

May Section Meeting: Reagan Airport – Transforming the Passenger Experience

Reagan National's current facilities were designed to serve 15 million passengers per year. But more than 23 million passengers traveled through the airport in 2016, setting new records and straining the existing infrastructure. In response, the airport launched [Project Journey](#), a \$1 billion investment to transform the



traveler experience inside terminals, at the gates and along the roads. The end result will provide passengers with greater connectivity, more shopping and dining choices and a more pleasant post-security environment. Future improvements to roadway and parking configurations will address the vehicle congestion produced by record-breaking passenger activity.

Please join the American Society of Civil Engineers-National Capital Section (ASCE-NCS) at the Hilton Arlington on Tuesday, May 15, 2018, as team members from Turner Construction present on:

- The 'New Concourse' that is being built to help create a better passenger experience by ending busing from Gate 35X

- The 'New Security Checkpoints' which are being built to alleviate passenger congestion by moving security checkpoints and incorporating National Hall into a connected, post-security environment
- Challenges and Solutions to help keep the airport active throughout Project Journey

About the Speakers

Hallie Burdin works for Turner Construction and is the Project Manager of the New Concourse at RRNA. She is a Veteran of the Army Corps of Engineers and has 10 years of industry experience. Hallie is a mother of two daughters, McKinley age 9, and Ashley age 5. She enjoys coaching her daughter's softball team, and volunteering with the Girl Scouts.

Kurt Gavalier works for Turner Construction and is the Senior Project Manager of the Secure National Hall at RRNA. Kurt has 19 years of industry experience, 18 of which have been with Turner. He and his wife went to Virginia Tech and now live in Bristow VA with their two kids who are 10 and 7. ■

Please join us on **Tuesday, May 15**, 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 \$55 for those preregistering, \$20 for students and \$65 for walk-ins, as space allows. One Professional Development Hour is available to attendees. For questions, please contact [Brian Barna](#). Please click [here](#) to register by **May 11**.

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

The National Capital Section is one of the largest and most successful Sections within ASCE when considering all of the educational events, volunteer initiatives, technical committees, social activities, and member resources including the Newsletter you are reading right now. You may be surprised to learn that roughly 90 percent of the work that goes into keeping this NCS machinery humming along each month is performed by about 30–40 members, or about 1 percent of our over 3,000 active members. The majority of our volunteers are working professionals with separate full-time jobs who donate their time to help this organization succeed. We are grateful for the hard work that our volunteers do. This group of a few dozen “star” members plus all of our members that contribute time to organize or even simply attend events cannot be commended enough for their efforts. On the other hand, imagine how great this Section could be if instead of 30–40 regular volunteers, we had 70... or 100? It would allow us to fortify and improve our existing functions and start new exciting initiatives. I don't think that increasing our actively engaged members from 1 percent to 3 percent is an unattainable goal.

Most of our recently started programs started with one volunteer with an idea and the ambition to see it through. The Reston Branch is a great example of that. Adding a Branch to our Section was not something that was in our long-term plans, but a member suggested it in our annual planning meeting, and took the lead on getting the Reston Committee formed. The



Reston Committee proved the concept that there was an interest and a need for the lunchtime meetings to provide another option to our members who may not be able to regularly attend the evening Section meetings, and after much deliberation and work behind the scenes, the Reston Committee became an official Branch in September 2017.

A few years ago, we completed the first-ever Infrastructure Report Card for the District of Columbia. We also published a high-quality book highlighting 100 years of civil engineering achievements in our area, *Engineering the Nation's Capital*, in honor of the Centennial year of the founding of NCS. Both of these publications were the result of several writers and researchers and a few leaders willing to put in the time to pull everything together. We have also placed much more emphasis in recent years on educational outreach to both K-12 and university students – again, this was only possible because a few volunteers took the mantle of this effort.

Volunteer organizations are interesting organisms. You really have neither a carrot nor a stick to compel a person to perform a task. Our volunteers help out simply because they want to do so. Knowing this, we try to keep our volunteers engaged in activities that they are interested in – so they continue to want to be a part of the group. I'm not aware of any volunteers that are stuck only performing mundane, data-entry type tasks. (If you are, contact me and we'll fix that.) Thoughtful decision making is a necessity for all of our

volunteers, which keeps things interesting and fun.

While our quantity of members within the Section boundaries has remained relatively constant for several years, our Section has recently grown tremendously in our scope of activities. Monthly meetings for the Reston Branch, presentations and site visits for the Construction Committee, and educational outreach events like the coffee house mixer we had a few weeks ago with all of our local universities are just some of the new programs that we did not have a few years ago. We want to continue to grow and to keep finding new ways to engage with our members. The only way that will happen is to get additional volunteers involved because we cannot continue to ask our current core of volunteers to give more of their time and wear more and more hats. Our annual planning meeting in mid-July would be a perfect time for a member curious about becoming more involved to meet the Board and other active members and to see what positions may be open or need assistance. Whether you only have a few hours to spare per month, or you're ready to dive in to a position where you could contribute several hours per week, we will find a place for you in the organization. Please feel free to email me directly at president@asce-ncs.org, and we'll start the process of getting you involved!

