

## Arlington as a Gold-Level Walk-Friendly Community

**Mr. Richard Viola, Arlington County's Transportation Planning Section Supervisor recounts lessons learned on making Arlington a vibrant urban city on October 21, 2014**

Arlington is one of only 14 communities in the USA that have been recognized as a Gold Level Walk-Friendly Community. Unlike most of the other top-rated



communities, Arlington's development has been relatively recent, mostly occurring in the mid- to late 20th century, at a time when most American trans-

portation networks have been automotive rather than pedestrian-oriented. Producing a highly pedestrian-friendly community in an age of automobiles requires a clear vision and strong determination to implement the policy and physical changes.

The Arlington Master Transportation Plan (MTP) that was adopted between 2007 and 2012 provides the most recent expression of Arlington's vision for its community. However the most important planning began decades prior and is manifested in the development of the many urban centers within most of Arlington's recent growth has taken place and in the multi-modal transportation systems that support them.

The changes to Arlington's transportation plan began with key planning decisions that have been put into place through thousands of infrastructural improvements. Those improvements have included many street retrofit projects designed by the County's engineering staff and through developer site plans guided by the staff and community advisory bodies. The development of design standards and guidance has been a continuous process as staff, consultants and other collaborators have



learned from past efforts. This presentation will identify key aspects of what we have learned about how to make a community better for pedestrians.

Mr. Ritch Viola is the Planning Section Supervisor for the Arlington County Division of Transportation. He began his career with the Arlington County government as the Bicycle Program Coordinator in 1987. His work for the County has included management of the bicycle and pedestrian programs, safe-to-routes-to-schools coordination, taxicab regulation and long-range transportation planning including project management for a complete revision of the County's Master Transportation Plan. Ritch graduated from the University of North Carolina with a master's degree in urban and regional planning and is a member of the American Institute of Certified Planners. ■

Walk, ride, or drive to our dinner meeting on **Tuesday, October 21**, at the Hilton Arlington, 950 North Stafford Street, Arlington, VA, on the second floor in the Gallery Ballrooms. Parking is available at the hotel (\$8), at the Ballston Mall garage (\$1 after 6 p.m.), and on the street (free after 6 p.m.). The Hilton is on the same block as the Ballston Station on Metro's Orange Line. Registration and networking will be from 6–6:45 p.m., followed by dinner. The program will end by 8:30 p.m. The cost is \$45 for those preregistering, \$10 for students, and \$55 for walk-ins, as space allows.

**Please register by October 15.** Click [HERE](#) to register. One Professional Development Hour is available to attendees. For questions, please contact Christian Manalo at [Manalo\\_christian@bah.com](mailto:Manalo_christian@bah.com).

**Note that no-shows will be charged the full registration fee.** We welcome walk-ins, including any registrations made after the guaranteed number of guests is provided to the hotel. However, the cost for walk-ins is higher because the Section is charged accordingly by the hotel for late registrations.

## President's Corner

It is with great honor that I take on the helm of this esteemed organization, the ASCE National Capital Section (ASCE-NCS). For nearly 100 years, ASCE-NCS has served the civil engineering community around Washington DC, and has grown to more than 3,200 active members today. As I take on my new role as your Section President, I cannot help but think of all those that came before me, including our previous presidents and officers but also the countless others that have supported civil engineering through the years, many of whom have been lost in time. This includes academics who developed our body of knowledge, instructors who shaped future engineers, and practitioners who designed and built infrastructure that has inspired us all.



bettering the environment in which we all live and depend on, from our water and transportation infrastructure to our buildings and natural environment. Our profession is an honorable one and through our good works we exemplify the best in our society. This is true whether you focus

on local infrastructure, or if your focus is national or international in nature. It is truly remarkable and awe-inspiring when you think of how Washington DC has developed into a modern 21st century city, none of which could have occurred without the civil engineer. It is equally inspiring when you consider the profound impact that our local engineers have had throughout the nation and around the world.

