

# The Bulletin

ASCE / North Carolina Section Volume 45 No. 1

Sept. / Oct., 2008

## Mark your Calendar:

### Jan. 10

NC Future Cities  
Competition Finals  
NC State Talley Student  
Center  
Raleigh

### Feb. 6-7

Regions 1, 2, 4, and 5  
Multi-Region Leadership  
Conference  
Cherry Hill, NJ

### Feb. 15-21

Engineers Week

### April 2-4

Carolinas Conference  
UNC Charlotte

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## PRESIDENT'S ADDRESS

Joe Moore, PE

**The North Carolina Section of ASCE will be the state's recognized source in promoting the Civil Engineering Profession by focusing on sustained career development, advocacy, and leadership growth while ensuring to protect the health, safety, and welfare of the public.**

**What future will you choose: Sustained career development, advocacy, or leadership growth.**

The future is often seen as the great unknown. Many of us fret over what the future will bring because we view it as an uncontrollable inevitable. However, this doesn't necessarily have to be the case. One can prepare themselves for their future and thereby affect the outcome. I like to think back on what the late Jim Valvano, former head basketball coach at NC State, once said about



his tenure at Iona College. Seemingly anti-intuitive, the small school of 3000 students in New Rochelle, N.Y. helped him to successfully take on legendary coaches like Dean Smith, Mike Krzyzewski, and Lefty Driesel, and ultimately lead him to a national championship against very long odds. While at Iona, Valvano and his staff could not afford equipment or staff to "scout" opponents in advance of upcoming games. Instead he assembled a diverse team and trained them against a multiple set of scenarios. As the game would play out, he would pick up on the opponents' tendencies and would change out players and schemes to adapt to the scenario at hand.

**ASCE has the team to help you prepare for the future.**

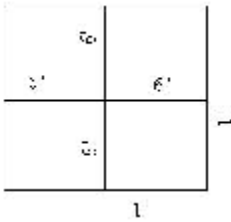
Fortunately, as members of ASCE we have access to a diverse team that allows us to prepare against a multiple set of scenarios. In these uncertain times, it's settling to know that we can sustain our career advancement, advocate for our profession, and become leaders in our community by becoming involved in ASCE.

(Continued on Page 3)

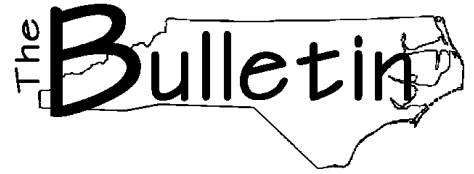
**PROBLEM CORNER**

The intended answer to last issue was 26 strokes using 100 and 125. The secret being one backwards approach on hole #5. There were multiple people who submitted that answer. However, Adam Browning, EI with S&ME submitted the perfect engineering answer for the ASCE golf course, 16 strokes using clubs of 200 and 300 yards. The key assumption in Adam’s approach is that the ball could be hit at an angle, while still being hit in a straight line. For example, the first hole at 250 yards can be broken into two right triangles with the two hypotenuses of 200 yards and an angle of 51.3 degrees. Great job Adam! **This Month’s Problem:**

A square window with sides of one foot each is divided by the narrow bars into four panes, half a foot on every side. A second window is requested with four sides, each one foot again, but now divided into eight panes with all equal sides. How would you design the window? Ignore the thickness of the bars.



Please send your answer to [krines@mbpce.com](mailto:krines@mbpce.com) or mail to Keith Rines, MBP, 3101 Poplarwood Ct, Suite 301, Raleigh, NC 27604.



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## President's Message (Continued from Page 1)

### Career Advancement

Throughout our careers, the skill sets and networks of each position changes. Our young engineers can gain the experience of leading teams and learning management skills by volunteering for short-term Younger Member socials or management focused Branch officer positions. Our mid-career engineers can bolster their networks to collaborate on work or seek out new opportunities by attending meetings, technical sessions, conferences, and social functions. Our more experienced engineers can hand down their years of knowledge at Student member roundtables and Young Member interview preparations.

