in the SEAU Newsletter does not constitute endorsement or approval by SEAU of the products or services advertised. SEAU reserves the right to refuse any advertising or editorial comment.

FOCUS

SEAU NEWS intends to highlight some of our most interesting and important buildings in Utah, highlight some of the local firms, and provide biographies of famous structural engineers.

If you have a particular interest in a building or person you would like to see highlighted in this space or want your firm highlighted in this section, please contact newsletter committee member Jerod Johnson at (801) 486-3883 or jjohnson@reaveley.com.

SEAU – How Do We Stack Up?

By Jerod Johnson

This article is part of an ongoing feature of SEAU News which has the purpose of highlighting member firms of the organization and/or highlighting SEAU itself.

It was my recent pleasure to participate in a monthly function of SEAONC (Structural Engineers Association of Northern California). This is a subsidiary organization of SEAOC and operates in a manner very similar to our own organization. This particular meeting was an inaugural event and opportunity for recruitment into various committees of the organization. I had the pleasure of learning about these committees from the various representatives and at the same time I had a convenient excuse not to join a committee, being only a visitor to California. Be it simple curiosity or the perhaps the desire to build upon our own organization, my interest was heightened. As I made my way from table to table I could not help but compare SEAU to SEAONC and ask myself; how do we stack up?

There are 15 committees in addition to a board of directors in SEAONC. In SEAU, we have 18 committees (not including liaisons to other organizations, i.e. BSSC) to complement our board of directors. Though different in name, many of the SEAONC committees appear to have similar purposes and functions of the Utah counterpart. Committees catching my eye that do not have an SEAU counterpart include the Sustainable Design Committee and the Young Members Forum.

Though the concept of sustainable design has been around for over 30 years, it has only recently seen surges of interest and growth. According to some reports, the number of projects seeking credits for sustainability has increased annually by approximately 100 percent for the last 5 years. In SEAONC the purpose of this committee is to establish and advocate the role of the structural engineer in the sustainable design process, to provide guidelines for the contributions of the engineer and to review current trends in sustainability. Our own ACEC Utah Chapter

has also recently established a committee to treat the sustainability issue.

SEAONC’s Young Member Forum or YMF provides an avenue for young members to become more actively involved in the organization. It has an extensive professional development program including exam preparation for the PE and SE exams. In this forum, future California SE’s learn the entire process of the sometimes lengthy migration from university student to licensed structural engineer.

Perhaps similar committees may be organized in SEAU’s future. Aside from these, I was interested to find that many of the committees of SEAONC paralleled our own SEAU committees. Did I find this surprising? In some ways I did. While California is rightfully recognized as one of the birthplaces of advanced earthquake engineering and structural dynamics I was pleased to receive re-affirmation that SEAU is a top-flight organization with a talented membership and organizational services that parallel those of very large markets like California. Although by comparison our numbers and our market are very small, the opportunities for career growth and advancement in the field of structural engineering are promoted, encouraged and endorsed by our own SEAU in a manner of equal caliber to our California counterpart. Even more so, the opportunities for active involvement and growth through SEAU are far greater since our ratio of committees to total membership is far larger.

SEAU MEMBERSHIP APPLICANT

The following individuals have submitted applications to the SEAU membership committee for new members:

- Michael S. Linford Associate
- Jesse Malan Associate
- Sonny Au..... Professional
- Aaron J. Buchanan Associate
- Immanuel K. Runnels Associate
- Steven S. Hobbs Professional
- Benjamin Nolte..... Professional
- Joseph W. Stuart..... Associate

SEAU NEWS SUBMITTAL DEADLINE

October SEAU News deadline is October 23rd.

- We expect updates from the following:
- Board Member - Treasurer
 - Codes Committee
 - Emergency Response Committee
 - USSS Representative

TECHNICAL ARTICLE by JESSE MALAN

Concrete Cantilevered Retaining Walls Part II

This month's article is the second part of a three part installment on the design of cantilevered concrete retaining walls. Part I discussed the basic static forces and loads on retaining walls and briefly looked at various stability issues and factors of safety. This article will focus on the loads and safety factors for the effects of seismic excitation on the wall.

