



# eNewsletter

National Capital Section  
FOUNDED 1916

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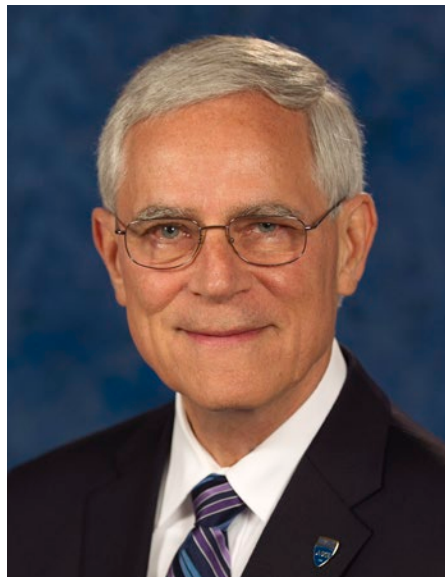
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## The NCS Presents ASCE 2015 President Robert D. Stevens, PhD, PE, F.ASCE on Life as an ASCE President and ASCE's Strategic Initiatives

Join the American Society of Civil Engineers-National Capital Section (ASCE-NCS) on **September 20, 2016** as we welcome ASCE 2015 President, Robert D. Stevens. With over 150,000 members around the world, an ASCE president has many opportunities to interact with civil engineers and students. The president has a unique opportunity to meet and speak both in our country and around the world. Our 2015 President travelled to 10 different countries and spoke to groups ranging from 25 to over 7,000. This international travel helps further ASCE's global strategy.

President Stevens will discuss ASCE's strategic initiatives and describe some of his experiences around the world. He will also focus on ASCE's continuing emphasis on technical activities, including the creation of ASCE's ninth technical institute – the Utility Engineering and Surveying Institute. He will also explain how you can help achieve the initiatives and solve pressing issues facing our country.

Bob Stevens was installed as the 2015 ASCE President at the 2014 Annual Meeting in Panama City, Panama. At the Annual Convention in New York City in October 2015, he became ASCE Past-President. He has been an active ASCE member for over 50 years, serving on the ASCE Board of Direction since 2012 when he was assigned to the Executive, Audit, and Strategic Planning Committees. With his election to President-Elect, he stepped down from his position as Chair of the Committee on Technical Advancement.



He was also a founding governor and officer of ASCE's Transportation and Development Institute and Chair of the Technical Region Board of Governors.

Bob graduated from The University of Akron with a bachelor's degree in civil engineering and math, Yale University with a master's degree in city planning and a certificate in traffic engineering. Additionally, he earned his master's degree and doctorate in civil engineering, with a focus on transportation, at the University of Michigan.

Throughout his career, he has worked in the transportation and water specialties of civil engineering leading environmental assessments, and the planning, design, and construction management of roads, bridges, rail, transit, airport, sewer, and water treatment projects.

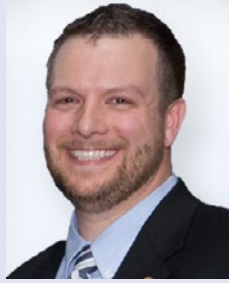
Please join us on **Tuesday, September 20, 2016**, at the Hilton Arlington, 950 North Stafford Street, Arlington, VA, on the second floor in the Gallery Ballrooms. Parking is available at the hotel (\$10), at the Ballston Mall garage (\$1 after 6 pm), and on the street (free after 6 pm). The Hilton is on the same block as the Ballston Station on Metro's orange and silver lines. Registration and networking will be from 6–6:45 pm, followed by dinner. The program will end by 8:30 pm. The cost is \$45 for those preregistering, \$10 for students, and \$55 for walk-ins, as space allows. One Professional Development Hour is available to attendees. For questions, please contact [D. Scott Wolf](#). Please click [HERE](#) to register by **September 14**.

*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.*

Although Bob retired from Arcadis in 2007, he continues to work there part-time as Executive Vice President for special assignments out of their Fort Worth, Texas, office. He is a registered professional engineer in seven states, and has taught at the University of Akron, Ohio, the University of Michigan, and Cleveland State University. He lives with his wife, Bonnie, in Keller, Texas. ■

## President's Corner

The old saying "time flies when you are having fun" is a perfect description of my tenure as the ASCE-NCS President this past year. As I enter the final month of my term and reflect on the past year, I am extremely grateful for the opportunity to have served as NCS President, proud of our accomplishments, and excited about the future.