It is my pledge to do my best to continue to support and promote the civil engineering profession. I also ask you for your support. To the extent that you are capable, have

the skills and expertise, drive, and love of our profession, please join us. This upcoming year, we have an aggressive program planned. Actions are already underway to produce a Centennial Commemorative Book and Infrastructure Report Card. Additionally, we will continue to host multiple activities each month, produce monthly newsletters, help our local student chapters, support national initiatives, and promote STEM education.

I look forward to hearing from and meeting more of you over the next few weeks and months. Please always feel free to contact me directly if you have any questions or suggestions for our organization. I am certain that working together, ASCE-NCS will continue to do its part in promoting our ideas, building the profession, and being a shining example for generations of civil engineers to come.

*Christian Manalo  
President, ASCE-NCS 2014–15*

Today's civil engineer inherits a legacy and rich heritage that we must strive to maintain. All of us have a role in

## Opportunity Alert! Help Needed on DC Infrastructure Report Card

We are actively recruiting members to help develop a draft of the DC Infrastructure Report Card. If you have knowledge of and expertise in any one or more of the following 16 infrastructure components and wish to participate in this vital Section effort, e-mail Ranjit Sahai at [rsahai@ram-corp.com](mailto:rsahai@ram-corp.com). ■

Infrastructure Categories	Infrastructure Components	
<b>Water &amp; Environment</b>	<ul style="list-style-type: none"> <li>■ Dams</li> <li>■ Drinking Water</li> <li>■ Hazardous Waste</li> </ul>	<ul style="list-style-type: none"> <li>■ Levees</li> <li>■ Solid Waste</li> <li>■ Wastewater</li> </ul>
<b>Transportation</b>	<ul style="list-style-type: none"> <li>■ Aviation</li> <li>■ Bridges</li> <li>■ Inland Waterways</li> <li>■ Ports</li> </ul>	<ul style="list-style-type: none"> <li>■ Rail</li> <li>■ Roads</li> <li>■ Transit</li> </ul>
<b>Public Facilities</b>	<ul style="list-style-type: none"> <li>■ Public Parks and Recreation</li> </ul>	<ul style="list-style-type: none"> <li>■ Schools</li> </ul>
<b>Energy</b>	<ul style="list-style-type: none"> <li>■ Energy</li> </ul>	

## Newsletter

**Rachel Schneider, Editor**

**November 2014 Issue Deadline:  
October 15, 2014**

**To Submit Articles:** [newsletter@asce-ncs.org](mailto:newsletter@asce-ncs.org)

**NCS eNewsletter Archives:** go to [www.asce-ncs.org](http://www.asce-ncs.org) and click on the Newsletters tab.

**Address Changes:** Call 1-800-548-ASCE, e-mail [member@asce.org](mailto:member@asce.org), visit [www.asce.org](http://www.asce.org), or write: ASCE – Membership, 1801 Alexander Bell Drive, Reston, VA 20191. Remember to include your membership number.

## National Capital Section

### Officers (2014–2015)

**Christian Manalo, President**  
[manalo\\_christian@bah.com](mailto:manalo_christian@bah.com)

**D. Scott Wolf, Vice President**  
[scott.wolf@dot.gov](mailto:scott.wolf@dot.gov)

**Jordan Pitt, Secretary**  
[JPitt@parrishandpartners.com](mailto:JPitt@parrishandpartners.com)

**Emily Dean, Treasurer**  
[Treasurer@asce-ncs.org](mailto:Treasurer@asce-ncs.org)

**Rachel Schneider, Newsletter Editor**  
[newsletter@asce-ncs.org](mailto:newsletter@asce-ncs.org)

**Kelly Cronin, YMF President**  
[ncsymfpresident@gmail.com](mailto:ncsymfpresident@gmail.com)

**Brian Barna, Director**  
[brian.barna@cardnohayneswhaley.com](mailto:brian.barna@cardnohayneswhaley.com)

**Julia Devine, Director**  
[jdevine@sheladia.com](mailto:jdevine@sheladia.com)

**Shri Yamijala, Director**  
[syamijala@hntb.com](mailto:syamijala@hntb.com)

**Ranjit S. Sahai, Past President**  
[rsahai@ram-corp.com](mailto:rsahai@ram-corp.com)

**Qamar A.O. Kazmi, Previous Past President**  
[qkazmi@schnabel-eng.com](mailto:qkazmi@schnabel-eng.com)

### Committee Chairs

Please refer to the NCS website at <http://www.asce-ncs.org> for a current list of NCS committees and chairs.