### Advocacy

When asked to name the top professions, I suspect many in the general public automatically answer "doctors and lawyers". In some respects this is due to legislators and our communities not knowing who we are or what we do. In greater respects it's probably a reflection of people not knowing how large we are. In North Carolina alone ASCE is a membership of 2500 strong. Can you imagine what we could accomplish for our profession and public health, safety, and welfare if we used those numbers to bring important issues to the attention of legislators and the general public?

### Community Leadership

While the technical abilities and interest of our nation's school children continue to lag against other industrialized nations, it is time for us to fill the void and generate excitement in the field by volunteering to visit schools, judge science competitions, and promote through scholarship our brightest and hardest working students. We can also lend our technical know-how to help build-up communities through our joint programs with Habitat for Humanity, Toys for Tots, and Engineers without Borders.

In conclusion, ASCE has the team to help you prepare for the future. In the future you will hear from your Branch Presidents on ways in which you can volunteer to advance your career, advocate for the profession and the public, and lead the community. The question will then stand for you to answer – what future will you choose?

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## Important Notice to all Members: Changes have occurred at *The Bulletin*

The Section Board of Directors has voted to change the method of delivering *The Bulletin* to members of the NC Section. Beginning with the May/June 2008 issue, most members will receive *The Bulletin* via the Section website (<http://nc.asce.org>) in the form of a pdf file. Members will be notified by their Branch Secretary when a new issue is available. You will be able to read the issue online, or download and print the pdf as a hardcopy.

Advantages to the electronic version?

- Most ads are in color, which isn't available with the current mailed version.
- Issues will be available immediately upon release. We won't be dependent on the Post Office to deliver them.
- The Section will save an average of \$2,000 per issue, which can be used for programs to benefit the membership.
- Less paper waste, less clutter in your inbox.

**If the all-electronic version will cause a hardship to you, please contact *The Bulletin* staff or your Branch Secretary or President.**

A limited number of hard copies of each issue will be produced and mailed via regular mail to those members who do not have access to the internet. We want all members to receive each issue of *The Bulletin*. If you need to receive a hard copy by mail, please inform the editorial staff or your Branch Secretary as soon as possible.

**Want to place an ad in the next issue of *The Bulletin*?**

Simply contact the editor and staff at [nc.asce.bulletin@earthlink.net](mailto:nc.asce.bulletin@earthlink.net)

Rates are posted on the website at <http://nc.asce.org>.

**Deadlines for submissions are listed in the calendar on the back cover.**



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## Region 4 Report

### David B. Peterson, PE

The Region 4 Governors and Delegates met on September 19 & 20, 2008 in Nashville, TN. The Governor/Delegate scheduled meetings for 2009 are as follows: March 27 & 28 at Indianapolis, IN and September 18 & 19 at Williamsburg, VA. Any NC Section member willing to attend as a delegate should contact me or Joe Moore. The next governors meeting will take place on February 5, 2009 at Cherry Hill, NJ just before the Multi-Region Leadership Conference.

At the National level, there will be no dues increase this year. More significantly, the **2009 ASCE Infrastructure National Report Card** will be released on **March 25, 2009**. The Board of Direction will be reduced to seventeen (17) members, completing the governance transition begun several years ago. In addition, Garland Rose, PE will be a candidate for President-Elect from Region 4. This coming year there will probably be more than one candidate for President-Elect of ASCE.

The region received a mini-SPAG to help each section develop an Infrastructure Report Card in 2009. In North Carolina we will update our 2006 Infrastructure Report Card on the web and reprint the Report Card for distribution to our Legislators. We will need to use the Report Cards to continue to educate the public and policy makers about the critical needs facing our state's infrastructure.

Region 4 has an "At-Large" governor, as well as eight "Section" governors. If you are interested in serving as an At-Large Governor, please contact me or Joe Moore by the end of the year. The term is for three years from October 2009 to October 2012. Nominations will be discussed on February 5, 2009 at the next Governor's meeting.