Code Prescriptions

The commentary to FEMA 450 makes the following statement in section 7.5: "Increased lateral pressures on retaining structures during earthquakes have long been recognized; however, design procedures have not been prescribed in U.S. model building codes." The current IBC does not specifically address increased lateral pressures due to seismic excitation.

According to ASCE 7-05^a section 11.8.3, the geotechnical report shall include lateral pressures on retaining walls. If the design of a retaining wall occurs in a seismic design category D, E or F and the soils report did not provide lateral earth pressures, *it would be irresponsible for the structural engineer* to not ask for and use an increased lateral earth pressure from the geotechnical engineer.

Forces

Figure 1 illustrates the increased lateral earth pressure due to seismic considerations. Traditionally this pressure has been applied as distributed load along the height of the wall that was similar to the lateral earth pressure (greatest at the base of the footing and linearly decreasing to zero at the soil surface). Recently, geotechnical engineers have explained to the membership of SEAU in a previous SEAU meeting, that the most recent research has shown that this pressure should be distributed as an inverted triangle as shown in Figure 1. Some references recommend that the resultant force should be applied at a height of $0.6 \cdot H$, where H is the height of the wall. The resultant force should follow the direction of the wall for the recommended loading.

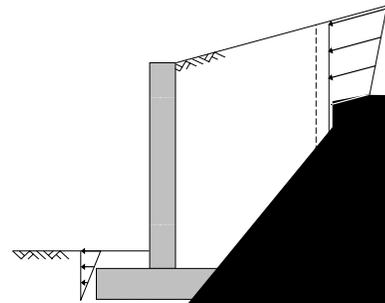
The seismic excitation increases the active and passive pressure that acts on the wall.

The lateral earth pressures from seismic considerations is not to be added to the lateral earth pressures from static loads. The seismic lateral earth pressure is added to the lateral earth pressure from static loads to create an increased lateral earth pressure.

Design Considerations

The retaining wall should be checked for both the loading condition of the static wall under the static loading and the loading condition of the retaining wall with the static loads combined with the seismic lateral

forces. Although the seismic condition has greater forces, most geotechnical reports also allow for increases in bearing capacity for transitory-type loading such as seismic excitation. The argument can also be made that the factors of safety could be less conservative for a transitory loading as well.



TECHNICAL ARTICLE (cont.)

structures. It is the responsibility of the structural engineer to apply a safe and reasonable design for such structures.

Closure

This article was not meant to be a descriptive design but a guideline of considerations for use in retaining wall design. The newsletter committee invites and welcomes any comments on this article.

References

- a. American Society of Engineers, ASCE 7-05, "Minimum Design Loads for Buildings and Other Structures"
- b. International Code Council Inc., "2006 International Building Code"
- c. FEMA 450, "2003 NEHRP Recommended Provisions for New Buildings and Other Structures Part II: Commentary"
- d. Army Corps of Engineers, Engineer Manual 1110-2-2502, "Engineering and Design – Retaining and Flood Walls," Washington DC, Sept. 29, 1989
- e. Bowles, Joseph E., "Foundation Analysis and Design, Fourth Edition," McGraw-Hill, 1988

MESSAGE FROM THE BOARD (continued from page 1)

This precaster coordination and backing was surprisingly easy considering that the two local precast companies typically reacted to each other like the proverbial "cats & dogs", but it worked because they both had a vested interest. I got into a PCI committee and spent time over two years helping to edit a design guide for GFRC. I ended up being asked to author a brief "Perspective" in the PCI Journal a couple of years later. In 1992 I opened my own consulting firm, and I slowed again somewhat in professional activities as I tried to build up a new business into a profitable venture. More and more of our company's work seemed to be coming from southern Utah, so in 1995 I moved my office and my family to St George.