# 2015 ASCE-NCS Awards Banquet

## Award Nominations Now Being Accepted

The Annual Awards Banquet provides an opportunity to recognize and celebrate local projects, engineers, and students who have contributed to our section and our community. Every year, the NCS presents a number of awards during its annual banquet, including Outstanding Civil Engineering Project team, Community Service Award winner, Meritorious Service Award winner, Student Scholarship award winners, and members of the NCS who have achieved Life Member status.



Please submit all nominations to Ranjit Sahai no later than **December 31, 2014**.

Ranjit Sahai, P.E., F. ASCE  
*Chair, Awards and Nomination Committee*

RAM Consulting Corporation  
21525 Ridgetop Circle, Suite 270  
Dulles, VA 20166  
[rsahai@ram-corp.com](mailto:rsahai@ram-corp.com)

### Outstanding Civil Engineering Project

This award recognizes a civil engineering project within the National Capital region that demonstrates the greatest civil engineering skills and represents the greatest contribution to civil engineering progress. The project must have been substantially completed within the preceding three years. In granting the award, the Awards and Nominations Committee considers the contribution to the well-being of individuals, the resourcefulness in planning, the solution of design problems, the pioneering use of materials and methods, innovations in construction, impact on the physical environment, unusual aspects, and aesthetic values.

An award plaque is given, naming the project and the firms or agencies involved. The nominees are notified and invited to attend the banquet as guests.

### Community Service Award

The Community Service Award recognizes outstanding contributions by an individual toward community improvement in the Washington metropolitan area. The nomination can be submitted directly by the individual or by another member. The nomination shall briefly describe the achievements and contributions of time and talent toward a civil engineering-related activity that has furthered the welfare of the community within a three-year period preceding the award. The Awards Committee reviews and selects the winner for this award. The awardee will be notified and invited as an honored guest to attend the banquet and to receive the award – an engraved plaque, naming the individual and accomplishment.

### Meritorious Service Award

This award recognizes an individual member of the National Capital Section who has made outstanding contributions to the work of the Section. The awardee must be an active member who has contributed significant time and talent to the Section and who sets a high standard of professionalism through service. The awardee will be notified and invited as an honored guest to attend the banquet and to receive the award – an engraved plaque, naming the individual and accomplishment. ■

NCS award candidates are nominated by the Awards and Nominations Committee which actively seeks recommendations from NCS committees and members. **All members are encouraged to nominate**, either by e-mail or traditional mail, **members and/or projects for one of these awards**. The awards are granted by the Awards and Nominations Committee and are given at the Section's Annual Awards Banquet held in March 2015.

## Volunteer Judges Needed!

Are you interested in being a judge for two big competitions that can advance to a national level – the steel bridge and concrete canoe? Have you previously been a judge and attended a national competition in the past?

If you are interested in serving as a head judge or a panel judge, email Tia Como, P.E., at [tiacom@comcast.net](mailto:tiacom@comcast.net). Please include your name, phone, email, current position, school you graduated from, and whether you are interested in the steel bridge or concrete canoe and in what capacity (Head Judge or Panel Judge).

## ASCE-NCS Newsletter Patrons

- Tunnel Planning & Design
- Claims/Dispute Resolution
- Construction Management

**JACOBS ASSOCIATES**

**WWW.JACOBSF.COM**  
**EXPERTS UNDERGROUND**



**NICHOLSON**

Fred Tarquinio, P.E.  
Business Development Manager  
(412) 221-4500

We are Versatile Geotechnical Contractors offering proven expertise in the design and installation of deep foundation elements, earth retention systems and ground treatment solutions.