I appreciate the opportunity to serve on the Region 4 Board of Governors as your North Carolina Section Governor. Please feel free to contact me about any issues concerning ASCE at the branch, section, region or national level. As Governor, I am to serve as your bridge (communication link) between the National Board of Direction and the North Carolina Section board from October 2008 to October 2011. (phone: (919) 878-9560, email: [dpeterson@rkk.com](mailto:dpeterson@rkk.com)).

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**Branch News** The Eastern Branch Board met on four occasions since our last report: on May 13<sup>th</sup> at CH2M HILL's Raleigh office, by conference call on July 11<sup>th</sup>, on August 14<sup>th</sup> at Dewberry's Raleigh office, on September 4<sup>th</sup> at Kimley-Horn's Raleigh office, and on October 2<sup>nd</sup> at Jacobs' Cary office.

The Younger Members had a Baggo tournament and social that was enjoyed by 20-30 attendees.

On July 1<sup>st</sup>, several Eastern Branch members attended the Legislative Reception in Raleigh. The reception was well attended by the Legislators; the ASCE members were able to speak with approximately 30 House members and 20 Senators.

If you are interested in volunteering time to work for the promotion of your profession in civil engineering, please contact one of the Eastern Branch board members. Our contact information is in this issue on page 3 of The Bulletin and on our website.



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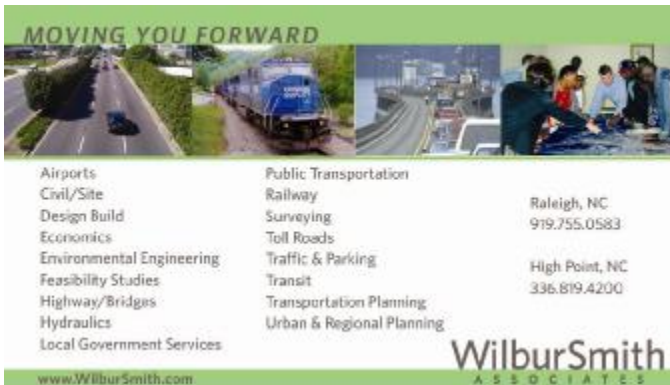
## Past-President's Address Jeffrey Coonse, PE

Thank you for allowing me to serve as your North Carolina Section President during the 2007 - 2008 term. I have been blessed to be a part of such a great organization. Our section will be led this year by our President, Joe Moore. Joe is a wonderful person and talented engineer with special skills in leadership and administration. We can also look forward to the leadership of our President Elect, Yolande Stover. Yolande is an accomplished engineer and compassionate person. She is one of the hardest working, most organized folks I know.

I would like to use this final address as an opportunity to encourage you to become more involved in ASCE. Like so many other groups, you can't realize the full benefit without getting involved. The rest of us can't enjoy the full benefit without you either. The point of organizing like minded talented folks is that the group becomes more than the sum of its parts. You are needed.

## Campus Adventures: Student Chapter of ASCE at UNC Charlotte

The biggest activity that will take place on the campus of UNC Charlotte will be the ASCE Carolinas Conference on April 2, 3, and 4, 2009. The students are finalizing the guidelines and rules for the different competitions. Of course the Concrete Canoe and Steel Bridge competitions will occur. Additionally there will be a geotechnical, environmental, and transportation based events. The Balsa Wood bridge will also be one of the competitions. Over the next few months please be aware (or be aware) of correspondence looking for assistance with funding, judging, and other areas of support the student chapter and the CEE department will need to conduct a successful conference. This will also be a place where there will be a large concentration of Civil Engineering students, many of whom will be graduating in May, August, and December of 2009. Stalite and AREVA are early supporters for the conference and there is room for many other supporters. Civil & Environmental Engineering (CEE) continues to be a popular major for engineering students. Current enrollment in CEE at UNC Charlotte is approximately 425 total students; 325 are undergraduate students. While



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CEE is the smallest of the four departments in the college of engineering (MEGR, ECGR, EngTechnology), incoming freshmen accepted into the college selected Civil as their major just slightly less than the students choosing Mechanical Engineering, which has twice the enrollment of CEE. The number of CEE students graduating this December is approximately 30. The expected number of CEE graduates in May 2009 is approximately 60.