It was truly an honor to serve as President during the Centennial year of the NCS. While Centennial related Science, Technology, Engineering, and Math (STEM) outreach continues, the 2015–2016 year was an eventful year for the NCS. The NCS Committees hosted numerous meetings and organized Centennial themed tours. We conducted our usual monthly dinner meetings, each with a centennial theme and honoring a Centennial Engineer of the Month. We released the inaugural [Report Card for DC's Infrastructure](#) with numerous press engagements to raise awareness of the state of infrastructure both in DC and nationally. NCS members provided STEM outreach at events such as the Discover E Family Day at the National Building Museum, USA Science and Engineering Festival, and Environmental Protection Agency's P3 Expo. Civil engineering students and NCS members were recognized at our

Annual Awards Banquet. George Washington University hosted Virginia's Regional Student ASCE Competitions for Steel Bridge and Concrete Canoe. With the support of numerous organizations and corporate sponsors, we hosted an exceptional, daylong Centennial Conference at

the National Press Club. Additionally, we published a remarkable Centennial Commemorative Book titled "[Engineering the Nation's Capital – A Century of Innovation and Promise for the Future](#)" that will support our STEM outreach and serve as a legacy for years to come.

While I served at the helm of the NCS for the past year, the aforementioned accomplishments and the dozens of others that I did not mention are the product of NCS Presidents before me, the NCS Board of Directors, NCS Committee Chairs, ASCE staff, and countless volunteers who sacrificed evenings and weekends to support ASCE and give back to the civil engineering profession. It is this volunteer effort and dedication to the profession that has sustained the NCS for its first hundred years and will continue to do so for the next century.

By all accounts, we have had a successful and memorable Centennial year to date. I look forward to seeing

you on September 20 as we install new NCS officers and to your support of Mr. Jordan Pitt as he takes the helm to build upon on the energy of our Centennial celebrations to begin our next century of "Engineering the Nation's Capital."

During the summer, I accepted a position in Kentucky, where I am originally from, and have spent most of the summer with relocation related activities. While I am excited about the new opportunity and moving closer to family, I will miss DC and the ASCE-NCS. I sincerely thank the NCS for embracing me nearly seven years ago when I moved to DC. My involvement in NCS and serving alongside such a talented and motivated team of volunteers has certainly been one of the highlights of my time here in DC. I fully expect my career path will bring me back to DC in a few years and I look forward to serving the NCS again in the future.

Thanks again for the opportunity to serve as NCS President for the past year and for your unwavering support.

Sincerely,

D. Scott Wolf, PE, PLS, F.NSPE  
ASCE-NCS President (2015–2016)

## Congratulations to John Casana, PE, D.WRE, LEED AP, M.ASCE Region 2 Director-Elect!

The NCS congratulates John Casana for his recent election to a three-year term as Region 2 Director. Mr. Casana served as a Region 2 Governor from

2014–2016, NCS President 2012, and has been an active member of ASCE many years. Congratulations John, we wish you a successful term!



## Newsletter

Rachel Schneider, Editor

**October 2016 Issue Deadline:** September 15, 2016

**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 view along the sidebar.

**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. Include your membership number.

## National Capital Section

### Officers (2015–2016)

**D. Scott Wolf**, President  
**Jordan Pitt**, Vice President  
**Brian Barna**, Secretary  
**Emily Dean**, Treasurer  
**Rachel Schneider**, Newsletter Editor  
**James Palmer**, Editor in Training  
**Kelly Cronin**, YMF President  
**Piers Causton**, Director

**Alex Rosenheim**, Director  
**Shri Yamijala**, Director  
**Victor Crawford**, Director  
**Christian Manalo**, Past President  
**Ranjit S. Sahai**, Previous Past President

### Committee Chairs

Please refer to the [NCS website](#) for a current list of NCS committees and chairs.

## The NCS Scholarship Trust – Your Section Voluntary Contribution

By Bernie Dennis, NCS Past President (1996–97), NCS Scholarship Trust

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. 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, no contribution is considered too small.

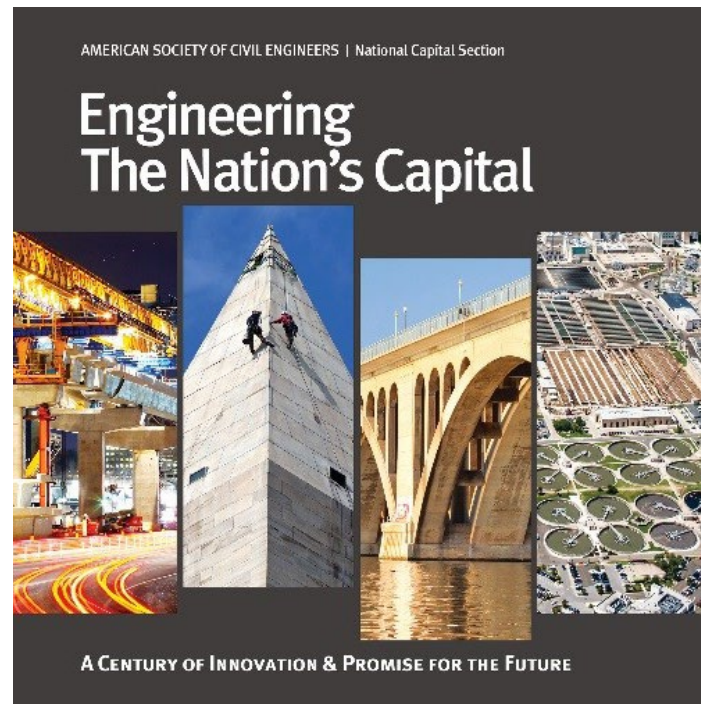
Other sources of funding for our Trust include the Past Presidents Annual Contributions, Memorial Contributions, and Corporate Contributions. ■

