

PRESIDENT'S MESSAGE

From Vision to Momentum

Dear ASCE NCS Members,

As we move into the next quarter, the energy within our Section is palpable. Following our successful year kickoff, we are now seeing our collective goals take shape through increased engagement and high-caliber technical dialogue.

A primary highlight of this quarter has been the revitalization of our Transportation Committee. In a region as dynamic as ours, staying at the forefront of multi-modal safety and intelligent systems is not just an advantage; it is a necessity. I am thrilled to see this committee becoming a vibrant forum for the "next generation" of ideas we discussed earlier this year.

Furthermore, we are making significant strides toward our Annual Gala. This event is the cornerstone of our commitment to the future of our profession. I want to personally thank our industry partners who have already stepped up as sponsors. Your contributions are the engine behind the scholarships that support our Students and the professional development that empowers our Younger Members.

As we look toward the upcoming months, I encourage you to remain active in our technical sessions and networking events. Whether you are a Life Member sharing decades of wisdom or a Student just beginning your journey, your participation is what makes the National Capital Section (NCS) the premier hub for engineering excellence in the heart of our nation.

Thank you for your continued dedication. Let's keep building on this momentum.

Sincerely,
Shofiq Ahmed, PE, PTOE, RSP1
President, ASCE NCS

2026 Virginia Report Card Updates

By: Victor I. Crawford, P.E., FASCE, Co-Chair, Virginia Report Card Committee

The Virginia Report Card Committee has developed the first draft, which has been provided to ASCE Headquarters for review. This Report Card, covering all of Virginia, draws support not only from the Virginia Section but also, because the area includes Northern Virginia, from several NCS members who are directly involved in this effort. Particularly, the Reston Branch, whose members are not only supporting this effort for 2026, but have also provided key leadership and support during the development and release of the 2022 Report Card.

This Virginia Infrastructure Report Card, scheduled for release in mid-2026, has required not only work by individual volunteers but also regular coordination meetings with Chapter Leaders and staff at ASCE Headquarters.

Planning is underway for a public release event at the Virginia State Capitol. Once released, the Virginia Report Card will be used during the Fly-In to Capitol Hill in early 2027 and during the Drive-In, when it will be used in meetings with Virginia legislators and their staff.



ASCE National Capital Section ANNUAL AWARDS GALA

The ASCE NCS would like to invite you for a **Night of Excellence** on **Tuesday, April 7th**. This night will be dedicated to celebrating the remarkable people and projects defining the future of our region. Join us for a Black Tie Optional evening featuring a vibrant atmosphere, upgraded audiovisual production, and an elevated dining experience. It promises to be a memorable night of connection, recognition, and inspiration.

Date: Tuesday, April 7th, 2026

Time: 6:30PM Cocktail Reception / 7:30PM Dinner & Awards

Location: Hilton Arlington (950 N Stafford St., Arlington, VA 22203)

Attire: Black Tie Optional

Metro Access: Orange/Silver Line Metro – Ballston Station (0.1 miles)

Parking: Hotel Parking (\$10) / Ballston Mall Garage (\$1 after 6PM) / Street (Free after 6PM)

Registration Fees:

- Standard / Non-Member: \$180.00
- Member: \$90.00 (Member Benefit)
- Guest of Member: \$115.00 (Limit 1 per member)
- Educator: \$65.00
- Life Member: \$55.00
- Student: \$25.00
- Award Recipient: You will be contacted by ASCE-NCS for your registration

A \$35 late fee applies to all registrations starting March 23, 2026.

[Link to Sponsorship Opportunities](#)

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REVITALIZATION OF THE ASCE NCS TRANSPORTATION COMMITTEE

The ASCE NCS Transportation Committee is shifting gears. We are relaunching with a renewed focus on the critical issues facing the National Capital region; from multi-modal safety to next-generation intelligent systems. Join us as we create a dynamic forum for knowledge sharing that reflects the future of our profession. If you are interested in joining, contact **Shofiq Ahmed** at president@asce-ncs.org.



NCS YOUNG MEMBER'S FORUM UPDATES

By: *Wing-Mei Ko, P.E., Assistant Project Manager at Soltesz*

January 22, 2026 — Skating Event

The NCS Young Member's Forum (YMF) January Winter Skate Spectacular brought together a mix of younger members and students from The Catholic University of America and Howard University for a fun night on the ice. The event was a perfect blend of networking and winter fun. Thanks to everyone who came out to skate, connect, and help kick off the year with great energy!

