

The 2023 SC Engineering Conference & Trade Show is offering 15 PDH, For attending a program in every time slot, you will be able to accumulate 15 PDH of the 15 required annually.

Thursday, June 15, 2023

4 PDH for the day

Exhibit Booth Set Up: 7:00 AM - Noon

Registration - 8:00 AM - 5:00 PM

8:30 AM - 10:15 AM - ACEC-SC Board and Annual Meeting

8:30 AM - 10:00 AM - ASCE-SC Board Meeting

10:30 AM – 12:15 PM – SCSPE Board and Annual Meeting

12:00 PM - 12:50 PM - Boxed Lunch

Program Descriptions:

1:00 – 1:55 PM (1 PDH) SC State Board of Registration for Professional Engineers and Surveyors Update

2:00 – 2:55 PM (1 PDH) SCDHEC Storm Water Update, Jill Stewart

3:00 - 3:55 PM (1 PDH) SCDOT Update, John Boylston, PE

4:00 PM – 5:00 PM (1 PDH) Legislative Panel, Adam B. Jones with ACEC-SC and SCSPE, Jennifer Patterson with SCFOR, Leslie Clark SC Coalition for Lawsuit Reform and Carolinas AGC and Rep. Gary Brewer House of Representatives District 114.

5:00 – 6:00 PM Trade Show Reception

Dinner on your Own

Friday, June 16, 2023

8 PDH for the day

7:00 AM – 5:00 PM Registration

8:00 AM – 3:00 PM Trade Show

8:00 AM – 5:00 PM Concurrent Sessions

9:50 AM – 10:25 AM Break Visit with Vendors



12:30 PM – 2:00 PM Lunch with Keynote Address Save the Light, Patty Geery The History and Engineering of the Morris Island Lighthouses' Save the Light Project

2:00 PM – 2:25 PM Break Visit with Vendors

6:30 – 7:00 PM Banquet Cocktails

7:00 – 9:00 PM SC Engineering Conference Banquet

Sorted by Track

Business Track – Track 1

Program Descriptions:

8:00 – 8:50 AM What is EOS and how it works in AEC Cyber Security Made Simple

In his book "Traction", Gino Wickman introduces us to the Entrepreneurial Operating System (EOS). Formed as a result of his years of consulting the EOS is designed specifically for small companies looking to scale up beyond the limits of the traditional founder's model. The success of EOS is underscored by the franchise "EOS Worldwide" that has sprung up around implementing the system. EOS integrates traditional strategic planning with plan implementation and company operations in a simple and comprehensive operating system. With over 170,000 companies using the concepts and tools of EOS, it is an alternative that AEC companies really should consider. Stewart Haney, AEC-OPS, LLC

1 PDH

9:00 – 9:50 AM

Cyber Security Made Simple

Most business owners know that protecting the data on their network is important. They implement firewalls, anti-virus protections, email filters, and ever purchase Cyber Security Insurance. This presentation outlines how despite the use of these important protections, the HABITS of the HUMAN BEINGS in your company are your biggest threat to keeping important information from being compromised!

James W. Berry, Custom Cloud Solutions 1 PDH

9:50 - 10:25

Break Visit With Vendors

10:30 - 11:20 Influence 90

Influence 90 Do vou want Trust & Tractior

Do you want Trust & Traction in your teams? Do you want High Performance Teams? You have to have influence first! You will learn 3 simple techniques that you can begin to apply right away to gain influence with your family, in your community and with your teams.

Betsy Hyden, Awesome Focus 1 PDH

11:30 - 12:20

Unmasking Risk: Navigating the Minefield of Liability Exposure in Design Engineering Stephen Agnew, IMCI

1 PDH

12:30 – 2:00 PM

Lunch with Keynote Speaker from 1:00 – 2:00 PM

Save the Light, Patty Geery The History and Engineering of the Morris Island Lighthouses' Save the Light Project 1 PDH

2:00 – 2:25 PM Break Visit With Vendors

2:30 – 3:20 PM

Establishing a Consulting Firm Via the Business Model Canvas

John Tirpack, Sabattis, LLC 1 PDH

3:30 – 4:20 PM

Selling is not a 4-Letter word!