## Engineering the Nation's Capital – A Century of Innovation and Promise for the Future

The Centennial Celebration Committee proudly presents, after more than two years in the making, this 130-page hardcover book in coffee-table format. The book, suitable for home or office, will inspire generations of civil engineers through its stories and images of some of the most notable infrastructure in the Washington, DC area. [ORDER NOW](#), and order as many as you want, we can always print more.

Featured projects and initiatives include

- D.C.'s Metrorail
- Reagan and Dulles Airports
- Washington Monument
- U.S. Capitol
- Woodrow Wilson Bridge
- The Capital Beltway
- D.C.'s Clean Rivers Project
- The Pentagon
- Springfield Mixing Bowl
- George Washington Memorial Parkway
- Francis Scott Key Bridge
- Arlington Memorial Bridge
- Monocacy Aqueduct
- Federal City Boundary Stones
- Nationals Ballpark
- Blue Plains Wastewater Treatment Plant



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## An Interview with Richard N. Wright, PhD, PE, NAE, Dist.M.ASCE: Centennial Engineer of the Month

*Editor's Note: Beginning October 2015, the NCS began publishing interviews of prominent members of our Section, asking them to reflect on their career and profession. The NCS Centennial Committee, including Dr. Phillip Melville, PE, PhD, F.ASCE, and Ms. Lucy Menon, PE, M.ASCE, of the Dream Big Subcommittee, have organized the interviews. We hope you enjoy reading these interviews and gain insight from these leaders in civil engineering.*

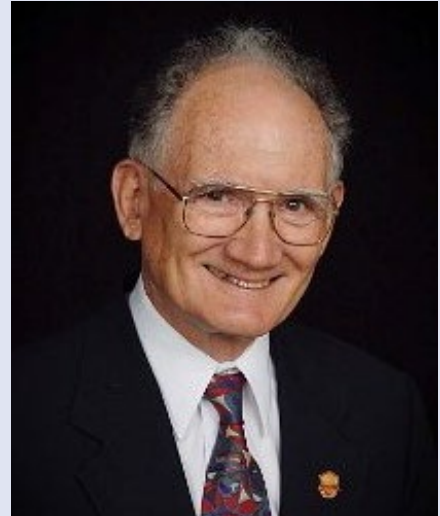
To close out our Centennial Year, we are honored to present an interview with Richard Wright, PhD, PE, NAE, Dist.M.ASCE. Mr. Wright holds bachelors and masters degrees in civil engineering (1953, 1955) from Syracuse University and a Ph.D. in civil engineering (1962) from the University of Illinois at Urbana-Champaign. In 1974, he joined the National Bureau of Standards (NBS, now the National Institute of Standards and Technology, NIST) as director of the Center for Building Technology. Wright is former Director of the Building and Fire Research Laboratory at NIST in Gaithersburg, Maryland. He retired in 2011, as Director of the infrastructure community initiative Practice, Education and Research for Sustainable Infrastructure (PERSI).

Upon retirement from NIST, he took the position of Research Professor, Civil and Environmental Engineering, University of Maryland College Park. Since 2011, he has been a member (and currently chair) of the ASCE Committee on Adaptation to a Changing Climate and contributed to its white paper *Adapting Infrastructure and Civil Engineering Practice to a Changing Climate* which is available at: <http://dx.doi.org/10.1061/9780784479193>. He is also

an active volunteer with the ASCE Committees on Sustainability and Adaptation to a Changing Climate and chairs the ASCE Committee on Sustainable Infrastructure Education.

Among his numerous awards and recognitions, include election to the National Academy of Engineering in 2003. He is a Dist.M.ASCE (2002), a Fellow of the American Association for the Advancement of Science, and was recognized in 1988 with the Presidential Rank of Meritorious Executive and as Federal Engineer of the Year by the National Society of Professional Engineers. In 2006, he received the University of Illinois, College of Engineering Alumni Award for Distinguished Service. In 1989, he received the department's Distinguished Civil Engineering Alumnus Award. In 2010, Mr. Wright received the ASCE President's Medal, which recognizes the accomplishments and contributions of eminent engineers to the profession, the Society, or the public.

