# Feb. '12

# Los Angeles Section

# Monthly: Est. 1913

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#### PRESIDENT'S MESSAGE

John C. Hogan, P.E. Los Angeles Section President

#### February—a Great Month to Be an Engineer!



What's the first thing that comes to mind when you think "February"? If you're an engineer, then I'm sure your answer is "Engineers' Week"! This year, Engineers' Week is February 19–25. Engineers' Week is a great opportunity to reach out to the public and showcase how civil engineers are making a difference in the world around them every day. I hope your office is planning activities to commemorate the occasion, to have some fun and to celebrate the great work that we all do. This is a good time

to issue a press release to have the media inform the public about something you are doing – a new project, award, or other achievement.

ASCE will be conducting a very special series of events in California in late February, before the dust has settled on Engineers' Week 2012 celebrations. These events will take place on February 28 and 29 in Sacramento. The annual Infrastructure Symposium is set for the 28th, followed that evening by the ASCE Region 9 Awards Dinner. The next morning, on the steps of the state Capitol, ASCE will unveil the 2012 Report Card on California's Infrastructure. That same day, ASCE members from all over California will be paying visits to state legislators to promote infrastructure causes.

Report card unveilings are always newsworthy. We anticipate that this year's event will be particularly so due to the increasing attention and awareness by the public of the importance of a strong infrastructure. Appeals are going out to have as many ASCE members, their colleagues, friends and families to be at the state Capitol for the unveiling. As stewards of infrastructure, Civil Engineers need to be there. The larger the turnout, the more publicity will be generated and the more influence we will exert. We expect strong media coverage and a large contingent of elected officials and their staff members.

I know it is inconvenient to be in Sacramento for these events. However, if you believe in the causes that ASCE is promoting and are interested in doing something to advance them, then please consider taking off for a day and a half. Come to Sacramento on the 28th for the Symposium and Awards and then stick around until the next morning and show up for the Report Card unveiling. You can fly home and be back in the office that afternoon. Many of us do not think twice about taking a few days off to go skiing in February. With poor snowpack this year, use that time instead to come to Sacramento and be part of an effort that benefits our quality of life, our economic fortunes, and our professional opportunities. See you in Sacramento!

A few days following the big events in Sacramento, another inspirational ASCE event will be held—this time in Monterey Park. On Saturday, March 3, 2012, the Los Angeles Section will be holding its annual Life Member Brunch. This is when the Section and its members will honor our newest Life Members. The Section is proud to have 68 of its members reaching this milestone in 2012.

When I say this event is inspirational, I am not using the word lightly. I have been a regular attendee and every year I am amazed and inspired by the careers and accomplishments of the new Life Members. When hearing about the body of work that each of these engineers *continued on page 3* 

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# The 'Civil Engineering Revival'

By Fareed S. Pittalwala, P.E. Governor, ASCE Region 9



What is the greatest challenge facing civil engineers as we embark on 2012? Some say it's reviving the economy, addressing our ever-degrading infrastructure, ensuring adequate and pertinent education of new engineers, or continuing to engage our legislators to ensure financial commitments to infrastructure. All of these are valid and interrelated, and I can't imagine ranking them in order of priority.

The focus of this year's Engineers' Week (February 19th–25th) is based on the projected world population of 7,000,000,000. It's fairly obvious that this increase brings many challenges facing our world that require immediate and sustainable engineering solutions. Civil engineers are needed in the United States today as much or more so than they were during the nation's most prosperous years of growth, but the world in which we will operate is vastly different. As Engineers' Week 2012 starts this year, it's important to remember, but more importantly to embrace all of these challenges with a renewed focus on education. Education of the public, and education of the new generation of younger engineers joining us as colleagues and taking our profession into the future.

We know the education we gave our past graduates, even those of the recent past, will not fit our times. Today's civil engineers increasingly need other skills as they negotiate with the public, incorporate social skills in their work, and address questions of cost and sustainability. So what should constitute the education of a civil engineer in the years to come? ASCE has produced a document, the "Vision for Civil Engineering in 2025" that includes some guidance on the topic.

