

The Bulletin

ASCE / North Carolina Section Volume 45 No. 5

May / June, 2009

Mark your Calendar:

August 27-28
 NC Section Annual Meeting
 and Scholarship Fund-
 Raising Golf Tournament
 Downtown Marriott
 Greensboro

September 18-19
 Region 4 Governors and
 Delegates Meeting
 Williamsburg, VA

October 29-31
 ASCE 139th Annual Civil
 Engineering Conference
 Kansas City, MO

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PRESIDENT'S ADDRESS

Joe Moore, PE

Looking Back . . . Looking Ahead

With our planning year coming to a close we can look back with pride on several accomplishments. The year was broken into thirds to mirror the three primary goals of Leadership, Advocacy, and Career Advancement listed in our Mission Statement.

The first third of our year focused on our Leadership goal of increasing awareness of Civil Engineering through education, public relations, partnering, and mentoring. We had an enormously popular Future Cities program and competition, and we made a significant impact with North Carolina's elementary students through all of our E-week activities. The statewide Future Cities competition was the culmination of a months-long involvement of many engineers serving as mentors and judges. In the end, we sponsored Davidson IB Middle School to represent North Carolina at the national competition in Washington, D.C. Through our E-week activities of school visits, career fairs, and media presentations, we reached over 1600 school children. In the future we look to expand our efforts by encouraging our members to participate individually in programs such as Take A Girl To Work, or join existing Branch efforts in Engineers Without Borders or Habitat of Humanity.



We identified clear areas of focus and we had several people work very hard and ingeniously to meet those goals.

As we moved into the second-third of our year we focused on our Advocacy goal of developing interest and participation within the membership for establishing reciprocal lines of communication between legislators and members. We coupled our traditional North Carolina General Assembly Drive-In and Reception with a release of the North Carolina Infrastructure Report Card.(Continued on Page 5)

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Member Profile

Jill M. Heimburg, P.E.

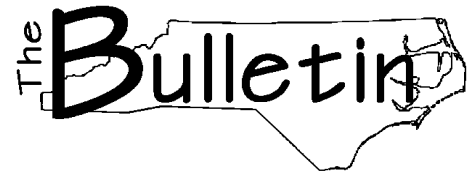
Jill Heimburg is a Senior Geotechnical Engineer with MACTEC Engineering and Consulting, Inc. in Asheville, North Carolina and has eight years of experience providing geotechnical engineering and construction materials testing services.

Jill is originally from Canton, Ohio and earned a Bachelor of Science degree in Civil Engineering from the University of Dayton (Go Flyers!). After graduating from UD, Jill went to work for MACTEC, then LAW Engineering and Environmental Services, in their Northern Virginia/Washington D.C. office. From 2001 through 2004, she was involved in geotechnical exploration and construction materials testing projects located in Virginia, Pennsylvania, Maryland, New York, and Washington D.C., including projects at the White House, the Washington Navy Yard, and the Naval Research Facility. During this time, Jill was also a project engineer for the geotechnical exploration of a 13-mile long section of the Coalfields Expressway proposed for construction in the mountainous terrain of southwestern Virginia. In addition to interpreting the results of over 600 soil test borings, Jill also coordinated the effort of twenty subcontract firms and managed the project financials for this multimillion dollar project.



In the summer of 2004, Jill transferred to MACTEC's Asheville office after falling in love with Western North Carolina while vacationing in the area. Since that time, she has been providing geotechnical engineering, construction materials testing, and Special Inspection services on projects throughout Western North Carolina, South Carolina and Tennessee. Jill has significant experience in evaluating alternate foundation systems, such as deep foundations, mat foundations, or intermediate foundations, in order to provide cost effective solutions to challenging subsurface conditions. Her recent project experience includes providing geotechnical engineering and Special Inspections for a "high-rise" condominium building in downtown Asheville and multiple university, community college, high school and elementary school buildings.

Jill has been an active member of ASCE since her time at UD and is currently the president-elect for the Western Branch. In her free time, Jill enjoys exploring the mountains of Western North Carolina with her husband, her 14-month old son, and her two big dogs.