To learn more, visit us at [nicholsonconstruction.com](http://nicholsonconstruction.com)

ANCHORS  
AUGERCAST PILES  
DIAPHRAGM WALLS  
DRILLED SHAFTS  
GROUTING  
MICROPILES  
SECANT PILE WALLS  
SOIL MIXING  
SOIL NAIL WALLS  
SOLDIER PILE WALLS

## 2015 ASCE-NCS Sustainability Award Nomination

The tenth annual ASCE-NCS Sustainability Award recognizes private-industry outreach initiatives and projects or public legislation/programs in the metropolitan Washington, DC area. The award-winning project will advance or promote the responsible and sustainable development of infrastructure, the built environment, or the conservation of natural resources. In 2014, the ASCE Foundation won for their LEED Gold certification for the ASCE Headquarters Building in Reston, VA.

### Award/Recognition Criteria

The nominated initiative or project must:

- Advance or promote sustainable development as defined by the ASCE's Code of Ethics:  
*Sustainable development is the challenge of meeting human needs for natural resources, industrial*

*products, energy, food, transportation, shelter, and effective waste management while conserving and protecting environmental quality and the natural resource base essential for future development.*

- Adopt a long-term view, cognizant of the triple-bottom line of Environmental, Social, and Economic implications while emphasizing the impact of choices made now on succeeding generations.
- Be within the geographical limits of the NCS, i.e., the jurisdictions of Montgomery County, Prince George's County, Loudoun County, Fairfax County, City of Alexandria, Arlington County, or the District of Columbia.

Please provide a succinct description of project or initiative (limit to 100 words) and include the following:

1. The public or private entity responsible for the program (include point of contact information, if available), and
2. Describe how the nomination meets the general criteria outlined above.

The nominating individual must provide his/her name, affiliation, telephone number, and e-mail address. All nominations must be submitted by **December 31, 2014**.

For more information or to submit a nomination, contact the Chair of the ASCE-NCS Sustainability Committee, Alex Rosenheim, P.E., LEED AP, M. ASCE, at [alex.rosenheim@gmail.com](mailto:alex.rosenheim@gmail.com). The winner will be announced at the NCS Awards Banquet in March 2015. Anyone interested in becoming involved with the Sustainability Committee please contact Mr. Rosenheim. ■



## The NCS Scholarship Trust

### Your Section Voluntary Contribution

Many of you know that our Section's Scholarship Trust annually awards scholarships to high-academic civil engineering students at the five universities in our Section boundary: Howard University, Catholic University, the George Washington University, University of District of Columbia, and George Mason University. But did you know that ASCE-NCS has awarded more than \$300,000 in scholarships to local students over the past 25 years?

We need your help with this effort and it is easy. You will be receiving your annual ASCE membership dues request soon. On the form, the block for Section Voluntary Contribution allows you to contribute directly to our NCS Scholarship Trust. Your contribution will have a **direct impact** on the

future of the Civil Engineering profession. Please be generous in your contribution – while \$25 is suggested, no contribution is considered too small.

Other sources of funding for our Trust include the Past Presidents Annual Contributions, Memorial Contributions, and Corporate Contributions. ■

*Editor's Note: Additional information on the history and workings of the NCS Scholarship Trust was provided in three articles written by Bernie Dennis, NCS Past President (1996–97), and presented in the February, April, and May 2011 newsletters. These can be accessed at [www.asce-ncs.org](http://www.asce-ncs.org) under the newsletters tab.*

## ASCE-NCS Newsletter Patrons



**Specializing in Design and Supply of Mechanically Stabilized Reinforced Earth® Walls and Precast Concrete Arch Structures**

**Keith Brabant**

Mid Atlantic Regional Manager

12001 Sunrise Valley Dr., Suite 400, Reston, VA  
800-446-5700  
[www.reinforcedearth.com](http://www.reinforcedearth.com)

Highways & Roads  
Bridges  
Railways  
Industrial  
Waterways & Dams  
Protective Structures  
Commercial & Public Facilities



**A. JAMES CLARK**  
SCHOOL OF ENGINEERING

**Graduate Programs Designed for Working Engineers**

- Civil & Environmental Engineering  
- Project Management  
(available 100% online)

- PE Exam Review  
(Fall/Spring)

[www.advancedengineering.umd.edu](http://www.advancedengineering.umd.edu)

## A Message from the Region 2 Director, Chris Menna

Late Summer 2014

Much has happened over the past few weeks and now we are in the full swing of things. Your Governors and I have been very busy as we continue to strive to oversee another exciting year for our Region.