Wright was cited, "For his leadership and support of sustainability in civil engineering through his service on ASCE's Technical Activities Committee, Sustainability Committee, and involvement in the creation of the



*PERSI initiative, for his work with the Founder Societies in related collaborative efforts."*

### What do you consider your major achievements in civil engineering in our Section area?

I have been in the NCS since 1971. From 1971 to 1999, I was a research manager at the National Bureau of Standards (NBS), which in 1988 became NIST. My achievements at NBS/NIST are those of projects and programs for which I had management responsibility. Major achievements related to civil engineering include:

- Developing performance criteria and test methods for corrosion resistance of reinforcing bars in bridge

*continued on page 5*

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**Ethan Grossman  
Engineering**

decks and slabs exposed to deicing salts. These led to the development of epoxy coated reinforcing bars that are used in most saltexposed locations and have quadrupled service lives of bridge decks.

- Research on structural loadings and reliability, which led to more consistent and economical practices, incorporated in the national standard "Minimum Design Loads for Buildings and Other Structures."

- Investigation of structural performance in major U.S. and international earthquakes to define research needs and recommendations for improved seismic design and construction practices and formulating seismic standards for federal buildings.

- Development of the Electronic Monograph on the Structure and Properties of Concrete and Other

Cement-Based Materials for prediction of concrete properties as a function of mixture design, curing and environmental exposure.

### ***Why did you decide on a career in civil engineering?***

In the 8<sup>th</sup> grade (age 13), I was asked to identify what I wanted to study in college. I looked at what a civil engineer would study and do, saw these were subjects of value to humanity and of interest to me, and decided to pursue a civil engineering career.

### ***What do you consider the best guidance to young people for a future career in civil engineering?***

Enjoy your studies, colleagues and work. We can and should feel enthusiastic that we are serving humanity in providing functional, durable and safe infrastructure systems. We need

social knowledge and skills to communicate with and work effectively with our project teams and the stakeholders we are serving and affecting. We need scientific and technical knowledge and skills to assure that our projects are functional, durable and safe.

### ***What do you consider the major challenge to a career in civil engineering?***

As expressed by the Envision sustainability rating system for infrastructure projects, we are challenged to "do the right project" and to "do the project right." Both are essential. The major career challenges are: (1) to gain the personal knowledge, skills and credentials to become an effective contributor, and (2) to work in an organization committed to doing the right projects and to doing them right.

## ***Volunteers Needed to Support Science, Technology, Engineering, and Math (STEM) for the Next Generation***

By Victor Crawford, PE, M.ASCE, Centennial Committee Chair, NCS

The NCS is working with the American Association for the Advancement of Science (AAAS), which has been bring engineers and scientists into the classrooms for over ten years (<http://www.aaas.org/senior-scientists-and-engineers/programs-dc>) in supporting STEM in DC area schools. Recognizing the importance of STEM for the continuance of the civil engineering profession, NCS has embraced this educational outreach program and is preparing for the fall 2016 semester.

Volunteers will use their experience and knowledge to assist K-12 teachers in bring civil engineering concepts to young students. This program works particularly well for retirees that can devote one day a week to volunteering. We are focusing on the elementary schools where your expertise in civil engineering would be very welcome by teachers introducing science concepts to young students.

There are also many programs at all class levels including Project Lead the

Way, which has a civil engineering component. The NCS is providing three copies of "Engineering the Nation's Capital – A Century of Innovation and Promise for the Future" to leave in the science/engineering classrooms.

If you are interested in giving back to the profession while sharing the joy of engineering with eager young minds, please contact Victor I Crawford at [vicris51@verizon.net](mailto:vicris51@verizon.net). ■

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# Your Local Professional Chapter of Engineers without Borders

By Eric Tilden, PE, M.ASCE

Engineers Without Borders (EWB) is a non-profit humanitarian organization that collaborates with community partners around the globe to design and build sustainable engineering projects. EWB-USA's projects occur in 47 countries spanning 5 continents, and the organization includes nearly 15,000 members. What readers may not know, however, is that their local DC Professional Chapter of EWB (EWB-DC) was recognized as the National Premier Professional Chapter of 2015.

This is a direct result of the people and projects within the DC chapter. All project team members are professionals and graduate students who volunteer their time, expertise, and energy to one of three active projects around the world. Despite the name, project teams are comprised not only of engineers, but include professionals from a wide array of backgrounds, including health, business, and the public sector. They donate anywhere from hours to weeks of their time to helping each project be successful in providing critical infrastructure to communities who have requested aide.



Education is essential to the success of projects

Currently, EWB-DC is working in the countries of Cameroon, Panama, and El Salvador. While project teams travel once to twice per year to a project site for evaluation and implementation phases, most of the design and administrative aspects of a project occur right here in DC.

## Water and Health Project (Mbokop, Cameroon):

Nestled in the mountains of the Cameroon's Northwest region, the rural village of Mbokop is home to approximately 2,200 people from three primary tribes speaking three main languages, and following two major religions. This



Plotting a path to a successful project

diverse community primarily supports itself through subsistence farming and herding livestock, but lacks basic services such as safe drinking water, proper sanitation, and electricity.