Selling is not a 4-letter word. In fact, it is an important, challenging, and rewarding aspect of the engineering marketplace. Unfortunately, accredited 4-year engineering programs lack enough time to cover many topics including sales. ANYONE in an engineering firm including engineers can sell. ANYONE also includes the firm's management, administrative, financial, or contracting associates. This presentation will demonstrate a scalable model which any engineer (and associate of a firm) can adapt to sell ideas and create winning proposals to grow a firm's top line and bottom line. 3 case studies will be cited demonstrating the implementation of the model. John Tirpak, Value Selling Associates 1 PDH

Civil Track – Track 2

Program Descriptions:

8:00 – 8:50 AM

3D Modeling Greg Lemke and Michael Pfaff, ROWE PSC 1 PDH

9:00 – 9:50 AM

Restoring the Historic Factors Walk Retaining Walls

Over the past 11 years, the City of Savannah has been engaged in an ongoing historic rehabilitation program for the historic masonry walls along Factors Walk that retain the old Savannah Bluff. The construction of the walls initiated in the 1850s



and walls were constructed with various types of masonry, including granite, brick, sandstone, and ballast stone. This presentation will summarize the history of the Bluff, the various types of wall construction, previous repair efforts, the existing condition of the walls, and the ongoing repair program.

Jonathan Sigman, GEL Engineering, LLC

9:50 - 10:25

Break

Visit With Vendors

10:30 - 11:20

Engineer Tomorrow – Knowledge for a Changing World

The world is changing rapidly, and the Civil Engineering landscape is changing. New technologies, new material and new processes are all part of the exciting change in Civil Engineering. Learn what ASCE is doing to help prepare the future civil engineer to have the knowledge, skills and attitudes of the future civil engineer to support the future of the profession. This presentation is not only for engineers early in their career, but also for senior engineers leading young engineers into their future.

John Fleming, Southern Carolina Alliance 1 PDH

11:30 - 12:20

Project Pipeline: An innovative Approach to Prioritization for Funding Purposes

Project Pipeline was designed by the Virginia DOT to develop a steady stream, or pipeline, of high-priority projects through efficient studies to feed into the statewide prioritization processes. The objective of the program is to conduct studies across the Commonwealth with a focus on the priority locations and corridors that were adopted during the VTrans process which conducts a comprehensive assessment of transportation needs, risks to guide Virginia's transportation future. The primary goal is to develop solutions and investment strategies that address the identified needs and may be considered for implementation through funding programs such as revenue sharing, interstate funding, and local and regional sources. If the planning and development process is streamlined, it can improve project readiness and better manage project risks. To accomplish these goals, the Commonwealth is improving its collaboration with local governments and regional bodies to better understand the problems facing the transportation system. Brittany Groome and Albert Romano, ATCS 1 PDH

12:30 - 2:00 PM

Lunch with Keynote Speaker from 1:00 – 2:00 PM

Save the Light, Patty Geery

The History and Engineering of the Morris Island Lighthouses' Save the Light Project 1 PDH

2:00 – 2:25 PM

Break

Visit With Vendors

2:30 – 3:20 PM

Droning on About Mapping Waterways

Technology advancement has allowed unmanned systems to become a "major tool in the toolbox" in preparing riparian and bathymetric mapping deliverables. Combining aerial vehicles using the latest LiDAR technology with water surface vessels using single beam sonar systems, existing conditions models are created for various uses in planning, engineering, design, and construction. This session will include business and programmatic applications of this technology and set-up, performance, quality assurance, and delivery of projects of this nature.