- Governor Bob Efimba has continued to improve and expand our website; please check it out as time permits.



Region 2 Director Chris Menna speaking at ASCE NCS meeting on September 23, 2014

- Governors Tom Imholte and Jack Raudenbush have been planning our upcoming Region 2 Assembly, to be held at PSU's Harrisburg Campus on November 18, 2014. *(We highly encourage all current and emerging geographic entity leaders from within our region to attend. More information is forthcoming.)* They also both attended the Region 2 YMG Camping Trip this past July at a State Park near Harrisburg.
- Governor John Greishaber has been working in the background, improving our records and transition schedule.
- And Governor Bob Brittle has worked hard to give us more formalized budgeting and financial reports.
- Governor John Casana has stepped up and filled in a past vacancy, has formally been elected, and will continue to help us as the year progresses.

As for me, I have nearly finished my first year as Director and have become a more seasoned National Board member. I attended meetings in Stowe, VT and Denver, CO over the summer and helped to select our new Executive Director, Tom Smith. I will continue to serve as a conduit to all of you, bringing the latest developments from ASCE.

On September 10, Bill Brittle visited the Maryland Section and installed the new officers. On September 23, I will attend my first-ever NCS meeting and will support President-Elect Bob Stevens' visit. I am excited about going to Panama and strongly encourage as many of you as possible to attend. As always, we are here to serve you and to bring you the best value that ASCE has to offer. Please contact any one of us with your questions, ideas, and concerns. See you in the fall! ■

## November NCS Meeting Preview

Marriott Marquis Hotel, Washington and Top-Down Construction

Plans for the recently opened Marriott Marquis hotel called for the development of a 1.25 million square foot (sq ft) building on a relatively small (100,000 sq ft) site. Because of Washington D.C.'s limits on building heights, the hotel featured seven below-grade levels extending 100 feet deep to accommodate meetings, events, parking, and other functions. The extreme depth, together with severe space limitations

and the need for large, column-free ballrooms below a 15-story hotel tower, compelled the structural engineering team to devise novel solutions to a number of design challenges. Join us as Chris Crilly and Thornton Tomasetti share details of this remarkable project during our November 18, 2014 meeting. ■

# DISCOVER ENGINEERING

### ASCE-NCS Newsletter Patrons



## September Meeting Recap

### ASCE President Elect Presents "A Call to Action" to Solve America's Federal Transportation Funding Cliff

Bob Stevens, who will be installed as the 2015 ASCE President in Panama City this month, addressed the NCS fall kick-off meeting on September 23 at the Hilton Arlington. He said America's national bank account for transportation, the Highway Trust Fund, has essentially been emptied, Congress only narrowly averted another "funding cliff" scenario in August, and insolvency of



the Highway Trust Fund would directly impact every state and the District.

ASCE has taken a strong stand asking Congress to find a sustainable, long-term funding solution to America's surface transportation funding crisis before May 2015 when the Highway Trust Fund will again reach insolvency. To this end, ASCE launched a campaign "Fix the Trust Fund" at [www.fixthetrustfund.org](http://www.fixthetrustfund.org) to explain America's transportation system problems and how individuals can help to solve them. He encouraged NCS members to visit the website which includes videos, infographics, and resources to help you to voice your opinion to elected officials.

Prior to his presentation, Dr. Stevens and ASCE Region 2 Director Chris Menna installed the NCS Fiscal Year 2015 Officers. Director Menna informed attendees that former NCS



President John Casana was installed as an ASCE Region 2 Governor on September 20, 2014. John replaces former NCS President Dr. Robert Efimba who stepped down after his term as Governor. Director Menna also reminded members the Region 2 Assembly on November 8, 2014 at Penn State, Middletown, PA will be an opportunity to network with Region 2 YMF and Student Chapter leaders. ■

## Employment Clearinghouse

### Position Available

**Structural Engineer Wanted.** ASCE is seeking a structural engineer to manage the day to day and strategic operations of ASCE's structural engineering specialty institute, SEI, creating value added products and services, and ensuring its programs are responsive to the needs of its members and consistent with the overall mission and vision of SEI.