In early 2015, the EWB-DC team broke ground on the installation of a spring-fed, gravity water system for the residents of Mbokop. This includes a spring box collection system, two break pressure tanks, and hundreds of meters of piping constructed over a series of trips. Construction is ongoing and the project team just returned from their fourth implementation trip in March, during which they installed about 360 meters (1,181 feet) of piping.

## Alternative Cookstove Technologies (Canton Satan Clara, El Salvador):

Cantón Santa Clara, El Salvador, is a rural community comprised of approximately 400 households. The majority of community members live in poverty, engaging primarily in subsistence farming, growing corn, beans, and some livestock. EWB-DC began engaging this community in 2004 to install an improved drinking water supply system. In 2012, the drinking water system was completed, with an initial distribution network reaching over 200 households in the community.

The Santa Clara team is now developing and testing prototypes of alternative cookstove technologies. These technologies are designed to reduce wood use and indoor air emissions from traditional cooking methods, as most kitchens in Santa Clara are indoors and women currently cook over an open fire. Without any chimney to direct smoke outside the house, the nuisance smoke

can potentially lead to elevated rates of respiratory problems, as well as advanced deforestation as community members travel further in search of wood for cooking fires.

## Education and Community Center (Rincon, Panama):

One of the most impoverished indigenous groups in Central America, the Ngo be-Bugle live in remote mountain communities throughout Western Panama. Historically marginalized, they lack governmental support for infrastructure and development projects. Moreover, economic, environmental, and political pressures have eroded their indigenous way of life.

The EWB-DC team has collaborated with the community of Rincon on an initiative called CREER (Centro de Recursos Educativos en Rincon). This project seeks to construct a building in Rincon that will house a library, computer center and a community center. The principal objective of EWB-DC's project is to increase access to information and provide the students with the educational tools that they need to succeed. The community members also plan to use the computers to document their indigenous language and culture, apply for government services, and as access to better health care information, including telemedicine.

## How to Get Involved:

If you're interested in learning more about the DC professional chapter, or bringing your professional expertise to a project, the chapter holds monthly meetings every third Wednesday of the month. Visit their website at [www.ewb-dc.org](http://www.ewb-dc.org) for an up-to-date calendar of events, blog posts from trips, and other important information regarding the ongoing projects. ■



Saying goodbye can be hard after site visits

# NCS Committee News and Updates



## Younger Members Forum

By Mike Venezia, PE, M.ASCE, YMF Secretary/Newsletter, YMF President-Elect

**Monthly Happy Hours.** The NCS Younger Members Forum (YMF) holds monthly happy hours in Arlington, VA or Washington, DC. Happy hours are usually the first Wednesday of each month unless a holiday falls during that week. The NCS YMF held their July happy hour at Sehkraft Brewing in Arlington, VA on July 6. Approximately 20 members attended the event. On August 3, the YMF held their August happy hour at Penn Social in Washington, DC with about 25 members.

The next monthly happy hours will take place on **September 7**, at **Whitlows on Wilson** in Arlington, VA, and **October 5**, at **Sauf Haus Bier Hall** in Washington, DC. Join younger members from the area for free appetizers and drink specials. Look for emails with specific locations for future monthly happy hours!

**2016–2017 Planning Meeting.** On August 15, the YMF held its annual planning meeting at *Fire Works Pizza* 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 2016–2017 year. Topics of discussion included monthly YMF happy hours, professional development meeting potential topics/speakers, YMF participation in local volunteering events, and involvement with local university student chapters. In addition to the monthly happy hours, the YMF is planning to hold two professional development meetings, with one planned for fall 2016 and the second for spring 2017. Another goal for this year is to increase involvement with college students and local ASCE student chapters. The 2016–2016 YMF Officers include:

- President, Mike Venezia, PE
- Vice President, Emily Dean, PE
- Secretary/YMF Newsletter, Josh Jaskowiak
- Happy Hours/Social Chair, Joe Whartenby
- Professional Development, Paul Parfitt, PE & Mike Melhorn
- Outreach, Sara DeGroot, PE / Sumon Chatterjee

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).

**Stay Connected!** Check out photos and stay up-to-date with YMF events by visiting the new [YMF Facebook page](#). Also, follow us on [Twitter](#) (@asce\_ncsYMF).

**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 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 email the [YMF President](#).

**Centennial Committee: Engineering the Nation's Capital**  
**We are in the final stretch of our Centennial Year, time to work on our legacy**

By Victor Crawford, PE, M.ASCE, Centennial Committee Chair, NCS

Thanks to the hard work of our volunteers on the Centennial Committee, on our Technical Committees, and of course, our Board of Directors, we were very successful in bringing recognition to NCS in honoring the civil engineering accomplishments over the last hundred years. This included recognition for our Centennial through Proclamations received from the Commonwealth of Virginia, the District of Columbia, and the State of Maryland. We recognized our accomplishments through our excellent Centennial Engineers of the Month series. We recognized our accomplishments by touring the Washington Aqueduct, the C&O Canal, and the design and construct of the DC bridges. The very successful Centennial Conference was the Civil Engineering event of our Centennial Year, featuring Major General Mark Yenter from the Army Corps of Engineers and the current ASCE President, Mark Woodson. We also reached out to students and

the public by showing civil engineering accomplishments at the Discover Engineering Family Day at the National Building Museum and at the USA Science and Engineering Festival.