Frank Mundy, Mark Thomas, STEWART

1 PDH

3:30 – 4:20 PM

Peeling Back the Lowcountry of South Carolina with Lidar

The coastal Lowcountry area of South Carolina is lush with culture and vegetation, and a scenic area once occupied by Native Americans traces its European settlement to the 17th century. Drayton Hall is an 18th-century plantation in the Ashley River Historic Corridor of Charleston, SC, which serves as the only estate on the Ashley River that survived the Civil War. The Drayton Hall Preservation Trust decided to use remote sensing and GIS methods to determine areas that contained historical and cultural evidence of significant prior activity. Drayton Hall collaborated with GPI Geospatial, Inc. to acquire high-density aerial lidar and high-resolution aerial imagery to support their research. GPI combined high-density aerial lidar with photogrammetric feature extraction to produce digital terrain models, topographic mapping data, and orthophotography. These products revealed evidence of historical human activity, such as foot trails and building pads, phosphate mining scars, and other unique natural features.

Tyler Stentz, GPI Geospatial, Inc.

1 PDH

4:30 – 5:20 PM

3D Subsurface Utility Engineering and LiDAR: A futuristic Model Now

With the rise of Building Information Modeling (BIM) the need for an accurate digital twin of the subsurface is more important than ever. Combining Light Detection and Ranging (LiDAR) data with Subsurface Utility Engineering (SUE) data, a true 3-dimensional model can be achieved. Recent advancements in ground penetrating radar (GPR) arrays and LiDAR technologies now enable us to collect and analyze subsurface data faster than ever. These technological enhancements are breaking barriers such as costs and complex analysis, paving the way for a broader adoption of the technology. When new LiDAR and GPR array technologies are combined with traditional tools such as radio frequency electromagnetic pipe/cable locators (RFEM), a complete picture of our infrastructure including subsurface depths can be achieved. The result is a 3-dimensional visualization of surface and subsurface features that cannot be replicated by traditional 2D mapping and provides another powerful tool to be used for projects. Jeff Tallent, ESP Associates

1 PDH

Environmental Track – Track 3

Program Descriptions:

8:00- 8:50 AM

Uptown at Centre Pointe: Charting the Course for Sustainable Development

Over a ten-year period of collaboration and coordination with the United States Army Corps of Engineers (USACE), the project team utilized creative planning and engineering to make the vision of Uptown at Centre Pointe a reality. From the remnants of a nineteenth century phosphate mine, Uptown at Centre Pointe will bring economic opportunity and public benefit to one of South Carolina's fastest-growing cities, improve the quantity and quality of stormwater runoff, and make a significant contribution to the region's preservation of natural resources. The design team utilized multiple elements – narrow streets, retaining walls, structured parking, compact footprints, pervious surfaces, reduced setbacks, offsite mitigation, water filtration, biofiltration media, and a unique modular underground detention system – to minimize environmental impacts and achieve the project's stormwater management goals.

Morgan Asbell and Paul Ford, Reveer Group 1 PDH

9:00 – 9:50 AM Topic TBD Aaron Brummitt, S&ME 1 PDH

9:50 – 10:25 Break Visit With Vendors

10:30 - 11:20

Environmental Considerations in Project Development

Lessons learned in identification of potential environmental issues and minimizing their impact on project development. Examples from a variety of projects covering the most common, and not so common, environmental pitfalls - Section 7, Section 404, Section 4(f), and more. Christy Shumate, Three Oaks Engineering 1 PDH

11:30 - 12:20

Pipe Inspection, Evaluation and Acceptance

It is in the best interest of the Owner to know that all pipes in their system have been properly installed and were not damaged during installation such that the pipe system is compromised. Pipe inspection and evaluation throughout all phases of construction can mitigate these concerns. Post installation inspection (PII) provides the owner with the information needed to determine whether proper installation occurred prior to project close-out or final acceptance. We will be discussing the most recent edition of the AASHTO Guide Specifications for Highway Construction. Tiffany Ferrell, Rinker Materials