February 12, 2026 – Habitat Young Professional DC-NoVA with ASCE NCS YMF Habi-Chat Collaboration

On February 12, 2026, the joint Habi-Chat, hosted by Habitat Young Professional DC-NoVA and ASCE NCS YMF, brought together emerging professionals for an engaging conversation on the future of housing in the DC region. Featured speaker **Victoria Ballesterio, P.E., MBA**, and founder of **Guide Engineering**, shared insights on housing affordability, attainability, and the critical role of advocacy in addressing the housing crisis. The group discussed the role of land development engineers in designing spaces that meet the community's needs. Attendees left inspired by practical perspectives on how engineers and young leaders can contribute to meaningful solutions through advocacy and by serving as experts in their industries. Thank you to our event sponsor, Advanced Drainage Systems, Inc., for making this event free for attendees.

Upcoming YMF Events and Collaborations!

SAVE THE DATE! University of Maryland's ASCE student chapter is hosting a speed networking event with professionals in collaboration with **ASCE Maryland Section YMG** (Younger Member Group) and **ASCE NCS YMF** on **March 5** at the University of Maryland. Professionals are welcome to join, and the registration link will be shared via ASCE NCS YMF's newsletter when available.

SAVE THE DATE! NCS YMF is partnering with **DesignForce** to host a virtual workshop, *Leadership by Design: Strategies for the Next Generation of Civil Engineering Leaders*. The workshop will be on **Thursday, March 26**, from 6 PM to 7 PM and will cover topics such as leadership pathways in the civil engineering industry, career mapping, obstacles that emerging leaders face, and strategies to accelerate leadership development. The registration link will be shared via NCS YMF's newsletter when available.



EASTERN REGION YOUNG MEMBER COUNCIL 2026 RECAP

By: Huan Yi Low, P.E., Senior Project Engineer at Ware Malcomb

In January, four of our NCS Members had the honor of attending the 2026 Regions 1, 2, 4, & 5 Multi-Region Leadership Conference in Jacksonville, Florida. During the Conference, we heard from ASCE President (Marsha Anderson Bomar) and President-Elect (Carol Haddock), gaining valuable insights into what it means to be a leader and the importance of building impactful connections. We were also reminded of the important role we share as a community to advocate for our profession and the advancement of infrastructure.

The MRLC included the Eastern Region Young Member Council (ERYMC), the Workshop for Section/Branch/Institute Leaders (WSBIL), and the Workshop of Student Chapter Leaders (WSCL). Alongside our Section member, Sanskrit Singh, we also had representation from our Reston Branch, Vicky Yu, and from our Younger Member Forum, Huan Yi Low and Maaz Quiraishi, at the conference. NCS Region Student Chapters - Catholic University of America and George Mason University were also well represented! The MRLC allowed our members to network with industry professionals and collaborate with other Sections, Younger Member Groups, and Student Chapters through roundtable discussions and interactive panels. We look forward to applying and implementing the ideas discussed and sharing the successes and lessons learned with the NCS. We are so excited for what's ahead!



NCS RESTON BRANCH JANUARY LUNCH MEETING

By: Vicky Yu, P.E., PTOE, PTP, PMP, RSP2I, Traffic Engineering Senior Manager at ATCS

On January 20, 2025, the ASCE NCS Reston Branch hosted an in-person lunch meeting at ASCE Headquarters, featuring a presentation titled "Big Beam Weekend: Trust and Partnership That Led to a Successful

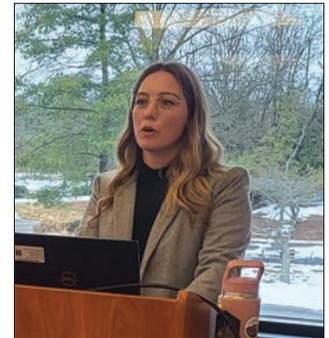
Operation." The presentation was delivered by Michael A. Trabucco, P.E., M.ASCE, Vice President of Shirley Contracting Company, LLC. The presentation focused on ten massive girders installed to support a new express lane ramp, representing the largest girders installed to date on the 495 NEXT project. The presentation highlighted the challenges and successes associated with installing the large girders across northbound I-495 in Virginia during a weekend closure from 9:00 p.m. on Friday, January 24, through 5:00 a.m. on Monday, January 27, 2025, as part of the 495 NEXT project. More than 30 industry professionals attended the event and actively participated through questions and discussion.