So how do we ensure the NCS and civil engineering legacy? By placing our outstanding book, "Engineering the Nation's Capital – A Century of Innovation and Promise for the Future" into local libraries. This book will be a source of inspiration for years by showing NCS civil engineering accomplishments have benefited the public. We need your help in implementing this legacy as we work with libraries to have our book displayed and made available for checkout. We need volunteers for DC and Prince Georges County.

Another major goal for the Centennial has been student outreach. What better legacy can we have for our first Centennial than by reaching out to students to highlight what a great future they can have by pursuing civil engineering for the next hundred years? We have already reached out to over 350,000 students and their parents, along with teachers and the public at the Science and Engineering Festival. Now we need you to participate in our Science, Technology, Engineering, and Math (STEM) outreach program. The American Association for the Advancement of Science has been bringing STEM volunteers into the classrooms for over ten years, and we are taking advantage of this superb student outreach program. Please see the write-up on this exceptional program and sign up, so we can bring your knowledge and experience into the classroom as we begin the fall Semester. Remember, our STEM volunteers will receive three "Engineering the Nation's Capital – A Century of Innovation and Promise for the Future" books to leave in the science/engineering classes rooms.

How do we reach the public and students that are visiting the Nation's Capital? Work continues carrying our civil engineering legacy forward by developing an interactive map to educate them about our engineering accomplishments. This map will allow students, by clicking on an internet accessible map, to obtain descriptions for our engineering achievements along

*continued on page 8*



with photos and fun facts. This legacy of our Centennial will also provide a means to reach out to parents and students by showing the benefits obtained of joining our profession. Please consider joining our team developing this very interesting map.

Finally, as a closeout to our Centennial, we are planning an outreach to the public by hosting a Centennial Celebration Tour open to all. We need your help, please join us by volunteering to develop and then present topics at stations set up around the National Capital Mall. We plan to use historical photos that will explain how our profession transformed a swamp into the Nation's front yard.

The NCS represents the ASCE in the Capital area. We have done well with our Centennial, but now need to secure our legacy. Work remains, which include our STEM outreach to schools, our interactive map to highlight our profession's accomplishments, and a Centennial tour open to the public. Your assistance will help make these ongoing endeavors a success. So, whether you are a Young Member, a Life Member, or somewhere in between, we need your help. Please join us by contacting the Centennial Committee at [vicris51@verizon.net](mailto:vicris51@verizon.net).

### Construction Committee Update

By Jeff Tan, PE, PMP, LEED AP, Chair, Construction Committee, NCS



### Professional Development Session.

The construction committee Professional Development Session was held on May 5, from 6:30–8:30 pm at Dolley Madison Library. Lieutenant Colonel Jerry Himes presented how Herman Haupt created

a standard-design bridge system that could be rapidly constructed by untrained, unskilled labor during the U.S. Civil War and made the emerging technology of the railroad a reliable means of supply for Union forces. Eight attendees received the professional development hour certificate.

### Celebrating Our First Anniversary!

September marks one year since the Construction Committee officially launched. The establishment of the Construction Committee in 2015 fulfilled the long-standing need for a committee in the NCS for individuals in construction to network with other professionals, sharpen their skills, and shape the future. We have come a long way in a short time and I am so thankful for the many people who have given their enthusiastic support to the Committee.

### Professional Development Session.

In celebration of our anniversary, the Construction Committee will meet on October 6, 6:00–8:30 pm at Reston Regional Library, Meeting Room 1 (11925 Bowman Towne Drive, Reston, VA 20190). Michael O'Connor will present Henry Campbell who was one of those amazing, early 19th century American civil engineers who not only located the railroad, built track and bridges but also in Campbell's case designed the steam locomotives. Campbell designed the classic and wildly popular "American" (4-4-0) steam locomotive. It was the most famous design of the 19th century according to other non-engineering scholars. Therefore, a civil engineer designed one of the most influential steam locomotives in the mid-19th century.

### Call for Committee Members.

Please join our mailing list at this link: <https://groups.google.com/d/forum/>

[asce-ncs-cc](mailto:asce-ncs-cc) and we will share information such as professional development event, job opening, construction news, etc. Please contact me at [sunjeffsun@gmail.com](mailto:sunjeffsun@gmail.com) if you need more information or wish to serve on the Committee's leadership team. Committee members commit to regular meeting attendance, have the ability to receive communication by phone and/or e-mail and are comfortable communicating their ideas in a group setting. We would be delighted if you considered being a part of it.