Candidates must possess or be able to shortly become a registered P.E. Ten to fifteen years' experience in structural

engineering with demonstrably increasing responsibility is required. Please submit resume and cover letter w/salary history and requirements at: <https://asce.applicantpro.com/jobs/109684.html>. **EOE M/F/D/V**

*The ASCE-NCS provides the Employment Clearinghouse as a free service to its membership. The Clearinghouse allows members to post short notices for available positions or candidates seeking employment. All employers listed herein are equal opportunity employers. If you have questions, are seeking employment or would like to post a position please contact the newsletter editor at [newsletter@asce-ncs.org](mailto:newsletter@asce-ncs.org).*

## ASCE-NCS Newsletter Patrons



**WJE** | ENGINEERS  
ARCHITECTS  
MATERIALS SCIENTISTS

Wiss, Janney, Elstner Associates, Inc.

## NCS Committee News and Updates

**New!** Did you know that the NCS chapter has fifteen [technical committees](#) that members can join? Every issue we will highlight a technical committee to help you learn more about each one. All of the committees can be found on our website under the Technical Committees tab.

The [Water Resources Committee](#) is dedicated to facilitating and encouraging the sharing of water related information and knowledge among the local civil engineering community. In its role, the committee focuses on:

- Increasing awareness of water issues in and around the Washington DC metropolitan area;
- Providing a forum for the exchange of ideas and information related to water issues;
- Organizing information and education programs, including hosting several water related activities (speakers, site visits, etc.) throughout the year; and
- Supporting the Board of Directors on water resource related issues.

Recent speaker topics include Integrated Planning and Growth Cost of Clean Water; DC Water's Biosolids Management Program; FEMA RiskMAP; DC Clean Rivers Project and Bloomingdale Flood Mitigation; and the Potomac Water Supply Program.

Committee meetings are usually held once every three months with additional support meetings scheduled as needed. ASCE members interested in becoming involved should email Piers Causton at [causton\\_piers@bah.com](mailto:causton_piers@bah.com), Sudhanshu Mishra at [sumishra@gmail.com](mailto:sumishra@gmail.com) or Sara DeGroot at [SDeGroot@mbakerintl.com](mailto:SDeGroot@mbakerintl.com). Additional information on Water Resources Committee can be found at: [http://www.asce-ncs.org/index.php?option=com\\_content&view=article&id=131&Itemid=35](http://www.asce-ncs.org/index.php?option=com_content&view=article&id=131&Itemid=35).



### Younger Members Forum

**Monthly Happy Hours.** The ASCE-NCS Younger Members Forum (YMF) holds monthly happy hours in Arlington, VA or Washington, D.C. Happy hours are typically held the first Wednesday of each month unless a holiday falls during that week. The ASCE-NCS YMF held their September Happy Hour at *Whitlow's On Wilson* in Arlington, VA on September 3 where 15 members attended the event.



NCS Younger Members enjoy themselves at *Whitlows on Wilson* in Arlington

The next monthly happy hour will take place at *Continental Pool Lounge (1911 N Fort Myer Dr, Arlington, VA)* at 6pm on Wednesday, October 8th. Look for emails with specific locations for future monthly happy hours!

### Recap of 2015 Planning Meeting.

On August 27, the YMF held its annual planning meeting *Lyon Hall* in Arlington, VA. During the meeting, YMF officers discussed the successful events from last year, made plans for upcoming YMF events, and voted on new YMF officers for the 2014–2015 year. Discussion topics included monthly YMF happy hours, professional development meeting potential topics/speakers, YMF participation in local volunteering events, and involvement with local university student chapters. YMF is planning to hold two professional development meetings, with one planned for October 2014 and the second for spring 2015. Another goal for this year is to increase involvement with college students by sponsoring a pizza party and technical presentation for local ASCE student



NCS Younger Members at 2015 Planning Meeting

chapters. If you have suggestions for professional development meeting topics, or would like to become more involved with the YMF in other areas, please contact the YMF President at [ncsymfpresident@gmail.com](mailto:ncsymfpresident@gmail.com).