Thanks,



Brian Barna, P.E.
ASCE-NCS President

Newsletter

Jim Palmer, Editor

Sumon Chatterjee, Editor-in-Training

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To Submit Articles: newsletter@asce-ncs.org

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Address Changes: Call 1-800-548-ASCE, e-mail member@asce.org, visit www.asce.org, or write: ASCE – Membership, 1801 Alexander Bell Drive, Reston, VA 20191. Include your membership number.

National Capital Section

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Please refer to the [NCS website](http://www.asce-ncs.org) for a current list of NCS committees and chairs.

Ethics 101, Part 3 – Applying Ethics

By Ranjit S Sahai, PE, F.ASCE

Ethics is inescapable. It’s a guide to action, and as living entities, we must act if we are to continue living. As human beings, we have volition and must choose what to do. Ethics answers the question: What should I do?

Ethics is a branch of philosophy that rests on two fundamental concepts: metaphysics – the nature of existence; and epistemology – the method of knowledge. To study the nature of existence we focus on data from our senses and use concepts to grasp that which we perceive (subject) and logical reasoning to understand why entities act as they do (action).

When we accept ideas (subject and action) without conscious effort to validate them, our life’s journey floats without purpose or direction. To live well requires planning life consciously with a moral compass as its guide.

To apply ethics is to flourish by pursuing values consistent with human nature, and your interests and goals. Emotions play a vital role in helping one to cultivate virtuous behavior in pursuit of values, because they are indicators of harmony or discord between subconscious values and consciously chosen goals.

In this last of three article installments, we’ll focus first on aligning values and goals, then we’ll review two references: one explains the criminal mind; the other documents case studies of

questionable behavior in professional settings.

On Human Flourishing

Ethics is typically taught using examples that demonstrate the perils of illegal behavior. Examining what something is not, does not define that something. Ethics is about a focus on human flourishing while being aware of and avoiding peril.

To know if something is doing well or flourishing, one must first know the purpose of that something. For example, the purpose of a saw is to cut, so for a saw to cut well, it must be sharp. Aristotle argues that in addition to sharing attributes with other living entities such as plants and animals, [the purpose of human life](#) is to reason and use language, thus he defined humans as rational animals. For humans to flourish, he continues, they must use reason in all spheres of their lives, be it to grow food, build shelters, gain knowledge, cultivate relationships, etc. This, he argues, translates to [actively](#)



Ethics helps one cultivate passion in life while leaping over peril.

[pursuing knowledge and cultivating virtuous behavior.](#)

Ayn Rand recognized the inescapable role philosophy plays in human life and made her case at West Point military academy where she addressed the graduating class of 1974 in her [lecture](#) that was later memorialized in the eponymous book, “Philosophy: Who Needs It?”

Role of Emotions on Flourishing

The Cognitive Appraisal theory of emotion holds that emotions result from appraisals of a stimulus by subconsciously accepted, automatized value judgments. Your subconscious appraisal of a value (such as a job or a romantic partner) determines your emotions to that value, whether or not your conscious conviction agrees with that appraisal. When your subconscious appraisal and conscious convictions about a value are in harmony, your emotions are positive – when in conflict, your emotions are negative.

When our subconscious views on a subject contradict or are not well developed, our emotions are confused and muted. When our views on greater and loftier values are strong, our emotions are more intense and passionate.

Both [Jean Moroney](#) and [Gena Gorlin](#) have influenced my thinking on the role emotions play in cultivating exuberance and passion in life with

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**Ethan Grossman
Engineering**

Civil Engineering and You, continued

a moral compass as its guide. They explain that the first step to uncover your subconscious values and to identify the highest value is to understand your emotions related to those values.

Both offer simple tools to do just that. Jean uses a list she developed called "Universal Rational Values;" Gena uses a chart that comes up on the 21st minute into the video linked to her name above. They continue by explaining that the second step is to take action, however small might it be, to reinforce your consciously assessed highest value. This needs to be an ongoing, life-long process as your hierarchy of values changes as you progress through life.