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New officers for the student chapter (2008):

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**Carolinas Conference Chair: Justin**

**Nance**

**Treasurer: Ana Collins**

**Secretary I: Thera Ban**

**Secretary II: Amanda Lawing**

**Webmaster: Mitch Taylor**

**Membership: Jeremy Scott**

**Project Highlight** by Jessica Montgomery, PE, Stimmel Associates, PA

### **Kernersville Medical Center**

On Friday September 26, 2008 officials with Novant Health, Inc. broke ground on the new Kernersville Medical Center. The Kernersville Medical Center is a Medical Business Park development located in Kernersville, North Carolina between Macy Grove Road and the West Fork Deep River and bound by Interstate 40 on the south side of the development. The hospital is designed by McCulloch England Associates Architects (Charlotte, NC) and is similar in design to Presbyterian Hospital in Huntersville, North Carolina. The Kernersville Medical Center will be located on a 77+ acre site along the Forsyth-Guilford county line. The 50 bed hospital will include, 46 acute-care medical/surgical beds, a four-bed intensive care unit, four surgical operating rooms, an emergency department with 14 treatment rooms, imaging services such as CT, ultrasound, X-ray, and mobile MRI, laboratory and pharmacy services and a 100,000 square foot Medical Office Building.

Kernersville is located between Winston-Salem and Greensboro and has recently been experiencing rapid growth. The hospital will cost approximate \$62 million to build and is expected to bring more than 300 jobs and a \$17 million payroll to Kernersville. Along with the 77+ acre hospital site, an additional 121 acres will be available for retail shops, restaurants, offices and an industrial park (by others).

Stimmel Associates, PA, a Landscape Architecture, Land Planning and Civil Engineering firm in Winston-Salem, North Carolina was contracted by Novant Health, Inc. and McCulloch England Associates Architects to provide the site design for the Kernersville Medical Center. The site design for the hospital included a detailed Erosion Control Plan, Site Plan, Grading Plan, Storm Drainage Plan, Utility Plan, Stormwater Management Plan and Details for construction. The first step in the site design was to complete a mass grading and erosion control plan so the earthwork could begin. Once the site was balanced and the final design of the facility was completed by the architects the detailed design of the site including fine grading, storm drainage and utilities began. Another crucial element of the site was the stormwater management. The developed drainage area was evaluated to be 64.44 acres which drains to the West Fork Deep River and is part of the West Fork Deep River IV Watershed. Stimmel Associates, PA decided a wet pond would be the best solution for the stormwater management for this site. No peak reduction of the larger storm events was required; however, the pond provides peak attenuation for the 10, 50 and 100 year storm events. Water quality treatment is provided by the wet pond. The design of the wet pond is based on treating runoff from the first inch of rainfall.

In addition to the site design Stimmel Associates, PA services for this project included: research and analysis of multiple sites, assisted Client with Certificate of Need submittals, coordination of traffic impact studies (TIA) and Traffic Consultants, organized and held neighborhood meetings, created a new zoning district-Medical Business Park (MBP), rezoning, negotiation of conditions, Preliminary Subdivision Plan and annexation for 190+ acres, road closing, coordination with NCDOT and Town of Kernersville, off-site road design and utilities extensions, probable opinion of cost, Landscape Plans and construction observation.



Doug Stimmel, RLA, ASLA (President), Cindy Hoffman, RLA, ASLA (Project Manager), Neal Tucker, PE (Director of Civil Engineering) and Omar Ching, PE (Project Manager/Engineer) all with Stimmel Associates, PA attended the ground breaking ceremony and continue to work closely with the Client, contractor and architect as construction begins and the Kernersville Medical Center begins to take shape.



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## Section / Branch Calendar

Year	2008			2009								
Month	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Section BOD												
Coastal												
Eastern	16	13		15	19	19	16	21		16		17
Northern												
Southern												
Western												
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