### NCS YMF attends 2014 Younger Member Leader Symposium.

On Sunday and Monday, September 21st and 22nd, ASCE's Committee on Younger Members hosted the 2014 Younger Member Leadership Symposium (YMLS) in Reston, VA. This was the first YMLS since 2009. Forty members from across the country attended the event. The National Capital Section was represented at the YMLS by David Smith and Michael Venezia, and Chris Manalo and John Casana attended the Presidents and Governors Forum (PGF). The conference was held concurrently with the Potential Governor's Session, where potential governors discover the duties of their Geographic Region Boards and expectations of ASCE Governors. Members of both the YMLS and PGF attended three workshops of their choosing.

**Get Involved!** Are you interested in getting involved with more Younger Members activities? Do you have ideas for social events or volunteering activities? Would you like to be a board member? The ASCE NCS Younger Members Group is always looking for new members! Let us know if you are not already on our mailing list! If you would like to become more active with the YMF or would like more information on our events, please contact the YMF President ([ncsymfpresident@gmail.com](mailto:ncsymfpresident@gmail.com)).

*continued on page 9*

## Conquering the FE & PE Exams

I would like to start with thanking the readers of Dr. Z's Corner from the metro area, around the nation and the globe for their good wishes, kind words, and constructive comments. As we've indicated earlier, the whole purpose of this exercise is to spark interest in engineering and along the way help the readers to prepare for the FE and PE exams and hopefully enjoy the experience. This month, I would like to answer some important questions that we've received from our readers.

Click [HERE](#) for this month's sample problems and solutions.

### How do I become a registered Professional Engineer?

Let us start with education. The students may start this journey in their senior year and take the (FE/EIT) exam even before they graduate. The exact rules may vary from state to state. Taking the (FE/EIT) exam is the most important step in the process followed by gaining the professional experience (number of years varies from state to state) and of course, passing the (PE) exam. For detailed information regarding the FE and PE exams the readers should refer to the official website of the National Council of Examiners for Engineering and Surveying (NCEES) at <http://ncees.org>.

### Who prepares the questions for the FE and PE exams?

The Committee on Examination for Professional Engineers of NCEES prepares the questions. The committee is composed of P.E.s who are experts from industry, consulting firms, education, and volunteers. Periodic surveys

are conducted by NCEES to ensure the FE exam specifications and contents reflect what is being taught in schools. The new format of the FE exam started in January 2014 following a survey done in 2012–2013.

### What is the new exam format and reference materials?

The new FE exam is a computer-based test (CBT). It is closed book exam with an electronic reference handbook (*FE Reference Handbook*, New 9.1 Version for Computer-Based Testing) is the only resource material allowed during the exam. Examinees will have 6 hours to complete the exam, which contains 110 multiple-choice questions. The exam will be divided into two sections with a tutorial, a 25-minute break in the middle.

### What are the dates of FE Exams?

Starting with the new computer-based test (CBT), the FE exam will be administered during four testing periods throughout the year: January-February, April-May, July-August, and October-November.

### When is the registration period?

Registration will be open year-round. You may register and schedule the appointment through your "My NCEES" account on the NCEES website. The registration process starts when you select your exam location. Once the location is entered, the applicant will be presented with a list of exam dates for that particular location. To find the best time, you can always browse through the available dates at

another testing centers approved by NCEES.

### What kind of units is used in the test?

The FE exam uses both the metric system of units (SI) and the U.S. Customary system (USCS). In the USCS system of units, both force and mass are called pounds. Therefore, one must distinguish the pound-force (lbf) from the pound-mass (lbm).