On Spotting Evil

Because humans are volitional living beings, some consciously choose to be evil. [Dr. Stanton Samenow](#), who specializes in the evaluation and treatment of juvenile and adult offenders has been practicing in Alexandria, Virginia for over 40-years. His eye-opening book, *Inside the Criminal Mind*, was originally published in 1984 and released its third edition in 2014. The book busts long-held myths about the sources of and cures for crime. In Chapter 15 of the Third Edition, "To

Change a Criminal," he shows through a case study that a criminal must hunger for change if he is to be rehabilitated and that the journey is neither easy nor quick, but one that is fragile and only succeeds when the criminal takes stock of his emotions and begins taking small steps to cultivate virtuous behavior until it becomes habitual. That chapter is an unforgettable read and can aid one in spotting a criminal mind and recognizing when it's laying a trap or pining for change.

ASCE's resident Legal Counsel Tara Hoke has been writing for over five years a column [A Question of Ethics](#) that is published 11 times a year by ASCE in its *Civil Engineering Magazine*. The column examines select ethical cases brought to its attention as well as ethical issues from a perspective of compliance with ASCE's code of ethics.

Each case in *A Question of Ethics* is presented in a consistent format: Situation, Question, and Discussion. The Situation section sets the context for the case; the Question section frames the central ethical issue in terms of its compliance with the ASCE code of ethics; the Discussion section

explains the evaluation for compliance by ASCE's resident legal expert.

To widen your perspective about cases considered important enough to highlight by ASCE, I recommend a review of the cases she has published. If I were asked to recommend one from the list of dozens and dozens of published cases, I'd suggest the case, "[A First Step Astray](#)," that illustrates a criminal mind in action and the perils of falling in its trap.

Conclusion

I leave you with the last few words in Robin Field's concert [Reason in Rhyme](#) that eloquently sums up what ethics is for: "Learning that living is loving to live."

About the Author

Ranjit Sahai, PE, F.ASCE, a Past President (2013–14) of ASCE-NCS, is a principal and founder of RAM Corporation, a firm serving State DOTs with a focus on traffic engineering design, stormwater facility inspections, and IT solutions for engineering workflows. He is also an [author](#) and speaker.



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April Meeting Recap: Alexandria's Clean Waterways Program for its Combined Sewer System

On Tuesday, April 17, 2018, Erin Bevis-Carver, PE, Civil Engineer for the City of Alexandria, provided an insightful presentation on the background of Alexandria's combined sewer system (CSS), existing program for reducing impacts, and an overview of the City's Long Term Control Plan Update (LTCPU). Speaking to approximately 50 attendees from ASCE-NCS and Environmental Water Resources Institute (EWRI) NCS, Ms. Bevis-Carver explained the City's CSS, constructed in 19th and early 20th century, is a combination of storm and sanitary sewer systems serving approximately 540 acres in Old Town (390 acres, or 72%, are impervious surfaces). When too much rain flows into the system, it overflows



into local waterways at four outfalls. Typically, 40–70 wet weather events in a year result in combined sewer discharges into these waterways, depending on the number of rain events, rain intensity, and total volume of rainfall.



Legislation passed in 2017 (2017 CSO Law) requires the City to update their 2016 Long Term Control Plan to meet the new legislation with construction complete by July 1, 2025 (LTCPU). To comply with the 2017 CSO State Law, City LTCPU projects involve the planning, design, and construction of underground tunnels to reduce sewer overflows to no more than 4–6 per year for an average rainfall year. Ms. Bevis-Carver expanded on the City's planning process and alternatives considered for the projects in the LCTPU. With the

assistance of a stakeholder group and public outreach, LTCPU options were evaluated on life cycle costs, operations and maintenance complexity and reliability, adaptability, schedule risk, community impact. Green infrastructure design options, potential climate change impacts, and rate forecasts were considered with each LTCPU option.

According to Ms. Bevis-Carver, the City is collaborating with Alexandria Renew Enterprises (the independent public entity that collects and treats wastewater from Alexandria and parts of Fairfax County) to enable more work to take place concurrently and provide for more flexible financial options. The City will transfer permit and outfall-related assets to AlexRenew and AlexRenew will lead the implementation of the LTCPU, with support from the City. Ms. Bevis-Carver said the City plans to submit its revised LTCPU to Virginia Department of Environmental Quality by June 1, 2018. There were several questions and requests for more information from the meeting participants. For more information on Alexandria's CSS, visit <https://www.alexandriava.gov/Sewers>. ■

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Approaching the FE Exam for the First Time

I owe my editor an apology. This month's article was supposed to be at my Editor James Palmer's desk a week ago. Thank you, Jim, for your patience and for the great work that you've done for the Newsletter. As you may know, Jim is also a Structural Engineer working in Washington, DC.

For educators like us May means the end of another academic year. To say that this past semester was "busy" would be an understatement. Lectures, quizzes, finals, research papers, proposals, consulting, MATHCOUNTS and ASCE Steel Bridge Competitions, pro-bono Saturday classes,... the list goes on.