1 PDH

12:30 - 2:00 PM

Lunch with Keynote Speaker from 1:00 – 2:00 PM

Save the Light, Patty Geery

The History and Engineering of the Morris Island Lighthouses' Save the Light Project 1 PDH

2:00 – 2:25 PM Break Visit With Vendors

2:30 – 3:20 PM

Water Sustainability in the Manufacturing Industries

Water sustainability has become an issue of great importance in both the private and public sectors as a result of concerns regarding the availability of water around the world. This presentation explores various opportunities where sustainable practices can be applied in conventional processes found in a wide variety of manufacturing industries to utilize water responsibly. The presentation describes concrete measures to reduce, re-use and recycle water in a typical manufacturing facility. When effective and tailored actions are taken to optimize the use of water, considering areas of consumption such as water treatment, cooling towers and CIP operations, then achieving Water Sustainability in the Manufacturing Industries is a feasible task. Oscar Garcia and Gregory Lepak, Fluor Corporation 1 PDH

3:30 – 4:20 PM

The Huger Street Pump Station Project, Charleston, SC

For years, the intersection of Huger Street and King Street in Charleston was subjected to severe rainfall induced flooding. In a major effort to tackle storm water resiliency, and create equitable infrastructure in this busy corridor, the City embarked on a program to improve conditions. The engineering team first developed a 2D model to analyze the Huger Street Drainage Basin. This showed the existing system was undersized and sediment laden. As an immediate fix, the intersection of King & Huger was redesigned to maximize capacity and conveyance by adding larger pipe sizes and inlets while a longer-term solution evolved. The project culminated with the development of a one-of-a-kind pump station and forced the main to tie into the new intersection improvements. Part sculpture and part community park, the design of the new facility will not only address critical stormwater needs but add to the social fabric of the neighborhood. Ryan Mattie, JMT

1 PDH

4:30 – 5:20 PM OCRM

Elizabeth von Kolnitz, SCDHEC 1 PDH

Fire, Life and Safety and Geotechnical – Track 4

Program Descriptions:

8:00- 8:50 AM

Sprinkler Design for Storage Occupancies in the 2019 NFPA 13

The state adopted the 2019 NFPA 13 in January 2023. In addition to the standard being reorganized, there are many changes for sprinkler protection in storage occupancies. This class will provide a brief overview of these changes.

Ralph Foster, Foster Engineering & Consulting, LLC 1 PDH

9:00 – 9:50 AM

Introduction to the Fire Doors

This presentation will be an introduction to fire doors utilized as part of passive fire protection systems in buildings. We will discuss UL standards for fire doors as well as code requirements from IBC and NFPA standards.

Rob Hanson, SRNS 1 PDH

9:50 – 10:25

Break Visit With Vendors

10:30 - 11:20

Fire Protection Considerations for Existing Occupancies

Existing buildings can be a blessing or a curse. To make value investments, it is important to understand the requirements that must be applied before a building is occupied. Often, these requirements can come at a significant cost. This course will review several key fire protection/life safety features that should be examined when repurposing an existing building. John Smeck, Foster Engineering & Consulting, LLC 1 PDH

11:30 - 12:20

Required Fire Flows vs Fire Sprinkler/Standpipe Demand

Engineers designing underground water supplies are unsure the difference between Required Fire Flow verses the flow demand of a water-based suppression system. We will cover common the methods for determining the required Fire Flow and how to quickly estimate the flows needed for a fire suppression system.

Ralph Foster, Foster Engineering & Consulting, LLC 1 PDH

12:30 - 2:00 PM

Lunch with Keynote Speaker from 1:00 – 2:00 PM

Save the Light, Patty Geery

The History and Engineering of the Morris Island Lighthouses' Save the Light Project 1 PDH

2:00 – 2:25 PM Break Visit With Vendors

2:30 – 3:20 PM TBD

3:30 – 4:20 PM TBD

4:30 – 5:20 PM TBD

Transportation – Track 5

Program Descriptions:

8:00- 8:50 AM TBD 1 PDH

9:00 – 9:50 AM Understanding the Importance and benefits of Warm Mix Asphalt

This will discuss how warm mix asphalt fits in to the Biden Administration's Build Back Better initiatives.