### Introducing the ASCE-NCS Reston Committee!

By Lisa Anderson, PE, LEED AP, M.ASCE, Reston Committee Chair, NCS

The NCS is pleased to announce the formation of the Reston Committee, which will hold monthly technical meetings at ASCE Headquarters (1801 Alexander Bell Dr # 2, Reston, VA 20191) in Reston. The goal of the Reston Committee is to serve ASCE members in the Reston area, including surrounding counties, looking to network with other professionals, sharpen their technical and professional skills, and earn Professional Development Hours. For more information, contact the Reston Committee Chair, Lisa Anderson, at [lmanders@bechtel.com](mailto:lmanders@bechtel.com) or 703-429-6631.

The inaugural meeting of the Reston Committee will be held on Thursday, September 15, 2016, starting at 11:45 am at ASCE Headquarters. Norma Jean Mattei, PhD, PE, F.SEI, F.ASCE, 2017 ASCE President, Professor and Past Chair at the University of New Orleans Department of Civil and Environmental Engineering will be speaking on ASCE's Strategic Initiatives: Infrastructure and Sustainability. Please RSVP by Friday, September 9, to [Lisa Anderson](mailto:Lisa.Anderson) or 703-429-6631. ■



NCS Construction Committee participants enjoying the May professional development session.

### Employment Clearinghouse

The 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](#) and visit our [jobs page](#).



## Time Flies – Even Faster When You are Having Fun or Time Really Flies – Especially When You Are Having Fun

Unbelievably AY-2016–2017 has just started. Time goes by so fast. Some of you may know I am just back from my semester-long sabbatical leave. For the last thirty years in academia, thanks to my students' resistance, I had never dared considering a leave until this past semester. As a tenured professor, I was told, I was eligible to take paid sabbatical leave at least four times in three decades, but no regrets.

Here is a brief account of my break. During my break, while charging my batteries, I never missed my monthly NCS articles of Dr. Z's Corner. I also continued preparing dozens of original problems for our readers every month. Not only that, I was also at school almost every Saturday to make sure I run our now well-known pro-bono Saturday classes for the students from various universities and also practicing engineers in the metro area. I was really having fun since we have helped scores of engineering students and engineers for free. And one of them was Diego Buitrago, a structural engineer from Washington, DC. His story was truly inspirational:

Dear Dr. Z,

*I just received the great news. Yes, I conquered the Fundamentals of Engineering (FE) engineering exam on my first try. As a fresh graduate, I would like to thank you for your continued support and mentorship. I also would like to thank to NCS for the "Dr.Z's Corner" for providing hundreds of problems for free for the students and engineers who are preparing to take their FE and PE exams. Your pedagogy, your examples and your pro-bono Saturday sessions made a huge difference and believe it or not you have changed my life Dr. Z.*

*For other students who are interested in passing these exams, I have to tell them my story, how I met you and how I joined your exciting free Saturday classes at UDC? First, let me start from the beginning:*

*I came to U.S. from Colombia in August 2013 and I had set three important goals for myself. To work hard and be a great Structural Engineer, finish the master's degree, pass the FE and PE exams and hopefully be my own boss one day.*

*You may not remember but in spring 2014, I had the opportunity to meet with you, Dr. Z at Howard University. You were a guest speaker at our research seminar that I attended. You gave to us an unforgettable presentation about "How to inspire, motivate and educate engineering students and how to conquer the FE and PE exams?" You also shared with us some stories of your personal life. I was especially impressed with your first two weeks in this country and your experience with homeless people on the streets of Washington, DC. At that point, for sure you were my hero and my role model. For the first time since I came to the U.S. I felt identify with a person that I could see as a very positive influence on me. By that time, I thought I had difficulties but that was nothing compared to your experience. No doubt, this gave me hope and inspiration to be successful in my career as a structural engineer.*

*At the end of summer 2015, my master's degree requirements were partially completed and I joined your pro-bono Saturday classes that you have been offering at UDC. During the first three months, I studied and prepared for the FE exam based on the*

*information and class notes from you. I followed your every advice to conquer the FE exam and I literally solved all the exercises available at Dr Z's Corner given in the NCS' website. I want all other students to know that ASCE-NCS website is a great source with hundreds of original problems and costs nothing, it is absolutely free.*

*Immediately after passing the FE exam, I also received a job offer from a world renowned structural engineering company in San Francisco, California.*

*I consider myself very fortunate that I met you at the right time Dr. Z. You have already changed my life. I cannot thank you enough, I am eternally grateful.*

*Sincerely,  
Diego Buitrago, E.I.T  
T. Y. Lin International  
Bridge Engineer*

Finally, did you know that NCEES Reference Handbook (Version 9.4) is just published? Next month we will talk about that exciting news and its implications.

I will close with a reminder: In both FE and PE exams timing is everything. To conquer these exams SPEED is crucial, and speed can only be attained through practice and more practice ([try out this month's problems](#))!