According to NCEES, every year 55,000 people take the FE exam and most of them are college seniors within one year of graduating or are recent graduates. The FE exam is the first step in the process leading to the Professional Engineer (PE) license and it contains 110 multiple-choice questions. The exam appointment time is 6 hours long, which includes a nondisclosure agreement, tutorial (8 minutes), the exam (5 hours and 20 minutes), a scheduled break (25 minutes), and a brief survey.

When approaching the FE Exam for the first time, it's natural to feel a bit overwhelmed. The best way to build your confidence is to prepare for the test and to know the ins and outs of the test. To answer many readers' questions, we would like to review the exam day experience and what you are expected to do that day.

Once your registration is approved by NCEES, you will receive an email notification that you have been authorized to take the exam and are eligible

to schedule your exam appointment. NCEES computer-based tests (CBT) are offered in testing windows throughout the year during the following months: January, February, April, May, July, August, October and November.

Once you register and know your exam date, NCEES recommends the following: First, you should plan to arrive at the testing center 30 minutes prior to your scheduled appointment. Upon arrival, a representative will provide you with a copy of NCEES-CBT exam rules for your review. After doing so, you will be asked to provide your digital signature to confirm that you have read the rules and agreed to abide by them.

Then you will be asked to provide a current government issued form of ID such as a driver's license. Once the representative confirmed your identification and the exam that you are taking, you will be asked to provide palm vein scan and have your photo taken. Your signature, palm vein scan and photo will be stored with your exam result. Prior to be admitted into the testing room, a representative will insure that you have in your possession only the items that NCEES allows them to the testing room. These items include, your ID, an NCEES approved calculator and eye glasses.

Most test centers have secure storage lockers on site for you to store prohibited items such as cell phones, other electronic devices and personal belongings such as a watch, wallet and bag. Once you complete the check in process, then you report to an exam proctor who will ask you to confirm your ID by providing again your palm vein scan. Then the proctor will give

you a reusable booklet and marker for scratch work. The proctor will review the exam rules and will escort you to the exam room and assigned work station and launch the exam. Before starting your exam, all examinees will be required to read and agree to the NCEES' non-disclosure agreement and complete a brief tutorial to learn how to ADVANCE to the next item, RETURN to a previous item and FLAG items for review.

After completing approximately 55 questions, examinees will be prompted on screen with the option to take a 25-minute break. Examinees who wish to take the scheduled break should raise their hands and wait for the prompter assistance. Unscheduled breaks may be requested at any time during the exam by following the same procedure. However, examinees should be aware that clock will not stop during an unscheduled break. Examinees are allowed to access their lockers during the scheduled and unscheduled breaks.

After completing the exam and a brief survey, you should raise your hands and proctor will verify that you had properly exited from exam and escort you from testing room and collect your booklet and marker. You will not receive any type of score before leaving the testing center. You will receive an email from NCEES within 7 to 10 days notifying you that your results are available for viewing in your MYNCEES account.

Good Luck!

Ahmet Zeytinci (Dr.Z.)
az@akfen.com



ASCE-NCS Committee News and Updates



Younger Member's Forum

By Haley Carpenter, EIT

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 our April Happy Hour at Penn Social in Chinatown, Washington, DC. Approximately 25 members attended the event.

Join us for the next upcoming monthly happy hour, taking place on Wednesday, May 2nd at Courthouse Social in Clarendon, Arlington, VA. Network with local engineers from the area while enjoying free appetizers and happy hour drink specials, meet new friends and make new connections.

A list of all upcoming happy hours and other YMF events through September has been provided below. We look forward to seeing you!

- June 6th – Happy Hour at Takoda, U Street, Washington, DC
- June – National's Baseball Game (Date TBD)
- July 11th – Happy Hour (Location TBD)
- August 1st – Happy Hour at A-Town – Ballston, Arlington, VA
- August – YMF Planning Meeting (Date and location TBD)
- September 12th – Whitlows on Wilson – Arlington, VA

Stay Connected! Check out photos and stay up-to-date with YMF events by visiting the new YMF Facebook page: <http://www.facebook.com/ASCENationalCapitalYMF>. Also, follow us on Twitter (@asce_ncsYMF) at https://twitter.com/asce_ncsYMF.

Sustainability Committee

ASCE Five-Year Roadmap to Sustainable Development

(continued from previous 2018 Newsletter entries)

The ASCE Five-Year Roadmap takes a two-pronged, “bottom-up/top-down” approach comprising (1) four strategic priorities and (2) key requests for Board action. This month, we will focus on **Priority 3: Expand Technical Capacity**.

Now that the familiar lighthouses of the past may no longer be relevant, civil engineers must have the protocols, processes, and standards needed to navigate the unfamiliar waters of the future safely and effectively. We must develop tools to perform life-cycle assessment and life-cycle cost analysis to account for lifetime impacts of infrastructure – and even for impacts beyond its useful life.