In the St. George area I was suddenly struck hard by the obvious fact that southern Utah did not have an active association such as SEAU! I tried to stay involved by traveling to Salt Lake to SEAU meetings and functions, but it was difficult to justify several hours of driving for short meetings. Over time I began doing a fair amount of work in southern Nevada and Las Vegas, and later I joined SEASoN (Structural Engineers Association of Southern Nevada) to get involved with a closer-to-home organization. These efforts were not done to keep me socially involved with my peers. My wife will quickly agree that I am not the social type, and rather are the all too typical social invert that many engineers are known for. But these efforts helped me personally in a professional way, helping me to stay current on code changes and professional practice updates. It helped me to be aware of what was being done with current design and construction methodologies.

While I was trying to stay more current myself, I observed other local southern Utah practicing engineers struggle without the help of a local and active structural engineers association. I saw building officials struggling when they did not have easy local access to an organization of professionals for help, opinions, and answers. I saw these same engineers and officials struggle and wish for better information on local snow load particulars, on critical spot location wind load data, on current professional design practices, and on proper professional ethics.

Eventually I began to coordinate with the City of St. George to offer "lunch and learn" meetings to overview critical topics and to hold discussion forums. Engineers, building officials, architects, and contractors were invited to attend, but the vast majority of attendees were engineers and building officials. These went very well and the City, fortunately, started to bring in an occasional outside speaker also. The benefits to the region were very quick and obvious. As these meetings started to taper off in attendance after a few months, I did not want to lose the benefit and arranged permission from SEAU to organize a southern SEAU monthly meeting. While much less formal than the main SEAU meetings in Salt Lake City, these meetings were a continued help in maintaining forward momentum of professionalism within the area. Before moving back to the Salt lake area after nearly ten years, I saw a vast change in the professionalism expected and provided on structural services. Engineers were providing better documents, building officials understood the importance and were demanding these better documents, and I believe public safety within new buildings in the area was vastly improved.

The whole point of this long description is that all of us as professionals in a dynamic industry need to stay active in, and continue, our professional education. It is also very critical for us to help others to do the same. I sincerely hope that all members of SEAU will be active in SEAU and in other groups, committees, local issues, and we will all push for statute improvements that will improve our profession. I think it is critical to include all of the State of Utah in this movement to action. We need to include outlying area engineers and building officials, helping them to know and understand the critical current issues. Today, more than ever before, this can be done through fax and phone and email and other technologies. Let's make sure that this year we use all of the resources of all of the structural engineers within the State to help on committees, to receive the current information, to participate in the issues and discussions. Many SEAU committees are short of help; let's get some of those engineers from Logan or St. George or Tremonton or Moab to help!

BULLETIN BOARD

SEAU – NCSEA REPRESENTATIVE by BARRY ARNOLD



I've been asked a number of times, "What is NCSEA", or, "What does NCSEA do for me?" They're both fair questions. NCSEA is an abbreviation for the National Council of Structural Engineers Associations. As

members of SEAU a portion of your yearly SEAU dues is sent to NCSEA to fund their work in furthering the goals of the organization, the local member organizations (SEAs) and the structural engineering profession.

Specifically NCSEA:

- Provides structural engineering expertise in the Code development process and pursues unified, national positions on the Building Code and other issues relevant to structural engineering. (There have been recent discussions about code simplification in many venues. The NCSEA Code Advisory Committees have been at the forefront of code simplification and have strenuously worked to streamline the model codes and provide a "level playing field" for the various materials interests.)
 - Promotes structural engineers and structural engineering to the public and to students.
 - Publishes STRUCTURE, the leading monthly publication for, by, and about structural engineers and their practice.
 - Established a national Structural Engineering Emergency Response (SEER) network to link state SEER groups and help form groups as necessary.
 - Provides meaningful, practical and convenient continuing education opportunities.
 - Provides national support for pursuing separate licensing on a state-by-state basis.
- Provides an identifiable resource for those needing communication with the structural engineering profession.
 - Pursues improvement in the level of competence and standard of practice of the structural engineering profession throughout the U.S.
 - Encourages communication and interaction between member organizations and their committees.
 - Helps in the revitalization and building of state SEAs.