Engineers must still be grounded in math, science, and discipline knowledge, but they need to have to have a broader understanding of the humanities, social sciences, and economics, as well as the ability to lead, the last of which may be the most important. Additionally, today's civil engineers must take advantage of outside opportunities: volunteerism, international study, and any other relative education beyond the core civil engineering core curriculum, whether in undergraduate education, post-graduate education, or continuing education once licensed.

As we look at the challenges we face and the continuing growth of our population coupled with the continuing degradation of our backbone infrastructure, our society is turning once again to civil engineers. We are the only ones who can solve our transportation problems and upgrade our roads, bridges, and tunnels, and manage our precious water resources. This is truly the time for the "civil engineering revival." I encourage you to work with ASCE Region 9 on their efforts to usher in this revival through its many programs and strategic efforts, including education of the future generations of civil engineers.

Editor Cris B. Liban's column is dark this month to give way to an important guest article on page 6.

# **ASCE's L.A. Section Centennial**

By Don Sepulveda, P.E. Centennial Celebration Chair

It is hard to believe that the Los Angeles Section will be 100 years old in 2013. This is a monumental event. It would be interesting to be able to look into the minds of the founding engineers that sat together

in a room and visualized the formation of this group of engineering professionals and what would be the future for the Section. Do you think that they had thought that this Section would be the second largest in the Society? What were the challenges facing these engineers as they organized the Section and formed into an organization that would end up being so important for the citizens of southern California and ASCE as a whole?

ARTICLE



It is important to think about some of the challenges facing

the founders of the Section in 1913. William Mulholland, a past president of the Section, was working to provide water to southern California. The development of the Model T required additional roadways. The transformation of southern California from a major agricultural region to include manufacturing and business was in progress. These challenges of connect communities, supplying them with clean water, providing sufficient utilities, and providing transportation were significant challenges back then, as they are now.

One hundred years later we see a region that is the product of their hard work. More than half the population of the state lives and works in southern California. This would not have been possible without the accomplishments of these and hundreds of other engineers since. We have many of the same challenges, but new challenges exist regarding sustainability and aging infrastructure. We continue to be a developing and changing society.

Our Section is planning a year-long celebration of our accomplishments. Probably more important is our celebration of how we are going to meet the challenges of the future. This will be accomplished through understanding the role that we as engineers play in the development of the communities in which we live and work. This is an important opportunity to celebrate our accomplishments while we reach out to our political leaders and others within the community to highlight the importance of what we do.

Our Centennial celebration will include many events designed to reach out to demonstrate the importance of our infrastructure while celebrating our past. Through events such as E-Week activities, a statewide water and transportation symposium, video outreach, student events, and K–12 events we will be reaching out to leaders in our communities as well as other engineers.

A committee has been formed to plan the celebration events throughout the year. This committee, made up of past presidents and others *continued on page 3* 

## PRESIDENT'S MESSAGE

has accomplished during a career that typically stretches for four decades or more, a younger engineer cannot help but be encouraged. For me, it is another validation of my belief in the nobility of our profession. Please come check it out – even if you do not know any of the honorees. I can promise you that you will be warmly welcomed and will walk out afterwards immensely proud to be a Civil Engineer.

On the subject of Life Members, I was saddened to learn of the recent passings of two LA Section Life Members, John A. Martin, S.E. and Loren Anderson, P.E. Mr. Martin, founder of his namesake firm, was responsible for the structural engineering of many Los Angeles landmarks. He became an ASCE Life Member in 1984. Mr. Anderson, who became a Life Member just last year, was well known and highly respected in Orange County as City Engineer for Irvine and Mission Viejo, where he later became Director of Public Works. Both gentlemen left proud legacies and our world is better place because of them.

ASCE Life membership connotes career longevity. Speaking of longevity, as you aware that the Los Angeles Section is about to turn 100 years old? That's right – 2013 is the year of the Los Angeles Section's Centennial. We plan to celebrate the 100th anniversary of our founding throughout the year. Actually, the celebration will officially kick off in October 2012, at the Annual Meeting of the Section, when we conduct our Awards program and install our new officers, including Mike Thornton, P.E., who will become Section President during the Centennial year.