### What is the best strategy to conquer the exam?

The FE exam is computer-based and the *FE Reference Handbook* is the only resource material you may use during the exam. You won't be allowed to bring your personal copy of the Handbook into the exam room. The computer-based exam will include a PDF version of the Reference Handbook for your use. **Reviewing the Reference Handbook before the exam is one of the best strategies to conquer the test.** Throughout your preparation, you must become familiar with the charts, formulas, tables, and all other reference information provided. For example, if you need the section properties of W 12 x 50, you may immediately flip to Page 155 of the Handbook in a couple of seconds or waste several crucial minutes searching for that information. In the FE exam, timing is everything and that is why you must have a time plan and a wristwatch.

Until next time,  
Dr. Z



## ASCE-NCS Newsletter Patrons





**October 7–11**

ASCE and Engineers without Borders-USA will sponsor the *Global Engineering Conference 2014* in Panama City, Panama. Come to celebrate the 100<sup>th</sup> anniversary of the Panama Canal, network with peers, learn about community projects and giga projects, and see ongoing construction of the expanded Panama Canal. For more information or to register, click [HERE](#).

**October 8**

The NCS Younger Members Forum sponsors its monthly Happy Hour from 6–8 p.m. at *Continental Pool Lounge* in Arlington, VA. Join other younger members from the area for free appetizers and drink specials. Look for an upcoming e-mail announcement with more details. (See newsletter brief.)

**October 8**

Mr. Richard N. Wright, Vice Chair of the ASCE Committee on Adaptation to a

Changing Climate, will present and discuss lessons learned regarding bridging the gap between climate change science and engineering practice at the Rock Bottom Brewery in Arlington, VA from 6–8:30 p.m. (See newsletter brief.)

**October 21**

Join us for the NCS monthly dinner meeting at the Hilton Arlington. Our guest will be Richard Viola, Arlington County's Transportation Planning Section Supervisor, who will discuss county initiatives to make Arlington attractive to people traveling by foot or on bikes. (See newsletter lead article.)

**November 6–8**

ASCE will sponsor the *International Conference on Sustainable Infrastructure 2014* in Long Beach, CA. The event will focus on sustainability in the built environment, presenting relevant engineering research, demonstrations, and applications that

contribute to competitiveness and well-being. For additional information, click [HERE](#).

**November 18**

How do you construct a 1.25 million sq ft building on an 100,000 sq ft site? Learn about the Marriott Marquis Hotel's top-down construction at the November NCS meeting at the Hilton Arlington. (See newsletter brief.)

**August 23–26, 2015**

ASCE will sponsor *Pipelines Conference 2015* at the Baltimore Marriott Waterfront Hotel in Baltimore, MD. The conference will focus on recent advances in underground pipeline engineering and construction. Abstracts are due by November 13, 2014, and registration will open in March 2015. For more information, click [HERE](#).

**NCS Committee News and Updates**

*continued from page 7*

**Stay Connected!** Check out photos and stay up-to-date with YMF events by visiting the new YMF Facebook page at [www.facebook.com/ASCENationalCapitalYMF](http://www.facebook.com/ASCENationalCapitalYMF). You can also follow us on Twitter (@asce\_ncsYMF) at [https://twitter.com/asce\\_ncsYMF](https://twitter.com/asce_ncsYMF).

**Did you know?** The Potomac River, which provides approximately 90% of local resident's drinking water, has 486 million gallons removed every day. Blue Plains Advanced Wastewater Treatment Plant, servicing 725 square miles in the Washington DC area, has a treatment capacity of 370 million gallons per day and a peak capacity of more than 1 billion gallons per day.

**Bridging the Gap Between Climate Change Science and Engineering Practice**

The ASCE-NCS Sustainability Committee welcomes Richard N. Wright, Vice Chair of the ASCE Committee on Adaptation to a Changing Climate, to present and discuss lessons learned regarding bridging the gap between climate change science and engineering practice.

The presentation will inform engineers of all disciplines of:

- Evidence from observational and analytical climate/weather science which indicates that changes of climate will affect demands for and the performance of engineered systems.



- Authoritative sources for guidance and recommendations for adaptation of engineered systems to a changing climate and needs for the engineering community to collaborate in research with the climate/weather science community.

Join us on Wednesday, October 8 from 6–8:30 pm at the Rock Bottom Brewery in Arlington, VA. The cost is \$30 per person and one professional development hour will be awarded to attendees. ■