If you're interested in volunteering, NCSEA has the following active committees:

- Advocacy of the Structural Engineering Profession
- Awards Committee
- Code Advisory
 - Existing Buildings
 - Seismic Design
 - General Engineering
 - Special Inspections
- Continuing Education
 - Diamond Review Program – Reviewer or Establish a State Diamond Review Program
 - Technical Seminars – on site
 - Technical Seminars – on web
- Licensing
- Membership
 - Associate, Affiliate, and Sustaining Member Recruitment
 - Member Organization communication and interaction
- Publications
 - Publications other than STRUCTURE magazine
 - STRUCTURE magazine
 - *Structural Connection* (electronic quarterly newsletter)
- Structural Engineering Emergency Response Program (SEERP)

For more information you can contact me or NCSEA directly at www.ncsea.com.

SEAU – STRUCTURAL LICENSING COMMITTEE by KELLY CALDER



The Licensing committee is in the process of finalizing the form and content of a bill to be submitted to the Legislature in their next session. The goal of the bill is to create a practice act in the State of Utah which will define what

types of projects must be designed by Licensed Structural Engineers.

The bill is not yet in final form. At the time of this article the main sections of the bill were as follows:

An engineer shall be a registered structural engineer in the State of Utah to provide structural engineering services in the state for significant structures. Significant structures shall be defined as:

A) Buildings Representing a Substantial Hazard to Human Life

Buildings and other structures that represent a substantial hazard to human life in the event of failure include but are not limited to:

SEAU – STRUCTURAL LICENSING COMMITTEE (cont.)

- 1) Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300.
- 2) Buildings and other structures with elementary school, secondary school or day care facilities with an occupant load greater than 250.
- 3) Buildings and other structures with an occupant load greater than 500 for colleges or adult education facilities.
- 4) Health care facilities with an occupant load of 50 or more resident patients, but not having surgery or emergency treatment facilities.
- 5) Jails and detention facilities.
- 6) Any other occupancy with an occupant load greater than 5,000.
- 7) Power-generating stations, water treatment for potable water, waste water treatment facilities and other public utility facilities.
- 8) Buildings and other structures containing sufficient quantities of toxic or explosive substances to be dangerous to the public if released.

B) Essential Facilities

Buildings and other structures designated as essential facilities, including but not limited to:

- 1) Hospitals and other health care facilities having surgery or emergency treatment facilities.
- 2) Fire, rescue and police stations and emergency vehicle garages.
- 3) Designated earthquake, or other emergency shelters.
- 4) Designated emergency preparedness, communication, and operation centers, and other facilities required for emergency response.
- 5) Power-generating stations and other public utility facilities required as emergency backup facilities for essential facilities.
- 6) Structures containing highly toxic materials as defined by the adopted building code where the quantity of the material exceeds the maximum allowable quantities indicated in the adopted building code.
- 7) Aviation control towers, air traffic control centers and emergency aircraft hangars.
- 8) Buildings and other structures having critical national defense functions.
- 9) Water treatment facilities required to maintain water pressure for fire suppression.

C) Buildings and Structures Requiring Special Consideration

Buildings and structures requiring special design considerations include:

- 1) Structures that are normally occupied by human beings that are five stories or more in height, or more than 60 feet above the average ground level measured at the perimeter of the structure.
- 2) All buildings over 60,000 aggregate square feet in area.