The Section's Centennial Committee is hard at work planning various events, programs and publicity to commemorate this milestone. One of the highlights will be the 2013 Infrastructure Symposium, which is scheduled for March 6, 2013 (mark your calendar) at the Union Station/

MWD/Metro complex in downtown Los Angeles.

To get the word out and to build momentum for the Centennial, starting this month, the Los Angeles Section newsletter will feature a Centennial Page. This will offer news about centennial planning as well as glimpses back at memorable projects and engineers who helped to shape the region that we live in. All Branches, YMF's, the Life Member Forum, Technical Groups and Institute Chapters, and Student Chapters are encouraged to weave the Centennial theme into their programs and activities during 2013.

Anyone interested in participating in the planning and roll-out for the Centennial, please shoot me an email (jhogan@hfinc.com) or email our committee chair, Don Sepulveda, P.E., at sepulvedad@metro.net. The more members involved, the greater the impact we will have with our celebration.

Final topic for the month: one of ASCE's three strategic initiatives is 'Raise the Bar'. (The other two are Infrastructure and Sustainability). These initiatives set the focus of the organization. Of the three, the one that has created the most debate is Raise the Bar. It refers to ASCE's position that the educational pre-requisites for professional engineering licensure should be increased to include significant post-baccalaureate degree study. Recently, Josh Nelson, P.E., Orange County Branch President, devoted his column in the Branch newsletter to this subject. With his permission, his article is reprinted in this issue of the Section newsletter for the benefit of all members of the Section.

Have a great Engineers' Week and I hope to see you in Sacramento and Monterey Park.

### ARTICLE

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# 100 Years: Vision Statement Highlights L.A. Chapter's Centennial

closely involved with the Section, is establishing the groundwork for our year long event. We are looking for others to work with us to develop programs and events that will further exemplify our commitment to the infrastructure and the overall development of the quality of life in the Section.

We are excited about what we can do with this. This is an opportunity to bring our message to engineers and non-engineers alike. The Committee has developed a vision statement to guide us as we develop the overall program:

#### **VISION STATEMENT: American Society of Civil Engineers**

#### Los Angeles Section Centennial Celebration

In 2013 the Los Angeles Section of the American Society of Civil Engineers will be celebrating the 100th Anniversary of the formation of the Section. The Centennial celebration will take place throughout the year of 2013 and will include a number of events that will carry the message of the importance of civil engineering past, present, and future. The following statement captures the vision for the celebration and provides guidance for those developing Centennial celebration events.

"The Centennial celebration of the Los Angeles Section of the Ameri-

can Society of Civil Engineers will promote the values of the society and celebrate the history of the Section through:

- Programs to enhance student and younger member involvement by promoting the value of ASCE and civil engineering to younger engineering professionals;
- Programs for local agencies, elected officials, and the general public to showcase the contributions made by civil engineers and the Society in support of infrastructure, communities, and economic development of southern California;
- Personal involvement with public officials to emphasize the value of investment in infrastructure;
- Engaging civil engineers and ASCE in the celebration of the Section and its history; and
- Programs to introduce the value of learning math and science and the profession of civil engineering to students in grades K-12.

This is an exciting time. Please join us as we work together to celebrate the work that our predecessors have done as well as what our successors will do. Please call me at 213-922-7491 or email me at sepulvedad@metro.net if you would like to work with us.

## Reminder:

Copy deadline for the March 2012 issue is Feb. 1, 2012; copy deadline for the April 2012 issue is March. 1, 2012.

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# A Great Idea from the Life Members

The ASCE Life Members' Public Image Committee request that members take their (to be discarded) Civil Engineering magazines to their doctor's office or barber shop and merge them with the stack of magazines. We feel that this will be an effective way to make the general public more aware of what civil engineers do.