NCS RESTON BRANCH FEBRUARY LUNCH MEETING

By: Vicky Yu, P.E., PTOE, PTP, PMP, RSP2I, Traffic Engineering Senior Manager at ATCS

During the February 12, 2026, the NCS Reston Branch lunch meeting, we were honored to have Alexandria Carroll, Complete Streets Program Manager for the City of Alexandria, Virginia, present on how the City is implementing its Complete Streets policy to design and operate roadways that safely serve all users, including people of all ages and abilities to walk, bike, take transit, and drive. Approximately 30 professionals attended the meeting and learned about the City's practical and cost-effective approach, as well as key design elements demonstrated through its successful Complete Streets projects. Alex shared the City's vision and challenges and provided valuable insights for civil engineers seeking to apply Complete Streets principles in an urban context.



NCS STRUCTURAL ENGINEERING INSTITUTE

Design and Analysis of Support of Excavation Systems



By: Parsa Heydarpour, Ph.D., P.E., PMP, Tunnel Specialist, COWI North America

Support of Excavation (SOE) systems form the backbone of safe and efficient underground construction. Whether for transit stations, utility corridors, or deep foundations, these systems enable engineers to excavate vertically in tight urban environments while protecting adjacent structures and ensuring worker safety. As cities grow denser and infrastructure becomes more complex, the importance of well-designed temporary excavation supports cannot be overstated.

What Are Support of Excavation Systems?

SOE systems are primarily temporary structures designed to stabilize vertical or near-vertical excavations, typically deeper than six feet. By resisting lateral earth and groundwater pressures, these systems maintain excavation stability and prevent ground loss, which could endanger nearby buildings and utilities. In urban projects where sloped excavations are impractical, SOE systems make vertical construction feasible and minimize surface disruption.

Common Retaining Elements

Several retaining systems are available, each selected based on soil conditions, groundwater, space constraints, and project requirements:

Sheet piles—Interlocking steel sheets driven into the ground provide quick installation, cost efficiency, and immediate stability. They are especially useful in water-bearing soils or temporary cofferdams.

Soldier piles and lagging—H-piles combined with timber or concrete panels offer flexibility and rapid construction, making them suitable for congested urban areas with minimal vibration.

Secant or tangent pile walls—Overlapping concrete piles create a rigid, low-permeability barrier that controls groundwater and provides high stiffness, ideal for deep urban excavations.

Slurry or diaphragm walls—Constructed using bentonite slurry to prevent trench collapse, these walls offer superior alignment control and can be built adjacent to existing structures with minimal disturbance.

Soil mix walls—Formed by in-situ mixing of soil and cement, these provide both structural and groundwater control benefits, often used for environmental remediation and ground improvement.

External and Internal Support Systems

Retaining walls often work in tandem with external or internal bracing elements. External systems, such as tiebacks, ground anchors, and soil nails, transfer loads to stable soil or rock beyond the excavation zone. These elements are tensioned or passive members that provide critical lateral support. Internal systems, including cross-lot struts, rakers, and floor slabs, resist loads within the excavation itself. The choice between external and internal bracing depends on site constraints, adjacent property considerations, and construction sequencing.

Design Principles and Analytical Methods

Designing an SOE system requires understanding both geotechnical and structural behaviors. Traditional limit equilibrium methods—such as Rankine and Coulomb earth pressure theories, or free and fixed-earth support methods—remain useful for preliminary design and quick checks. These methods, however, assume simplified soil conditions and rigid wall behavior. More advanced analyses employ the beam-on-elastic-foundation model, representing soil as a series of springs (the Winkler approach) and the wall as an elastic beam. This allows engineers to estimate deflections, bending moments, and anchor forces with greater realism.

Today, finite element modeling tools, such as PLAXIS, offer even more accurate simulation



of soil-structure interaction. These numerical models can account for nonlinear material properties, staged excavation, groundwater drawdown, and time-dependent effects like consolidation and creep. They also enable prediction of ground movements—critical for projects near sensitive infrastructure.

Engineering Judgment and Innovation

While software tools have become indispensable, the foundation of effective SOE design remains engineering judgment. Understanding how soil behaves under changing stress conditions, how anchors interact with retaining systems, and how construction sequences influence performance is vital. Successful projects balance theoretical rigor, practical constructability, and safety considerations.