Exempt Structures and Buildings

Exempt buildings and structures include:

- 1) Buildings and structures that represent a low hazard to human life, including but not limited to:
 - a) Agricultural facilities
 - b) Temporary facilities with a floor area greater than 20,000 square feet.
 - c) Minor storage facilities
- 2) Residential buildings including:
 - a) Single family residence
- 3) Light framed one and two story residential buildings
- 4) Bridges

Section A and Section B reflect the 2006 IBC building types for occupancy categories 3 and 4. This is intended to encompass all buildings that in the event of failure represent a substantial hazard to human life and all essential facilities. We have deliberately kept the wording and the list of structures in these two sections consistent with the code occupancy category 3 and 4 in an effort to help simplify the building official's job of trying to identify what is included and what is not. Section C was added to identify other structures deemed important that are not included in the code category 3 and 4 structures. This section must be kept fairly limited and clearly identifiable.

An essential compliment to the definitions of what types of buildings require a licensed structural engineer is a grandfathering policy that would be initiated to define licensees that would be eligible for licensure as SE's under the new law. Current SE's would of course be included. We are working on the specifics of the grandfathering provisions at this time as well.

We would like any comments from interested parties at this juncture. We still have some limited time to make modifications. Our intention is to keep the requirements clearly defined, consistent with the philosophical underpinnings of the code, and politically palatable to the greatest extent possible while still achieving our goal. Please structure any comments with this perspective in mind. We appreciate the comments we have received from some of you already and look forward to any additional suggestions. Send comments to seau@seau.org and reference the Practice Act Bill.

SEAU – SEISMIC COMMITTEE by STEPHEN COHEN

First an update on the tilt-up panel slab only connection. We have been in conversation with TCA (Tilt-up Concrete Association) on this connection, since they are the organization that sponsored this connection. TCA is in

the process of updating their design manual which will contain a sample problem of the calculations that they believe are required for the slab only connection.

When TCA has created their final draft of this publication we have requested the opportunity to review this sample problem. It sounds like it may answer some of the questions that we have. Based on our findings we are planning on writing a summary document that will outline the required code checks for the use of this connection. This summary document will be distributed through this newsletter to engineers and to plan reviewers through the city and county building departments.

As a separate issue on this connection is the question, "What is the correct "R" value to use for tilt-up panels when using the slab only connection?" Most engineers when designing tilt-up panel shear walls use the "R" value for a Special Reinforced Concrete Shear Walls. It is our understanding that the use of the higher "R" value associated with the term "Special" assumes that ductile connections are used that can dissipate energy.

For the seismic committee, we feel that this is probably the "Achilles Heel" issue in trying to use the slab only connection. Since the use of the slab only connection assumes that there is a net zero uplift (tension) force at the base of the panel (see section ACI 318-05 16.5.1.3 (c)), it appears to us that this connection does not provide any method for dissipating energy through the connection and therefore does not qualify as a Special Reinforced Concrete Shear Wall. We see three options; 1) require a lower "R" value to be used (i.e. $R = 3$) for the system; 2) require that the net zero uplift force be checked using the amplified seismic forces (E_m) from ASCE 07-05 12.4.3.2; or 3) don't use this connection. By using the amplified E_m for option 2, we believe that this could substitute for the lack of energy dissipation missing from the slab only connection.

While this is not final, the seismic committee is looking at submitting a code change at the national level to address this issue. Since SEAOC has issued a position statement expressing concern with the slab only connection, we believe that they would team up with us on this issue.

Some of the other items that the seismic committee is looking at for the coming year are as follows:

- Support legislative funding for creating a state wide data base on the seismic condition of K-12 schools. This data base would be based on the Rapid Visual Inspection similar to FEMA 155/156. This was attempted last year but was unsuccessful.
- Creating a summary document outlining when a seismic upgrade is required by code and what code options may be used when upgrading a building. Over the past several years there have been several changes made to the building code and the State of Utah amendments which help define the when and how provisions of seismic upgrades. These items are scattered through several documents and are being interpreted by different jurisdictions in different ways. We believe that a summary document containing all of these items in the same location would help clarify these requirements and options.
- Work with other organizations in coordinating seismic education and upgrading concerns.
- We may look at several geotechnical issues, i.e. new seismic maps, lateral pressure against basement walls and new liquefaction criteria.
- Continue to be a resource to the SEAU Board and its members on seismic issues.