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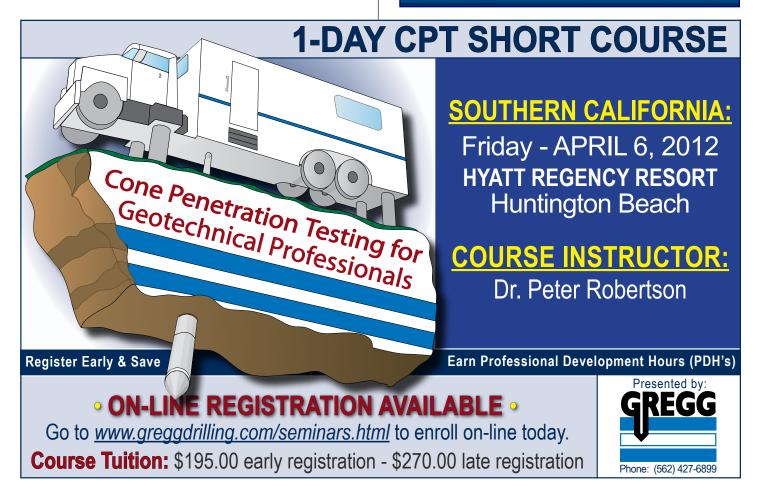
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The Los Angeles Section

Cordially Invites You to the

# Life Member Brunch

# March 3, 2012

In Honor of those members who have advanced to Life Member status in the society and in recognition of their career achievements.

# Keynote Speaker:

# ASCE Society President-Elect, Greg DiLoreto, P.E., F.ASCE.

Members & Guests: \$30.00 per person

Table Sponsor: \$300.00 (4 seats for Sponsor & 6 for Honored Life Members)

Reception: 11:00am Brunch: 11:30am Program: 12:30 – 2:00pm Lunch: Chicken Chardonnay, Vegetarian available

Reservation must be received no later than Friday, February 24.

Monterey Hill Steakhouse 3700 W. Ramona Blvd. Monterey Park, CA 91754 323-264-8426 For reservations, please send checks to: ASCE, Los Angeles Section 1405 Warner Avenue Tustin, CA 92780

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# PS 465 (aka RTB) and B+M/30 & E (aka BOK) = \$\$\$+R

By Joshua Nelson, P.E. President, ASCE Orange County Branch

(Note: this article originally appeared in the December 2011 issue of the Orange County Branch newsletter. It is reprinted here, with permission from Mr. Nelson, for the benefit of all members of the Los Angeles Section. To access the various links, please view the original version, available on the Branch's website at http://www.asceoc.org/index. php/newsletter/article/presidents\_message\_dec2011.)

Want to make more money? Want to get more respect from the general public? Support ASCE's PS 465 (aka RTB) and B+M/30 & E (aka BOK). I know what you are thinking: my article title got replaced with some HTML code right? Or maybe my newborn was banging on the keyboard while I was typing. Then again all engineers like a good equation right? Well the ASCE has a lot of momentum going with a couple key initiatives that I summed up in that simple formula. Now I am guessing you all want to know what all that means right? Well here you go:

PS 465 = Policy Statement 465

RTB = Raise the Bar

B+M/30 = Bachelor's + Master's or 30 Acceptable Credits

- E = Experience
- BOK = Body of Knowledge

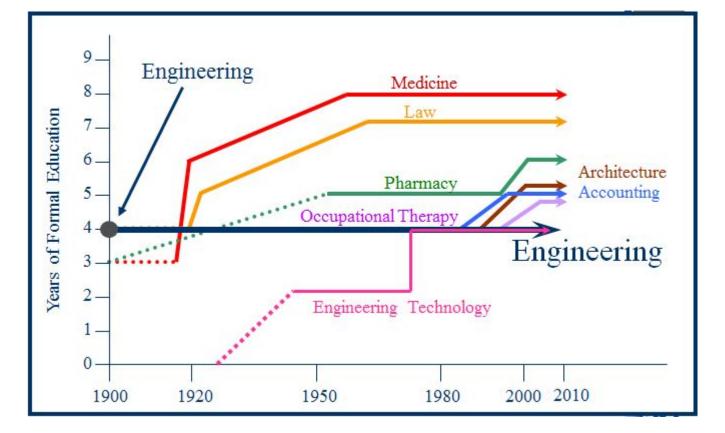
R = Respect

So how does that all lead to \$\$\$ and respect? Well let's establish a couple facts about other professionals. As stated in PS 465, while the education requirements for physicians and attorneys have been increased with the growing demands of their respective professions, the requirements for the practice of engineering have remained virtually unchanged. Today, many other professions beyond medicine and law require education beyond the baccalaureate degree including pharmacy, architecture, occupational therapy and accounting. In fact society President-Elect Greg DiLoreto, PE F.ASCE shared this graphic with us at the November dinner (a picture says a 1,000 words right?)