Conclusion

SOE design exemplifies the synergy between geotechnical and structural engineering. Each excavation is a unique challenge requiring tailored solutions that integrate material science, analytical modeling, and field experience. As urban construction continues to expand underground, engineers must combine classical theory with modern computational techniques to ensure stability, minimize environmental impact, and protect the built environment.



STRUCTURAL ENGINEERING INSTITUTE UPDATES

By: Anna Bohlmann, E.I.T., Structural Engineer III at SK&A

The Structural Engineering Institute (SEI) will be hosting monthly meetings on the fourth Thursday of every month typically from 12 PM to 1 PM. Meetings will consist of a technical presentation followed by an open board meeting. Presentation topics will be announced prior to the meeting date. All are welcome to stay after the presentation for the board meeting.

The SEI board is looking to fill two open board positions: treasurer and secretary. We are looking for individuals interested in helping put together and support our technical presentations and events within the field of structural engineering. If interested please contact [Parsa Heydarpour](mailto:Parsa.Heydarpour@cowi.com) at prhy@cowi.com.





ASCE NCS GEO-INSTITUTE UPDATES

- #1** The ASCE NCS Geo-Institute will be holding our annual geotechnical symposium on **Wednesday, March 18th**, at **ASCE's Bechtel Conference Center** in Reston, Virginia. This event will take place from 7:30AM to 5:00PM and will be worth 8 PDHs for attendees!
[Register here](#)
- #2** Calling all young members and those young at heart! The ASCE Geo-Institute will be hosting a **March Madness Happy Hour** on **March 19th** from 5PM to 7 PM at **Yard House Tysons Galleria** (1660M Galleria at Tysons II, McLean, VA 22102). The cost is \$10 per person and includes light appetizers and two drinks.
[Register here](#)

OPEN BOARD POSITIONS

with ASCE NCS Reston Branch

The ASCE Reston Branch is currently seeking individuals interested in participating on the Board for the 2025-2026 program year. *Be a part of the group that puts together great technical meetings and networking opportunities!* Participating with the Board is a great chance to meet professionals in our local community and to learn more about the Civil Engineering work that drives our area. We currently have two (2) voting board positions open, one (1) for the At-Large Director and one (1) for the Secretary.

If you would like to be considered for the At-Large Director and Secretary position, please provide a Statement of Intent (a brief paragraph describing your interest in the position) and Qualifications (brief bio or resume) to [ASCE Reston Branch, Vicky Yu](#), email: vyu@atcs.com.

ASCE NCS GEO-INSTITUTE FEBRUARY LUNCHEON RECAP

By: *Morgan Berger, P.E., Geotechnical Project Engineer at A.G.E.S., Inc.*



At our February 19th lunch seminar, we had a full house at Wildfire in Tysons, Virginia. **Brendan Dwyer** (Skanska) and **Jim Glider** (Malcolm) presented about the construction of the Portal North Bridge (PNB), a critical rail infrastructure project that serves one of the busiest commuter rail corridors in the country, connecting Newark, New Jersey to Penn Station in New York. Awarded by New Jersey Transit and Amtrak in October 2021, to the Skanska Traylor PNB Joint Venture, the project includes nearly 2.5 miles of total track replacement and a new bridge rising 50 feet over the Hackensack River. The presentation highlighted the complex foundation system which consisted of drilled shafts up to 10 feet in diameter and driven piles. Despite significant challenges such as tight access near active rail lines, difficult subsurface conditions, and extensive testing requirements, the project team has successfully completed the majority of the drilled shaft work and overcame these challenges.

Brendan Dwyer is the Project Executive at Underpinning & Foundations Skanska and who brings over 20 years of experience in heavy civil and deep foundation construction. Jim Glider is the Senior Project Manager at Malcolm Drilling Company who manages and estimates major foundation projects across the Midwest and East Coast. Together, the speakers provided valuable insight into drilled shaft means and methods and lessons learned from complex marine and land-based projects.

ASCE NCS — Annual Sponsors



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GET INVOLVED: Help Shape the Future of the ASCE NCS

Whether you're just stepping into the professional world or reflecting on a meaningful career in civil engineering, there's a place for you within the NCS. Our Section thrives because of the time, energy, and expertise that members bring to our many committees—and we need your help to keep that momentum going.