Unfortunately, the data and conditions that underpin previous standards and bodies of knowledge no longer accurately and reliably describe future conditions and requirements. Designing infrastructure based on such standards and methods without knowing whether those standards really apply is inherently risky and leads to the commoditization of civil engineering. Although applying old standards and processes may feel less risky than stepping beyond the comfortable bounds of traditional engineering practice and integrating the roles of “*master builders, stewards of the environment, innovators, managers of risk, and leaders in public policy*,” as **ASCE's Vision 2025** advocates, doing so is necessary.

To apply the principles of sustainable development, expanding engineers' abilities and capacities beyond the currently accepted professionalism and technical acumen of the engineering practice is necessary. Engineers must gain confidence and expand their capacities to identify, understand, navigate, and manage the new risk and uncertainty adequately and appropriately. The new engineer must develop relationships of trust and respect to become the trusted advisor. This role

requires expanded approaches, courses, study methods – even new bodies of knowledge – for pre-college, college, and post-graduation training and new advanced certifications, accreditations, and standards.

Priority 3 Strategic Goal

Achieving the necessary professional transformation requires civil engineers to build or expand their capacity to achieve the visions and principles of sustainable development through new training and professional development opportunities, including formal and continuing education opportunities.

Priority 3 Outcomes

The primary five-year outcome for this priority is to establish for members a successful, revenue-neutral Sustainability Certificate Program that demonstrates understanding of sustainable development principles and their implementation. This outcome includes

- An operational certificate program for engineers to practice sustainable development;
- A significant number of professionals pursuing the certificate, with a goal of 1,000 in five years; and
- A funded mechanism for delivery, acceptance, ongoing support, and marketing within ASCE.

Over the coming months, the ASCE Five-Year Roadmap for Sustainable Development will continue to be explored along with the COS goals, guidelines and ASCE's Case for Sustainability. The first article of this series appeared in the ASCE-NCS Newsletter for January 2018 and can be found at <http://asce-ncs.org/index.php/2-uncategorised/5-asce-ncs-newsletters-in-pdf>. For more information contact Alex Rosenheim, Chairman NCS-ASCE Sustainability Committee at tcc-sus@asce-ncs.org or for more information on the ASCE Committee on Sustainability, please visit: <http://www.asce.org/sustainability/>.

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Education Committee: K-12

By Vic Crawford, PE, M. ASCE, Education Committee Co-Lead

Thanks to all for making our biggest STEM Event such as success. The USA Science and Engineering Festival at the Washington Convention Center hosted over 350,000 students, teachers, parents, and members of the general public to learn about all aspects of engineering, science, government, and educational institutions, and the private sector are working to make life better for all.

ASCE had two booths at the Festival staffed by our National Capital Section members, our student chapter at Howard University, staff from ASCE Headquarters, and members from the Bull Run Branch from the Virginia Section. Building upon the Dreama Big Movie, we did the Windy City expertise



allowing students and their parents to construct a paper tower to test against our wind machine. We had a shaker table to show the impact on buildings from an earthquake. And of course, we had our banner being used to talk to students and their parents about civil engineering and how they can join our excellent profession. Sustainability was highlighted in our exhibit showing the benefits of using permeable pavement and providing students an opportunity to learn about sustainability using ASCEville to find ways civil engineers recycle plastics, reduce automobile use, and generate clean energy.

We continued our outreach by going to Wakefield Forest Elementary School in Fairfax for their STEAM Fair (Adding Art to Science and Engineering). Once again, we used our Windy City exercise, filling our area with students and parents building towers of paper



to test their design against our wind machine. In addition, we made full use of our new banner, showing what we do as Civil Engineers in Engineering the Nation's Capital to students and their parents.

We continue to work with the American Association for the Advancement of Science (AAAS) program for STEM, which has been bringing engineers and scientists into classrooms for over eleven years (<http://www.aaas.org/senior->



[scientists-and-engineers/programs-dc](http://www.aaas.org/senior-scientists-and-engineers/programs-dc)). Please consider becoming a AAAS volunteer in supporting STEM in the school districts in the DC metro area, including surrounding counties in both Virginia and Maryland. If you are interested in giving back to the profession while sharing the joy of engineering to eager young minds, please contact Victor I Crawford at victor.crawford51@gmail.com.

Education Committee: Collegiate

By Jameelah M. Ingram, PE, M. ASCE, Education Committee Co-Lead

Spring ushered in a *canoe* load of events for the student chapters of ASCE NCS. Please read about the highlights below:

2018 Virginia Section Regional Student Conference (March 22nd to March 24th)

ASCE Student Chapters from across the Virginia Section traveled to Washington, D.C. for the 2018 Virginia Section Regional Student Conference from March 22nd to March 24th. The conference was led by Mary Kate Selgrath (CUA ASCE President) and Elizabeth Cossel (Regional Conference Coordinator), both students from the host chapter at the Catholic University of America (CUA ASCE). This year's conference consisted of several student competitions including: T-Shirt Design, Steel Bridge, Concrete Canoe, Hardy Cross, Balsa Wood Bridge, Concrete Frisbee, and Steel-Crete Hockey.