Is our job that much easier? Is there really less knowledge that we should have as Civil Engineers? I'd say no way. What PS 465 states is:

"The American Society of Civil Engineers (ASCE) supports the attainment of a Body of Knowledge (BOK) for entry into the practice of civil engineering at the professional level. This would be accomplished through the adoption of appropriate engineering education and experience requirements as a prerequisite for licensure."

This is in line with NCEES' model rules for all engineers, but the full policy statement was written specifically for Civil Engineers. The ASCE board of directors adopted PS 465 on April 24, 2007. The BOK part of the equation is B+M/30 & E. The issue we have is that the civil engineering profession is undergoing significant, rapid, and revolutionary changes that have increased the Body of Knowledge required of the



## GUEST ARTICLE

profession. These changes include the following:

- Globalization has transcended the historically recognized worldwide geographic boundaries primarily as a result of enhanced communication systems.
- Information technology continues to make more information available; however, the analysis and application of this information is becoming more challenging.
- Complex systems are requiring integration of our knowledge and skills outside of traditional sub-discipline focus.
- The diversity of society is challenging our traditional views and increasing our need for improved interpersonal and communications skills.
- Many clients are searching for leadership in new management approaches that equitably manage risk as well as improve cost, quality and safety performance.
- New technologies in engineering and construction are emerging at an accelerating rate
- Enhanced public awareness of technical issues is creating more informed inquiry by the public of the technical, environmental, societal, political, legal, aesthetic, and financial implications of engineering projects.
- Civil infrastructure support within the United States is rapidly changing from a focus on development and operation, to the innovative renewal, maintenance, and improvement of existing systems, and the visionary development of new systems.

One of the rationales for the BOK is the "retention of a four-year undergraduate engineering education (as opposed to 5+ years) has contributed to the lowered esteem of engineering in the eyes of society, and prospective students and the commensurate decline in the perceived value brought forth by engineers relative to other professions." Another rationale is academia is being forced to try and squeeze more content into the baccalaureate curriculum while at the same time reducing the credit hours necessary for the baccalaureate degree. The result is a baccalaureate civil engineering degree satisfactory for an entry-level position, but becoming inadequate for the professional practice of civil engineering. Of course this won't happen overnight. The education requirements are most likely still 10-15 year out and of course, everyone prior to those changes will be grandfathered in. The NCEES is behind it but not all the state boards are necessarily behind it at this point. I think they all agree in principle that changes are needed, they just have different ideas on how to get there.

One of the interesting points about the 30 credits is that only half of them need to be specifically engineering coursework. The intent for the non-engineering classes are to help us be more well-rounded. Those of us out of school most likely didn't get training in the professional/

soft skills that are essential for a lot of us. An interesting statistic from the frequently asked questions that are linked to at the bottom of this article is that those BS engineers with a master's degree in engineering or a science master's are about half as likely to progress to senior management positions as those BS engineers with a master's in business or even in social sciences. So by allowing half of the 30 credits to be non-engineering coursework, the ASCE hopes to help us all be more well-rounded. Another interesting indicator that is concerning is we have seen a slippage in engineers holding the role of the State Secretary of Transportation. As of January 2002, only 18 of the 50 secretaries had bachelor's degrees in civil engineering.