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Region 4 Report by David B. Peterson, PE

The Region 4 Governors and Delegates met on March 27 & 28, 2009 in Indianapolis, IN. The final Region 4 Governor/Delegate scheduled meeting for 2009 is as follows: September 18 & 19 at Williamsburg, VA. Any NC Section member willing to attend as a delegate should contact me or Joe Moore.

The **2009 North Carolina Infrastructure Report Card** was released on April 14, 2009 with an **overall grade of C-** for North Carolina's infrastructure. The Board of Direction reduced the field of three candidates for President-Elect on April 23, 2009. This year there is more than one candidate for President-Elect of ASCE. Please be sure and learn more about each candidate and vote this summer for your new President.

The ASCE Fly-In to Washington, DC took place on March 25 & 26 the same time as the full Infrastructure Report Card release. Thanks to Eric Rysdon, Barry Mitchell, Matt Fogelman, Vish Chervu and Tom Slater for traveling up to DC to discuss the importance of infrastructure with their elected representatives. We have used the Report Cards to continue to educate the public and policy makers about the critical needs facing our state's infrastructure. If you need more NC Report Cards please contact me.

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 serving as your bridge (communication link) between the National Board of Direction and the North Carolina Section Board from October 2008 to October 2011.

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Problem Corner

Last month's problem:

A man has just finished painting his house and needs something. He goes to a hardware store and asks for help in finding what he needs. The clerk shows him where the objects are and tells him that they cost \$1 each. The man says: "I'm taking 600, so here's \$3." What did he buy?.... Todd Sessions, PE and Jim Sullivan, PE got the right answer: The new street address numbers for the outside of the house.

This month's problem:

A newlywed couple was planning their dream home. They wanted to hire the best engineer, so they solicited tenders from over a hundred firms. In turn, each presented their qualifications & experience and claimed to be the best. The couple came up with an ingenious idea to figure out who was truly the best by asking each firm one question. What was it?

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

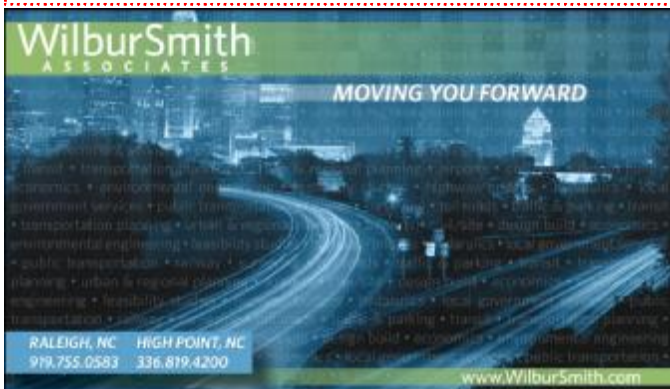
Summer Opportunities to Meet Elected Officials

There are two very important events in the lives of your Representatives and Senators this summer. No, not votes on a new transportation plan or health care reform (although both are important), but the 4th of July and August District Work Periods! The first runs from about June 27 (depending on vote schedules) through July 5 and the second runs Aug. 1 (again, depending on votes) through Sept. 7. Plan now to take advantage of these opportunities to visit with your lawmakers without making a trip to Washington, D.C.

Tips to get you started:

- Check local media and/or your elected officials' Web sites for Town Hall Meetings, local appearances and office hours (these are great opportunities to meet lawmakers in a casual setting and pose a few questions to start a dialog).
- Gather a small group (no more than five) of Section or Branch members and request a "Back Home Visit." Go to <http://www.asce.org/pressroom/publicpolicy/cfbkhome.cfm> for more information or contact ASCE government relations for assistance at govwash@asce.org or 202-789-7850.
- For more tips and information, visit <http://www.asce.org/keycontacts>.

SAVE THE DATE! August 27 and 28....NC Section Annual Meeting at the Downtown Marriott in Greensboro. Technical Sessions, Field Trips, Fund-raiser Golf Tournament, and time to catch up with old friends and meet new ones. Watch for details in the coming weeks!