Friday's competitions were held indoor on the campus of Catholic University. For a description of Friday's activities, please check out Dean Westman's article.

Saturday's activities took place at Fletcher's Cove on the Potomac River. Saturday was a brisk, yet sunny day and there were events held throughout the park. At one end of Fletcher's Cove, students gathered to participate in the Steel-Crete Hockey competition. Each student chapter constructed their own hockey sticks and pucks for use in the contest. Near the middle of the park, students stretched and warmed-up in preparation to give their concrete frisbee a good throw. The concrete frisbee was designed with aerodynamics, weight, and aesthetics in mind. At the river's edge, chapters cheered their teammates along, as students layered in wetsuits and life vests rowed for the win.

Students celebrated their accomplishments with awards at a dinner banquet held at the Liaison Capitol Hill Hotel on Friday evening and along the Potomac River on Saturday afternoon. Region 2 Governor, John Casana, P.E., D.WRE, LEED AP, F.ASCE announced ASCE NCS scholarship winners and outstanding graduating seniors on Friday as well.

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A table of ASCE Student Conference winners and photos are shown below (ASCE NCS Student Chapters in bold).

	T-Shirt Design	Balsa Wood	Concrete Frisbee	Steel-Crete Hockey	Concrete Canoe	Steel Bridge
First Place	George Washington University	University of Virginia	West Virginia University Institute of Technology	Virginia Military Institute	Fairmont State University	TBD
Second Place	Marshall University	West Virginia University Institute of Technology	George Mason University (w/special mention for aesthetics)	West Virginia University Institute of Technology	TBD	University of the District of Columbia
Third Place	West Virginia University	Virginia Military Institute	Marshall University	Marshall University	TBD	Catholic University of America
Fourth Place	–	–	–	–	–	George Mason University



UDC ASCE wins Second Place at the Steel Bridge Competition



CUA ASCE wins Third Place at the Steel Bridge Competition



Howard University ASCE Student Chapter (HU ASCE) competing in the Steel Bridge Competition



ASCE Student Chapter Hockey Sticks



ASCE Student Chapters Row, Row, Row their Concrete Canoes



GMU ASCE Concrete Frisbee Honored for Best Aesthetics

ASCE NCS Visit to Howard University

In early April, the ASCE Student Chapter at Howard University hosted ASCE Week. The student chapter president and graduating senior, Florantine Monica Joseph, started off the meeting with a friendly "Foundation Competition" icebreaker. Students used paper and masking tape to design a foundation to support text books with strict time constraints. She made announcements of upcoming elections and volunteer opportunities at the 2018 USA Science & Engineering Festival.

ASCE NCS members were also on hand to answer questions about professional life and opportunities within ASCE.



ASCE NCS Coffee + Connections

On a Wednesday evening in Washington, D.C., students and professionals gathered to network at the ASCE NCS Coffee + Connections event held at Slipstream DC. Upon entry, guests received name badges and a sticker for the "What mode did you take?" icebreaker game. The icebreaker sparked conversation as attendees greeted each other and a night of knowledge sharing began. Crafted coffees, premium teas, and hot chocolate were made to order as students and professionals entered

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from a long day of engineering classes or work. Guests also delighted in a selection of delicious sandwich bites, cupcakes, and more.

Throughout the evening, there were talks by ASCE Student Chapter leaders from across the National Capital Section. Student leaders shared their chapter's favorite moment of the year to an audience of students and professionals. They even mentioned lessons learned. Several students received advice from professionals in an informal setting, without a career fair table between them. For example, one student sought advice regarding his decision to pursue a doctorate degree or to enter private industry. Another student was interested in learning about business relationships amongst team members within a project environment. Professionals also had the opportunity to connect with students for potential internships and work opportunities.

ASCE NCS trivia questions were posted throughout the event for an opportunity to earn a copy of the book published to commemorate the ASCE NCS centennial year, *Engineering the Nation's*



Capital: A Century of Innovation and Promise for the Future. The award-winning tome makes for a great coffee table book!

Reston Branch

By Lisa Anderson, PE, LEED AP, M. ASCE, Reston Branch Interim President

On April 10th, Jill Hubbard, PE, PSP, EVP, Jughan Kwak, PE, CCM, PSP, Maria Nieves-Melendez, PhD, and Claudia Orozco-Solano, CCM, PMP of MBP, presented "The Silver Line Metrorail: Overview of a Megaproject."