If you have any comments on the above items or would like to add input on other concerns, please contact any of our committee members.

Special thanks to all of the committee members. Those involved in the seismic committee from last year are Barry Welliver, Justin Naser, Leon Tanner, Don Barfuss, Ken Willmore and Steve Powell. We'd like to give a special welcome to new committee members Glen Palmer (SEAU Board Rep) and Kevin Franke (Kleinfelder).

UPCOMING EVENTS**October 11-13, 2007**

NCSEA Fifteenth Annual Conference. Located in Philadelphia, Pennsylvania. See seau.org for further information.

October 18, 2007

SEAU Membership Meeting: **2006 ICC Performance Code for Buildings and Facilities** presented by Mark Mainridge. Meeting to be held at EMCB at the University of Utah at 5:30 pm.

November 4-9, 2007

The Third Structural Engineering World Congress - 2007 (SEWC 2007) will be held in Bangalore, India. Please contact info@sewc2007.org for further info.

SEAU – LEGISLATIVE COMMITTEE
by JOHN COFFEY



We are looking for several new committee members. If you have an interest in being part of reviewing proposed legislation and influencing legislators in issues that affect our profession. Contact: John Coffey (Chairperson) at Ph: (801) 575-8877, Fax: (801) 575-8875, or Email: jcoffey@dunn-se.com

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ETHICS by DEBORAH LONG

**Inquiring Minds Want to Know:
Why Did You Get in Trouble?**

Regulatory agency newsletters remind us that licensees make mistakes, sometimes serious ones, in their dealings with the public. Violations mentioned in these publications range from trust account mismanagement to misrepresentation to fraud and worse. And even though it is a relatively small percentage of professionals who are found guilty of professional misconduct, we know that they represent the proverbial "tip of the iceberg." Members of the public often do not want to get involved in the complaint process, perceiving that it might be too cumbersome. Some aggrieved individuals may be unaware that a complaint process exists.

When I discuss the complaint cases mentioned in my state's real estate licensing newsletter with my students, it's not uncommon to hear this reaction: "There but for the grace of God..." In other words, these licensed professionals are relieved to see that their names have not yet appeared on those notorious back pages. But they are also expressing the concern that they have committed similar violations to those described in the newsletter. They just haven't been caught yet. To some extent, those quarterly communiqués from our regulators are an important deterrent to practitioners who need constant reminders that their conduct is being watched.

But there are other factors that keep us from getting in trouble. One of those factors is our own ethical capacity and orientation. While many of our values were instilled in us in children and come from a variety of sources, our capacity to become even more adept at making moral judgement usually grows as we mature and experience marriage, parenthood and other significant life events.

Another factor in keeping us from going astray is professional standards or codes of conducts espoused by the private and public sector. While a code of ethics doesn't prevent misconduct, professional guidelines help us recognize the baseline for behavior. Codes of ethics set the minimum level of conduct we will tolerate from one another and help us make judgements about right and wrong. The majority of American companies subscribe to a code of ethics, acknowledging its importance in curbing workplace problems.

Many organizations realize the important of yet another factor in minimizing opportunities for misconduct: internal controls, such as adequate supervision, training of staff and careful review of work. It is particularly important that rules are clearly established and consistently and fairly implemented. And while policy manuals and one-day employee orientation programs are useful in establishing ethical boundaries, they are often not enough to meet the frequent ethical challenges that many professionals face. More and more companies are establishing mentoring programs to help

ETHICS by DEBORAH LONG

practitioners cope effectively--often one-on-one-- with work dilemmas.

Another critical factor in minimizing opportunities for misconduct is peer or team review. Peer auditing of critical cases or issues can be an effective tool in preventing problems or preventing their repetition. Sometimes, peer reviews by an independent group from another organization or from a regulatory body can be helpful as well as motivational.