We invite members to participate in one or more of our committees. There's a wide range to choose from, including:

- Reston/Bull Run Branch
- Structural Engineering Institute (SEI)
- Younger Member Forum (YMF)
- Environmental & Water Resources Institute (EWRI)
- Education Committee
- Education Committee (Collegiate)
- Geo-Institute
- Architectural Engineering Institute (AEI)
- Engineers Week (E-Week)
- Transportation Committee
- Sustainability Committee
- Boundary Stone Committee
- By-Laws Committee
- Life Members Forum
- History and Heritage Committee
- Construction Committee
- Corporate Relations Committee
- Management & Best Practices Committee
- Report Card Committee
- Section Meetings Planning Committee
- Newsletter Committee

Each committee plays a role in advancing our profession, supporting our members, and contributing to our region. Some committees are well-established and actively engaged; others need new leadership to restart and rebuild. ***This is a great opportunity for early-career professionals to step up and make their mark or for seasoned members to lend their wisdom and experience.***

We Need Writers, Creators, and Contributors!

The Newsletter Committee, particularly, is looking for enthusiastic members who want to contribute. Suppose you're interested in writing articles, attending events and recapping them, interviewing fellow engineers, or helping shape how we tell the story of our Section. In that case, we'd love to have you on board. No journalism degree is required—just a willingness to share and engage.

Don't See Yourself as a "Committee Person"?

That's okay. You can start by writing a short article, attending a meeting, or offering to help at an event. Every bit of participation counts and helps keep our Section strong and connected.

If you're interested in joining a committee, volunteering to write, or even helping a committee get back on its feet, please don't hesitate to reach out. We want to hear from you.

We can build a more connected, active, and engaged ASCE community—one committee at a time.

NEWSLETTER EDITOR:

Danielle C. Gittens, P.E., CCM
dgittens@brewington-mgt.com

SECRETARY:

Morgan Berger, MS, P.E.
M Berger@agesinc.com

EVENT RECAP

Dulles Airport Concourse E Construction Tour

Led by Julia Cypher, E.I.T., ENV SP

On January 29th, 2026, over 20 members of the Architectural Engineering Institute (AEI DC) community participated in an exclusive behind-the-scenes tour of the new Concourse E at Washington Dulles International Airport (IAD). Attendees represented a wide range of professional backgrounds—including civil/paving, water resources, architecture, structural engineering, aviation planning, and construction management—creating a dynamic interdisciplinary group. The tour offered a unique opportunity to explore a major aviation infrastructure project under construction, providing insight into lessons learned, design coordination, and the complex challenges of delivering a largescale airport facility.

Julia Cypher, E.I.T., ENV SP, who works in the Metropolitan Washington Airports Authority (MWAA) Office of Engineering and serves as the Secretary of AEI DC, organized and led the event. She was joined by several MWAA colleagues and representatives from Turner Construction Company, the lead contractor for the Concourse E Project. Their combined commentary helped illuminate how the project has progressed from early planning concepts to its emerging built form. Turner also generously hosted a small happy hour after the tour, offering attendees additional time to network and exchange insights.

The tour began with an overview of the project's planning objectives, including the need to increase gate capacity, improve passenger flow, and integrate modern building systems while working adjacent to active airside operations. Attendees learned how initial design renderings were translated into construction packages and how the team navigated challenges, including phased construction sequencing, material lead times, and coordination with MWAA's ongoing airport modernization efforts.

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Participants walked through several portions of the developing concourse, observing structural framing, mechanical and electrical roughins, airfield interface points, and the emerging architectural features of the passenger spaces. MWAA and Turner staff highlighted various design and construction considerations, such as accommodating future airline operations, integrating sustainability elements, ensuring airside safety, and coordinating utilities within an active airfield environment.

Attendees had the chance to examine real-world applications of engineering decisions, observe construction staging areas, and ask project team members detailed questions about quality control, safety protocols, systems integration, and longterm maintenance planning. The event served as an excellent learning opportunity for members to see how multidisciplinary engineering teams collaborate on a complex aviation facility, in the true fashion of Architectural Engineering principles.

AEI DC extends its appreciation to MWAA and Turner for providing such an informative and engaging experience. The AEI DC chapter looks forward to offering more technical tours and interactive events in the coming year to continue fostering professional development and crossdisciplinary collaboration within the local engineering community.