The next meeting of the Reston Branch will be held on May 9th at The Reston Association Conference Center in Reston, VA starting at 11:45am. Thom



Lipinski, PE, Mark Peterson, and Nicolle Boulay, PE, will present "Potomac Water Supply Program: An Overall Perspective of Planning, Design, and Construction of a World-Class Program". One PDH will be awarded to attendees.

History and Heritage Committee

H&HC Field Trip to Government Island – Stafford VA

On Saturday June 9th the History & Heritage Committee will sponsor a field trip to Government Island in Stafford VA. Government Island is a historic 18th and 19th century quarry site that is listed on the National Register of Historic Places. It provided Aquia sandstone for the construction of the US Capitol and the White House and other historic buildings in Washington, DC. It was purchased in 1791 Pierre Charles L'Enfant and provided the DC Boundary Stones. Dr. Robert (Bob) Kapsch, a member of ASCE-NCS H&HC, will lead the tour. Bob was the former Chief of the National Park Service's Historic American Buildings Survey/ Historic American Engineering Record (HABS/HAER). He edited the final report presented to the Stafford County Board of Supervisors, which led to the establishment of Government Island as a Public Park. For this field trip we will ask people to provide their own transportation to the park and meet at the parking lot entrance to Government Island. Plan to bring your own lunch and picnic on the grounds. For more details, directions, and to register for the tour, please contact Bernie Dennis before June 6th at berniedennis@mindspring.com. ■

Life Members Forum: Reflections

Eric Bock

I am an attorney who started out as civil engineer and I thought my transition from one profession to the other would be of interest to you. My parents moved to California in the 1960s as immigrants from Holland having lived in that country eight years after immigrating from Indonesia, where I was born. Starting in high school, they instilled upon me the importance of going to college in order to become gainfully employed and afford to raise a family. A degree in the subject areas I



was most attracted to – art and philosophy – were out of the question for my parents and they convinced me that I should try engineering. I did, and graduated from Cal Poly with a 3.5 GPA in civil engineering. In retrospect, I'm grateful for their guidance. Once I had my degree, the available jobs for civil engineering graduates seemed to be plentiful. This appears still to be the case today, but to me the stature of civil engineers in the eyes of the public has grown considerably due to the awareness of the rapid pace of

technological changes, the importance of environmental protection, and the need to fix the deteriorating state of the nation's infrastructure.

My first job was with CF Braun & Company, a very large, family-owned construction company in the petrochemical industry. The company had strict work policies and stressed professionalism. It impressed upon me that being a civil engineer should be viewed as prestigious as being a lawyer or doctor, even if the compensation was not as lucrative. The job took me to various

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petrochemical facilities in Southern California where I was responsible for doing the engineering that ensured that 100-ton tanks and other heavy vessels could be safely transported, lifted and installed on-site. As a newly minted engineer I was proud to walk onto a site with my hard hat, tie and rolled up engineering drawings among the laborers and equipment operators. However, I quickly learned to respect the know-how and experience these individuals brought to the job and that my engineering plans were essentially a back-up and check on the work they did. Humility was a big lesson.

My second job was with the Los Angeles Department of Water and Power (LADWP), the nation's largest municipal utility. I took the job because LADWP had a policy at the time of paying 100% of the tuition for advanced degrees earned in the evenings. I enrolled in a Masters in Civil Engineering program at the University of Southern California. LADWP also gave engineers the opportunity to periodically move between practice areas of civil engineering.

This was a unique process that allowed me to explore areas of civil engineering that would give me the greatest sense of fulfillment. I started out in water resources planning and was exposed to the California Environmental Quality Act (CEQA) which at the time was a brand new law. My major contribution in the position was to develop formulas that would allow the estimation of water depth, width and travel speed of water released in the event a reservoir dam owned by LADWP failed during an earthquake. I was proud that the inundation maps generated by the formulas were accepted by California's emergency response agencies. My next position was with the structural engineering group. The position was

more demanding of my analytical skills but it turned out my favorite part of the job was inspecting structural damage to buildings and homes resulting from some mishap in the operation of the water system. The work required me to write-up my assessments of the damage and present them to the utility's attorneys. I realized I enjoyed working with attorneys and began to look at engineering positions within the company that would allow me to work with them. I ended up taking the position of the engineer in charge of the City's water rights.

The city owned water rights in the eastern Sierra Mountains diverting streams into an aqueduct that transported the water 300 miles to the City. Over the decades the diversions led to the drying up of two large natural lakes and dust blown from the exposed shoreline created significant air quality problems. In a unique approach, the local air pollution district decided to call our diversion gates on the streams as stationary sources under the state clean air act and required them to cease operations. Our attorneys challenged the district's actions and I provided them technical support, but the LADWP lost the legal battle. During this period I had decided to abandon my studies at USC and to enroll in the night program at Southwestern Law School. After passing the California Bar the utility asked me to go Sacramento and lobby the legislature to amend the states clean air act so our water rights would be protected. I took the job and although we did not succeed in changing the law, I learned that I enjoyed what I call "soft engineering," i.e., conveying engineering technical issues through oral and written communications, public policy advocacy, and developing interpersonal relationships with policy makers. I saw the job as allowing me to marry my civil engineering and legal skills.