Enter Local Projects for National Award

The Outstanding Civil Engineering Achievement (OCEA) Award is open to all projects including local best project winners, runners-up, or those not entered on the local level. This prestigious award brings national recognition and publicity for your project. The national finalists will be honored and the winner will be announced at the 2010 Outstanding Projects and Leaders (OPAL) Awards Gala, which will be held in the Washington, D.C. area. Entries may be submitted by the individual firms or agencies involved in the project or may be nominated by an ASCE District Director. Nominations will be accepted until close of business on **Oct. 1**. Find complete information about the award at <http://www.asce.org> and click Press Room, then Honors and Awards, and Complete list of ASCE Awards.

President's Message (Continued from Page 1)

This presentation, and the subsequent magnitude, frequency, and type of media coverage, allowed us to reach 30 million households within 7 market areas in North Carolina, Georgia, and California. We also sent our largest delegation of members to visit our legislators on Capitol Hill in Washington, D.C. We hope to expand our efforts in the future to visit at least half of our legislative delegation each year.

Finally, in the final third of the year we focused on our Career Advancement goal of providing opportunities to civil engineers for career development through education and community participation at every stage of their career. We continued to do a great job of providing enough PDH opportunities, through our Branch lunches and Section conferences, to meet the renewal requirements of our registered members. Our Young Member Group continues to foster networks and develop the team building, public speaking, and leadership skills of our younger members through community outreach and social activities. In the future we look to involve and retain the membership of our student members, increase the involvement and recognition of our Life Members, and extend the opportunities for growth and development to all of our members through the expansion of our diversity efforts.

This has been a very successful year. We identified clear areas of focus and we had several people work very hard and ingeniously to meet those goals. I look forward to the year ahead when we can build upon this great foundation to expand past efforts and create new programs.

Branch News

The **Eastern Branch** May lunch meeting was held on May 21st at the NC State University Club in Raleigh. The speakers were Jason Orthner with the NCDOT Rail Division and Jim Kessler with HNTB. Their presentation was entitled "North Carolina Global TransPark: Connecting Track to the North Carolina Railroad Company." The meeting was attended by 70 people, and one PDH was awarded to each Profession Engineer. Also as part of this meeting, Life Member, David Robertson, was recognized as Eastern Branch President, Gabe Lang, presented him with an ASCE Fellow award.

On March 18th, the Younger Members sponsored a social outing for ASCE members and their families to a Carolina Hurricanes game. This event was attended by 65 people. On April 25th, the YM group participated in a Habitat for Humanity project with the NC State Habitat for Humanity Student Chapter. Eight YM's and over 20 students showed up to help. The Younger Members also attended a Durham Bulls game on Thursday, June 18th.

The 2009 ASCE Eastern Branch Golf Tournament was held on Wednesday, April 29th. It was played at Eagle Ridge Country Club, and 28 golfers participated. The net proceeds from the tournament will be designated to the scholarship fund.

ASCE Governor, David Peterson, and NC Section government liaison, Vish Chervu, attended the Legislative Fly-In in Washington, D.C. during March 25th and 26th. They met with North Carolina Senator, Kay Hagan, the office of North Carolina Senator Richard Burr, and the offices of North Carolina's Congressmen.

NC Section government liaison, Vish Chervu, and Eastern Branch government liaison, Jason Tracey, coordinated the Legislative Reception in Raleigh on April 14th. The reception was attended by 49 State Representatives, 8 State Senators, 16 ASCE members, and 28 guests. The 2009 Updated North Carolina Infrastructure Report Card was presented and discussed.

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 on page 3 of this issue of *The Bulletin* and on our website.



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Project Highlight by David Kiker, PE, WK Dickson & Co., Inc.

In September 2004, remnants of Tropical Storm Frances and Hurricane Ivan caused severe flooding in western North Carolina. One area that experienced some of the worst flooding was the Town of Newland. As many as thirty-five (35) businesses and six (6) residential structures experienced flooding. Additionally, numerous roads in the downtown area overtopped. As a result of the severe flooding experienced in this area, the State of North Carolina through Senate Bill 7 developed a planning level report which identified a series of projects intended to alleviate future flooding. One of these projects is the Newland By-Pass Project.



