Raise the Bar

In 1981, when I earned the standing of Professional Engineer in the State of California, I was very excited to have achieved this important milestone in my career. I was also relieved to know that I would not have to use my California Registered Engineer Stamp anytime soon! I knew, even though I passed the registration exam, that I needed more years of experience and seasoning before I became “in responsible charge” of a design or study. Fortunately, at the time, I worked for a public agency as an Assistant Civil Engineer and the City Engineer took care of all plan approvals. I was not directly responsible for plan approval and was mentored not only in the design process but in the decision making process. I was given the opportunity to gain experience with guidance from a more experienced engineer and to increase my technical education before being in responsible charge of a project.

Some years later, I was in the private sector and was then expected to be the Civil Engineer that would be approving the design work product. The day then came that I was in responsible charge of a design and was the person expected to “Stamp and Sign” my first set of plans. Before approving the plan, I asked myself, “should I sign this plan?”

There are many responsibilities that a Professional Engineer is charged with when they are “Stamping and Signing” a set of design plans and specifications or a report. State Law sets out the legal requirements for acting in the capacity of a Civil Engineer; court cases and insurance companies set out the personal liability implications of our field of practice; ASCE sets out our ethical standards; and common practices of other Civil Engineers, “doing similar work in similar locations,” defines the standards of care for the work product. In addition, a personal commitment to continuing education to keep our technical skills current must be made. As an Engineer in responsible charge of a design, you must be cognizant of all of these factors. The State of California, Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (BPELSG) reviews consumer complaints against our profession, and others, and determines disciplinary actions to be taken against Civil Engineers for alleged violations of State Law. In severe cases, a Civil Engineer’s registration is revoked. In my observation, many disciplinary cases appear to be the result of the professional performing work outside of their area of expertise or not fulfilling the standards of care for the profession. There are clear lessons to be learned from these cases. More information on disciplinary decisions can be found on the website of BPELSG. Reviewing disciplinary decisions is of great value in comparing the quality of your own work against the views of the regulator of our licenses.

A simple way to combine all of the above factors into one basic question, a way to measure if the design is ready for approval, is, “Will this design result in a safe condition for the public?” That simple question allows one to answer the legal, liability, ethical and work product standards of your efforts. I not only ask myself that question, but before I ever considered signing and stamping that first set of plans, I also asked myself one further question, “Am I proud of my work?” I always ask myself that question before I sign a plan, even though, 33 years after my licensure, I have signed hundreds of plans.
“RYE-MACK”, Western Regional Younger Member Council (WRYMC), registration is fast approaching. The Seattle YMF is excited to put on a conference that will provide leadership skills, networking opportunities, and showcase the beautiful Seattle area to all attendees. A pre-conference brewery tour in Seattle and an innovative scavenger hunt using social media will promote networking among younger members; while technical tours to the longest floating bridge in the world, the biggest tunnel boring machine, and one of the most sustainable treatment plants, will expose you to the complexities of engineering in the Seattle area. Don’t forget about the Leadership Sessions planned for Friday and Saturday that will help prepare you for your current or future leadership role in your local Younger Member Forum. Look for registration information in your email or check the WRYMC website.
The question of "Am I proud of my work?" cuts across everything a Civil Engineer is supposed to represent. This means that I have taken the appropriate amount of time to perform the design and/or have provided oversight of the design; I have field reviewed the project, walked it, pondered it, and evaluated the intended results of the design; I have utilized the standards of practice, standard plans, specifications, details, and checklists that are necessary to meet the design obligations; I have used my knowledge, training, skills and experience in the preparation of the design; I have considered public safety; I have considered the cost effectiveness, practicality, and factors of safety of the design; and, I have checked that the objectives of the client (public or private) have been met. Only after considering these factors, and others, and being satisfied that all of these factors have been appropriately addressed, and I can say to myself that I am proud of this work product, do I sign the plan.

One of the "other" factors to consider when preparing to sign a set of plans is the appropriate application of engineering judgment. This catch-all phrase, engineering judgment, must be used sparingly and only applied in unique circumstances which cannot otherwise be addressed through the application of standard practices. Reviewing non-standard circumstances that may be encountered in a design with your peers, through networking, studying, researching and evaluating such an issue, will help one to develop a sense of the appropriate application of engineering judgment. The application of engineering judgment is appropriate when the combination of one's experience and skills allows the drawing of a conclusion that the design, or issue being considered, has been appropriately evaluated and the solution is safe and applicable to the condition to which it is being applied. When considering the application of engineering judgment, I always test myself to think of what a court approved Civil Engineer Expert would say of the design process and design results should an issue related to a design end up being the subject of review in a court case. In this way, I check to see if there was a standardized design approach for an issue rather than simply concluding that engineering judgment was the solution to the design circumstance. Nevertheless, engineering judgment is one of the tools we have available to use when a reasonable decision needs to be made about a unique circumstance. We have a duty to our profession, public and clients to only issue plans, specifications and reports that represent good engineering practices and are ready for use.

Policy Statement No. 465 was then developed and recommends that future Civil Engineers complete the Baccalaureate Degree and a Master's Degree or 30 qualifying credits plus additional experience before gaining licensure as a Professional Engineer. These proposed educational requirements exceed the current requirements in the State of California. It is ASCE’s position that the Raise the Bar Initiative is necessary to enhance the public’s acceptance of our skills, to effectively and efficiently serve the public needs, to fulfill our obligations as Professional Engineers and to continue our legacy of success in building infrastructure and communities.