Shortly thereafter the Mayor and City Council asked me to go to Washington, DC to lobby Congress and the federal agencies on issues related to water and power and other public utility matters important to the City. I worked in the City's Washington, DC office for 6 years and then was hired to run the DC office of the Portland Oregon Law firm of Schwabe Williamson and Wyatt where my focus was representing electric utilities before Congress and the Federal Energy Regulatory Commission. I then joined an environmental litigation firm, Baise Miller and Freer. After a couple of years with the Baise law firm two other partners and I started our own legal firm which focused on real estate law. Again to allow me to combine my engineering skills with the law, I ended up focusing my legal practice on resolving issues involving contaminated properties and solid waste management. In 2007 I opened a solo office. I take great pride in being able to tell prospective legal clients that I am also a civil engineer and it has helped me attract business.

I was fortunate to be able to find a career that has been fulfilling. I learned the importance of finding mentors to help advance me professionally. My recommendation to young civil engineers is to become aware of those areas of engineering that bring you the greatest joy and pursue work and educate yourself in those areas as you grow in your profession. To be honest, one other reason I pursued the legal profession was that it offered the possibility of earning more than the average civil engineer. I truly believe that the civil engineering community needs to spend more resources advocating itself to the public stressing the fact we are vital to our society on parity with law and medicine, and should be compensated accordingly. ■

Upcoming Events *(Also available on the NCS website under the [Events tab.](#))*

May 2

YMF Happy Hour, 6:00–8:00 pm, Courthouse Social, Arlington VA.

Celebrate our monthly happy hour and network with fellow engineers. Look for an email announcement with more details.

May 9

ASCE Reston Branch Meeting

“Potomac Water Supply Program: An Overall Perspective of Planning, Design, and Construction of a World-Class Program” – Thom Lipinski, PE, Mark Peterson, and Nicolle Boulay, PE

May 15

ASCE-NCS Section Meeting, 6:00 pm, Arlington Hilton.

Join ASCE-NCS as Hallie Burdin and Kurt Gavalier of Turner Construction present Reagan Airport – Transforming the Passenger Experience. Further information, including registration, is available on the first page of this newsletter.

May 18

Tour of the American Geophysical Union, 2:00–4:00 pm, 200 Florida Ave NW #400 Washington, DC.

The ASCE Committee on Sustainability and the ASCE-National Capital Section Sustainability Committee have arranged for a guided tour of the Net Zero Renovation of the [American Geophysical Union](#) located in the Dupont Circle area of Washington, DC. For further information, contact [Alex Rosenheim](#), Sustainability Chair.

May 18

Sustainability Committee Happy Hour, 4:00 pm, The Board Room, 1737 Connecticut Ave NW, Washington DC.

Immediately following the American Geophysical Union (see above), the Sustainability Committee is hosting a happy hour. For further information, contact [Alex Rosenheim](#), Sustainability Chair.

June 6

History and Heritage Committee Field Trip, Government Island, Stafford, VA.

For more details, directions, and to register for the tour, please contact Bernie Dennis before June 6th at berniedennis@mindspring.com.

June 6

YMF Happy Hour, 6:00–8:00 pm, Takoda Beer Garden, Washington DC.

Celebrate our monthly happy hour and network with fellow engineers. Look for an email announcement with more details.

June 3–7

World EWRI Congress, Minneapolis MN.

Register here: <https://www.ewricongress.org/>

July 11

YMF Happy Hour, 6:00–8:00 pm, Location TBD.

Celebrate our monthly happy hour and network with fellow engineers. Look for an email announcement with more details.

August 1

YMF Happy Hour, 6:00–8:00 pm, A-Town, Arlington VA.

Celebrate our monthly happy hour and network with fellow engineers. Look for an email announcement with more details.

August 12–15

2018 International Low Impact Development Conference, Nashville, TN.

Register here: <https://www.lidconference.org/>

September 12

YMF Happy Hour, 6:00–8:00 pm, Whitlows on Wilson, Arlington VA.

Celebrate our monthly happy hour and network with fellow engineers. Look for an email announcement with more details.

November 17

Region 2 Assembly, George Mason University, Fairfax, VA.

All Sections, Branches, Younger Member Forums, Student Chapters, Faculty Advisers, and Practitioner Advisers are strongly encouraged to attend the 2018 Region 2 Assembly. More information, including registration, will be available closer to the event date.

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](#).