Until next time,  
Ahmet Zeytinci, P.E.  
(Dr. Z)  
[az@alfam.com](mailto:az@alfam.com)



### September 7

**YMF Monthly Happy Hour**, 6–8 pm, at [Whitlows on Wilson](#) in Arlington, VA. Join younger members from the area for while you enjoy free appetizers and drink specials. Watch for upcoming emails for more information.

### September 15

**Reston Committee**, 11:45am, at ASCE Headquarters, Reston, VA. Norma Jean Mattei, PhD, PE, F.SEI, F.ASCE, 2017 ASCE President, Professor and Past Chair at the University of New Orleans Department of Civil and Environmental Engineering will be speaking on ASCE's Strategic Initiatives: Infrastructure and Sustainability. Please RSVP by Friday, September 9 to Lisa Anderson: [lmanders@bechtel.com](mailto:lmanders@bechtel.com) or 703-429-6631.

### September 20

**NCS Section Meeting**, 6:30–8:30 pm, Hilton Arlington. Join us for an exciting presentation by 2015 ASCE President, Bob Stevens. Look for more information in emails and on our [website](#).

### September 26–28

**ASCE Week Las Vegas**, at the Green Valley Ranch Resort Spa & Casino Henderson, NV. Earn up to 34 Professional Development Hours to meet your license renewal requirements.

### September 28–October 1

**ASCE 2016 Convention** in Portland, OR. Visit <http://2016.asceconvention.org/registration> for registration info, speakers, and technical session details.

### October 5

**YMF Monthly Happy Hour**, 6–8 pm, at [Sauf Haus Bier Hall](#), Washington, DC. Join younger members from the area for while you enjoy free appetizers and drink specials. Watch for upcoming emails for more information on our Oktoberfest Celebration.

### October 6

**Construction Committee**, 6–8:30 pm, at [Reston Regional Library, Meeting Room 1](#). Michael O'Connor will present Henry Campbell who was one of those amazing, early 19th century American civil engineers who not only located the railroad, built track and bridges but also in Campbell's case designed the steam locomotives. Campbell designed the classic and wildly popular "American" (4-4-0) steam locomotive.

### October 10–12

**The GeoVirginia 2016 Conference** in Williamsburg, VA is just around the corner – [Register Now!](#) Contact [Sara Phillips](#) if you have any questions.

### October 17–19

**International Conference on Sustainable Infrastructure, 2016** in Shenzhen, P.R., China. [Register Now!](#)

Register by October 15. No on-site registration.

### October 24–26

**Arctic Technology Conference 2016**, in St. John's, Newfoundland and Labrador, Canada. The Arctic Technology Conference is a multidisciplinary conference; with 14 technical societies and organizations working together, to deliver the world's most comprehensive Arctic event. [Register Now!](#)

### October 25

**NCS Section Meeting**, 6:30–8:30 pm, Hilton Arlington. Dr. A. Hunter Fanney will share with us the details (design specifications, instrumentation, and modeling results) on the Net Zero Energy Residential Test Facility (NZERTF), constructed at the National Institute of Standards and Technology in Gaithersburg, MD. Look for more information in emails and on our [website](#).

### January 20–21, 2017

**Regions 1, 2, 4, & 5 Multi-Region Leadership Conference** in Newark, NJ. The conference includes the Workshop for Section and Branch Leaders (WSBL), the Eastern Region Younger Member Council (ERYMC), and the Workshop for Student Chapter Leaders (WSCL). More information (including a link to make reservations in the room block) will be available in October.

## Coming Soon: NCS October Section Meeting – The Net-Zero Energy Residential Test Facility

By NCS Sustainability Committee

A Net-Zero Energy Residential Test Facility (NZERTF) has been constructed at the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland. The facility, completed and put into service in 2012, is being used to demonstrate that a home similar in size, aesthetics, and amenities to those in the surrounding communities can generate as much energy as it consumes on an annual basis while meeting the needs of a family of four. The facility will subsequently serve as a test bed to facilitate the development and improvement of methods of test and performance metrics for existing and future energy efficient technologies.

The living area of the NZERTF (252 square meters) is slightly larger than average size home (242 square meters) currently being constructed in the United States. Additionally, the NZERTF is providing experimental data for computer model validation studies and to quantify the energy impact of mechanical ventilation. **On October 25, 2016**, Dr. Fanney will describe the design of the facility, the virtual family that resides in the facility, the instrumentation used in the experiment, to present data collected during the first year of operation and to discuss lessons learned.

**About the speaker:** Dr. A. Hunter Fanney is a Senior Research Scientist in the Engineering Laboratory at NIST. Dr. Fanney joined NIST in 1977. He initially led a team that conducted experimental and analytical studies of solar water-heating systems. In 1984, he became leader of the Heat Transfer and Alternative Energy Systems Group. He was selected to lead NIST's Energy and Environment Division in 2007, a position he held until being appointed as a Senior Research Scientist in 2013. ■