The Raise the Bar Initiative is not a topic of common conversation in California and I encourage you to start the dialogue leading to the improvement of our Profession. This Initiative will not impact currently licensed Civil Engineers and would only be implemented for future graduates (likely students now in Middle School). ASCE is currently seeking legislative approval in one or more States to implement the Raise the Bar concepts as a first step in gaining national acceptance of these new standards. I urge you to review this issue through the ASCE website and to support the concepts embodied in the Raise the Bar Initiative. It is our duty to remain current in our engineering education even though we do not have documentation requirements for continuing education in California. The proposed Raise the Bar requirements for additional education before we start our professional career is wholly consistent with our lifelong duties to serve the public good.

One of the Society’s primary initiatives is to “Raise the Bar” on the educational requirements for Civil Engineers to recognize the need for continuing education, improvement of technical competence and expanding experience in our field of work. This initiative was borne out of the fact that a Bachelor of Science Degree in Civil Engineering currently requires fewer college units than in the past, even though our profession is more technically challenging than ever before and many other professions have raised and require a higher educational commitment. ASCE evaluated the knowledge requirements for Civil Engineers and published the work in the “Civil Engineering Body of Knowledge for the 21st Century, Second Edition” which fully describes the expected outcomes from a Civil Engineering Education. This publication can be downloaded from the ASCE web site. ASCE

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American Society of Civil Engineers

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History & Heritage

Celebrating the 100th Anniversary of the Los Angeles Section
The Los Angeles Section
Cordially Invites You to
Renaissance Long Beach Hotel
111 E. Ocean Blvd., Long Beach, CA 90802

Annual Meeting, Installation of Officers & Awards Dinner
Wednesday, November 5, 2014 at 6:00 PM

Registration & Reception 6:00 PM, Dinner & Program 7:00 PM

Registration - $80.00, Students - $50.00 (Ticket Prices Include Self Parking Only)
International Conference on Sustainable Infrastructure 2014 Attendees - $70.00

To register online and for sponsorship opportunities, go to www.ascelasection.org.

For reservations by check, please issue payment to:
ASCE LA Section, 1405 Warner Ave., Ste. B, Tustin, CA 92780

If you have any questions, please call the ASCE office at 714-258-8306

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ENVISION TRAINING WORKSHOP
November 5th  8:30am-5:00pm

Envision™ provides a holistic framework for evaluating and rating the community, environmental, and economic benefits of all types and sizes of infrastructure projects. It evaluates, grades, and gives recognition to infrastructure projects that use transformational, collaborative approaches to assess the sustainability indicators over the course of the project’s life cycle.

Preceding the International Conference on Sustainable Infrastructure, ASCE Los Angeles Section Sustainability Committee is hosting a full-day Envision Training Workshop. ISI approved Envision Trainers will utilize a mix of presentations, case studies, and group discussions to equip participants to take the Envision Sustainability Professional accreditation exam. The Workshop can be taken in lieu of the webinar training course and please note the exam is not part of the course offering. The Workshop Notebook, Envision Manual, and catered lunch with beverages will be provided. Please bring writing materials.

Registration is open until October 29th but space is limited. Additional details at www.ascelasection.org/main/groups/sustainability_committee
For assistance contact Cody Briggs, Sustainability Chair, at cbriggs@pacificaservices.com

ASCE Member Government Employee: $175
Government Employee: $200
ASCE Member Private Employee: $450
Non ASCE Member Private Employee: $475
Contact for Faculty and Student Rates/Details

Renaissance Long Beach Hotel
$18/$23 Self-Parking/Valet
Verona Room, 3rd Floor
111 East Ocean Boulevard
Long Beach, California

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ASCE Region 9 Announces the 2014 Award Nominations Period

Awards Submission Period: September 8 – October 31, 2014
Each year, the ASCE Region 9 Board of Governors presents Individual and Project Awards at the Annual ASCE Region 9 California Infrastructure Symposium and Awards Dinner. These awards are selected from nominations made by the Sections, Branches, Younger Member Forum, Life Member Forum, Technical Groups, Committees, and individual members. Next year’s Awards Dinner event will be held in San Diego at the Air & Space Museum in Balboa Park, on Friday, March 6, 2015.

Project Awards
ASCE Region 9 Project Awards recognize outstanding Civil Engineering projects in California. Only projects that have received an award in 2014 from one of the four ASCE Sections in Region 9 (Los Angeles, Sacramento, San Francisco, or San Diego) are eligible for consideration.

Individual Awards
ASCE Region 9 Individual Awards recognize individuals for outstanding achievements or leadership in civil engineering, or who through their work, support and advance the profession. Nominations can be made by any Sections, Branches, Younger Member Forum, Life Member Forum, Technical Groups, Committees, or individual members. Additional specific criteria governing each Individual Award must also be satisfied.

New Awards Submittal Process in Place effective September 8, 2014
Beginning on September 8, a new web portal will be available for electronic submittal of your award nominations. Please access the web site below after September 8, to submit your award:

www.asceregion9awards.org

For more information, please contact
Kwame Agyare, ASCE Region 9 Awards Committee Chair, agyare.kwame@gmail.com
Lori Campbell, Region 9 Administrator, lkc.consulting@sbcglobal.net

Bi-Monthly Board Meetings

Day: 2nd Friday of February, April, June, August, October, and December
Time: 7:30 am – 10:00 am
Location: ASCE LA Section Office, 1405 Warner Ave., Ste B., Tustin, CA 92780

Everyone is welcome
Please contact ASCE Membership at 1-800-548-ASCE for any address changes.