What about respect? Our current society president pointed out in a recent blog post that we get no respect as engineers. As he said, while the general public has labeled us as trustworthy, we "get virtually no respect or recognition for what we do. It's probably our fault. We are by our training a modest group, we don't look for glory, and it sure doesn't seek us out". On his wall he has a poster from ACEC that says, "You can't – drive to work, cook that pot roast, bake that cake, shower after jogging, watch 60 Minutes, toast the bread, brew the coffee, call your mother, be cool in summer, wash your sweat suit, dine out, play computer games, medicate your colds, build your new house, listen to "ol' Blue Eyes", ride your bike, video that wedding, vacuum that rug, recycle your garbage, play baseball at night, be warm in the winter, fly to Hawaii, check the time, flush the toilet, buy a fresh tomato in winter, fill that cavity, use the cash machine, mail those letters – without an engineer."

So what can you do? Spread the word! Tell your colleagues about this. Join the "Raise the Bar Network" here. I want to leave you with this statement that the Society came up with in response to a question about how the cost of engineering services will probably increase. It was encouraging to me:

If the requirements for academic preparation for professional practice are increased, then the both the cost and the quality of engineering work requiring professional services should increase. Salary expectations of individuals are likely to increase modestly, based on historical data. Consulting engineering firm overhead will increase modestly, to compensate for the portion of educational costs of individuals borne by firms. The increase in the cost of professional engineering services is likely to be partially offset by the significant market that will develop in the "built environment" for non-licensed engineers with BS degrees who will be integral parts of engineering teams. The overall increase in the cost of engineering services has been estimated by some to be a couple of percentage points. ASCE contends that the increase in quality of engineering services will more than make up for the added cost.

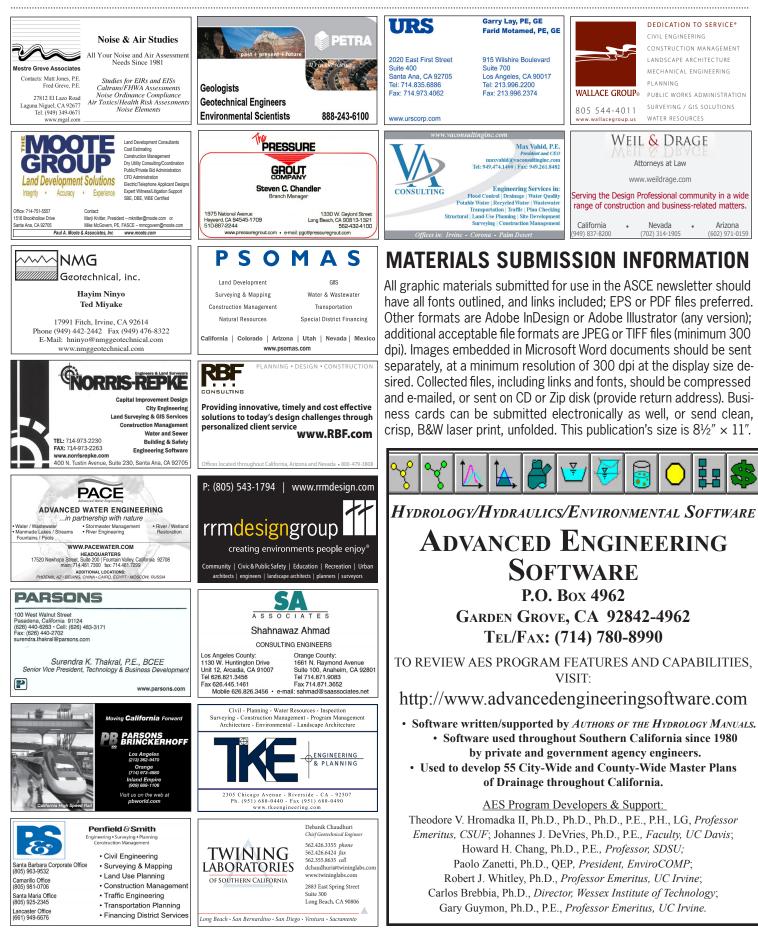
Any comments? If so, please start a discussion on our Facebook page or our LinkedIn page or reply to us on Twitter.

Please note that I pulled a lot of the info above from the frequently asked questions that you can find at http://www.asce.org/Content. aspx?id=2147485470.

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# **N**EWSLETTER **I**NFORMATION

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