Another determinant in minimizing misconduct is peer pressure within the organization. When the organization's leadership has clearly articulated the values of the company and more importantly, practices those values, then it is more likely that professionals affiliated with the company will practice them as well. We learn our values and ethics from people who have influence over us: first from our parents and family; then from our teachers; and later in life, from our employers and leaders. If our leaders are corrupt, we are more likely to lower our expectations and on occasion, respond by becoming corrupt ourselves. On the other hand, when leaders have high standards, we are more likely to conform to higher standards as well.

The last-- but not necessarily the least effective-- factor in controlling our conduct is government regulation.

Some licensees conduct themselves professionally because they don't want to pay the various penalties outlined by rules and laws. But we also comply with regulation because we believe that a society without rules and laws would be chaotic. So while we may not particularly like the idea of government regulation and reminders from regulatory agencies that let us know our conduct is being measured, we also recognize the importance of some government control.

As I tell my students preparing to take their state licensing exam, the last place I ever want to see them is on the back pages of the licensing newsletter as the "poster child of the month" for bad judgment. It is hope that the combination of their integrity, professional training, company values and leadership, their peers' influence, and government regulation will provide enough discipline and restraint to keep them from becoming an example to the rest of us of how not to conduct ourselves.

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YOU MIGHT BE A STRUCTURAL ENGINEER by STAN R. CALDWELL, P.E.

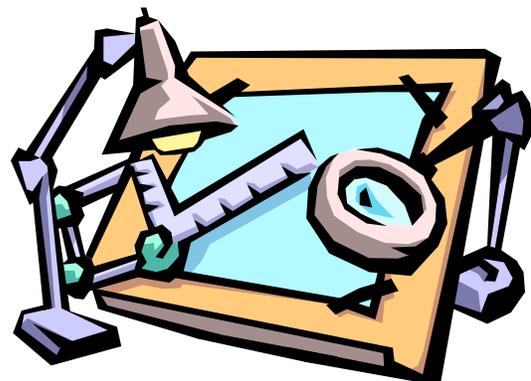
You might be a (happy/productive/successful) structural engineer, if ...

1. You take considerable pride in being a structural engineer. In fact, you view structural engineering as one of the "highest callings" imaginable.
2. You understand that a typical structural engineer plays a larger role in public safety than nearly anyone else, and you strive to practice accordingly.
3. You view structural engineering as a career, not as a job. Moreover, you view structural engineering as a profession, not simply as an occupation.
4. You consistently place ethics, integrity, and quality above any and all business pressures.
5. You strive to team effectively with those in other professions and treat them as respected peers, but you make all structural engineering decisions independently.
6. You take considerable pride in the tangible, constructed results of your efforts.
7. For the most part, you truly love your work and genuinely wake up each day looking forward to going to your place of employment.
8. You typically work somewhat in excess of 40 hours/week because you want to, and you couldn't care less about "the clock".

9. You expect to be fairly compensated with a salary and bonus based on the value of what you accomplish, not with a wage based on the hours that you spend.
10. You understand and accept the obligation to eventually give something back to the profession of structural engineering through financial contributions, active participation in professional organizations, or some other means.

Stan Caldwell is currently a member of the ASCE Board of Direction and the president of the Building Security Council, as well as the former chair of the NCSEA Advocacy Committee.

Thanks to Barry Arnold for submitting this information.



SEAU Presents:

2006 ICC Performance Code for Building and Facilities

October 18, 2007

5:30 PM

EMCB at the University of Utah
Salt Lake City

Presented by Mark Mainridge, S.E., P.E.
with ABS Consulting

The ICC Performance Code presents regulations based on outcome rather than prescription; it encourages new design methods by allowing a broader parameter for meeting the intent of the International Codes. The Performance Code is a companion to the International Building Code and gives information on the origin of Use Groups, Importance Factors, and Building Types used in the building code. The seminar will focus on the two structural chapters of the Performance Code and provide insight into performance-based design and how to communicate building performance to owners/clients.

STRUCTURAL ENGINEERS ASSOCIATION OF UTAH

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