The North Carolina Department of Environmental and Natural Resources - Division of Water Resources retained WK Dickson (WKD) to further evaluate the existing flooding potential in Newland and to make recommendations for reducing it. The focus of this evaluation is large scale flooding along the North Toe River on the downstream side of Newland. Flooding in the downtown area is exacerbated by the following three downstream floodplain conditions:

- High channel banks that approach 12 to 15 feet in height for the first 300 feet downstream of Pineola Street (State Highway 194). The banks approach this height due to fill placed to raise the rear of the commercial lots adjacent to the channel. Natural bank heights approach 4 to 5 feet for the area immediately downstream of Town.
- Pineola Street (State Highway 194) roadway crossing with four 11-foot by 8-foot reinforced concrete box culverts (RCBCs).
- A natural floodplain constriction located approximately 1500 feet downstream of Pineola Street (State Highway 194). This floodplain constriction is vulnerable to debris accumulation and also causes upstream flood elevations to be higher than would be expected. Debris accumulation on the right floodplain approached 6 feet in height after remnants of Hurricane Ivan.

FEMA's HEC-RAS hydraulic models were used to develop a series of alternatives that would reduce flooding in the downtown business district. The recommended alternative involves the following floodplain improvements:

Install a 60-foot wide, 536-foot long grass-lined earthen by-pass channel to divert flows around the area currently constricting flood flows. This by-pass channel is located approximately 1,400 feet downstream of Pineola Street (US Highway 194).(Continued on Page 7)



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SAVE THE DATE!

Sunday, Nov. 1, at the ASCE Annual Civil Engineering Conference in Kansas City, MO. Join us for the seventh annual Community Service Event as we work at Heartland Therapeutic Riding, Inc. See more details at <http://www.asce.org/professional/commservice/>

Project Highlight (Continued from Page 6)

- Install a floodplain bench along the left and right overbank in the vicinity of Pineola Street. These floodplain improvements also include a greenway trail in the right overbank which ties into the existing parks that are located on either side of Pineola Street. The purpose of these floodplain benches is to lower the tailwater elevation on the Pineola Street culverts to improve hydraulic performance and also reduce upstream flood elevations.
- Install a new headwall with a beveled upstream face at the Pineola Street (Highway 194) box culverts. Beveling the front face of the culvert requires securing a new concrete headwall that will reduce energy losses through the culvert and reduce upstream water surface elevations.

The project will provide both channel stability and flood reduction benefits in the downtown area. The more severely flooded areas will experience 1 to 2 foot reductions in the 100-year flood elevations. As an added benefit, the project will provide a greenway access connecting the two parks located on either side of Pineola Street. The project is currently in final design with an anticipated date for construction to begin in January 2010.

Don't Forget to Vote!

Watch for Section Ballots in the next issue of *The Bulletin*. National Ballots and instructions for online voting have been mailed to each member.

NORTH CAROLINA SECTION**Highway Culverts****3" to 48"**

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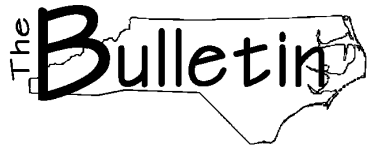
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Would you like to get more involved in ASCE and improving the practice of civil engineering? ASCE's Committee on Professional Practice (CPP) is looking for new full and corresponding members to serve on five of its thirteen constituent committees: Committee on Business Practices, Committee on Continuing Education, Committee on Employment of Civil Engineers, Committee on Licensure and Ethics, and Committee on Peer Review for Public Agencies. Visit <http://www.asce.org/professional/> to learn more about these committees and available positions. Contact Melissa Prelewicz (at mprelewicz@asce.org) by July 17. Please indicate your committee of interest and submit a brief resume as an attachment.

ASCE wants to hear from you! The Pre-College Outreach Program is launching its first online questionnaire for outreach volunteers to solicit member feedback and get a better picture of ASCE Pre-College Outreach volunteerism around the country. Your responses will help ASCE strengthen our network of volunteers. Responses will be accepted through September 30, 2009. **Members who complete the entire survey will be entered in a drawing to receive an iPod Classic** pre-loaded with the full season of Design Squad videos to help inspire your educational outreach events. ASCE will share results from the survey and announce the lucky iPod winners in October. (Apple is not a participant or sponsor in this program.) Go to <http://www.asce.org> and click Kids then Outreach Volunteers for more information.



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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				13	18	10	14	12	9			8
Eastern	16	13		15	19	19	16	21		16		17
Northern												
Southern												
Western												
Bulletin Deadline		14		16		13		15		17		18