Chris Strack, All State Materials Group 1 PDH

9:50 – 10:25 Break Visit With Vendors

10:30 - 11:20

Driving for the Green – NCDOT US Open Projects Initiative

On Sept. 9, 2020, the USGA announced Pinehurst as the first Anchor Site of the U.S. Open, with the championship returning to Pinehurst in 2024, 2029, 2035, 2041 and 2047. The U.S. Open's return in 2024 will mark the first time in over a century the USGA has awarded four Opens to a single site in a span of 25 years. This session will highlight NCDOT's approach to aggressively delivering key infrastructure improvements involving multiple projects to the US Open area to prepare for the influx of visitors in the coming years. The discussion will center around best project management strategies implemented by NCDOT to reduce risks, optimize design efforts, acquire right-of-way, and accomplish utility relocation prior to the 2024 US Open. This will tee up the next phase with projects letting to contract after the 2024 US Open and being completed prior to the 2029 US Open.

Patrick Norman, NCDOT and Jerry Page, Gannett Fleming, Inc. 1 PDH

11:30 – 12:20 TBD Kimberly R. Lyons, PhD 1 PDH

12:30 – 2:00 PM Lunch with Keynote Speaker from 1:00 – 2:00 PM

Save the Light, Patty Geery The History and Engineering of the Morris Island Lighthouses' Save the Light Project 1 PDH

2:00 – 2:25 PM Break Visit With Vendors

2:30 – 3:20 PM

Thick Lift Asphalt Paving Application in SC

After many decades of shallow depth mill and fills of asphalt pavement on major highway here in SC, it became evident that some areas needed further investigation due to reoccurring repairs. The investigations uncovered a need for much deeper asphalt repairs which required some outside of the box thinking to fix these issues in a timely manner to avoid traffic disruption and provide a good long-lasting pavement.

Clifford Selkinghaus, SCAPA 1 PDH

3:30 – 4:20 PM

Improving Safety and Congestion on SC 170 with a Quick Implementation of a Corridor Study

Averaging over one hundred crashes and one fatality per year, AECOM prepared a Corridor Access Management Study for a 4.4-mile segment along SC 170 in the Lowcountry area of Okatie, South Carolina. Following the completion of the study, the Near-Term recommendations are now designed and planned for construction which is critical for improving safety and congestion. With the project extents located in both Beaufort and Jasper Counties, the study also developed systemic strategies for the entire 4-lane divided primary arterial using the reduced conflict intersection to relieve traffic congestion and to accommodate future demand associated with several large scale commercial and residential developments. AECOM performed a traffic analysis of the entire corridor which included a review of crash history, study of 16 intersections, and reviewed the future No-Build and Build Conditions to identify Near-, Mid- and Long-Term Solutions. AECOM recently worked directly with Beaufort County to prepare roadway plans to implement the Near-Term Solutions along the corridor, which will begin construction this summer. Additionally, Beaufort County worked with SCDOT to incorporate a scheduled resurfacing of US 278 into the SC 170 package, which provides an opportunity to restripe ramp tie ins to improve operations and safety at the US 278 interchange. With continued growth, Beaufort County is coordinating with stakeholders and developing plans to implement Mid- and Long-Term Solutions. Emily Swearingen and Eric Eckenrode, PE, PTOE, RSP I 2 1 PDH

4:30 – 5:20 PM TBD

6:30 – 7:00 PM Banquet Cocktails

7:00 – 9:00 PM SC Engineering Conference Banquet



Saturday, June 17, 2023

8 PDH for the day

7:00 AM – 10:00 AM Registration

8:00 AM – Noon General Session

Program Descriptions:

8:00- 9:50 AM Elicots Rock: Surveyors Footsteps on the 35th Parallel Tom Robertson, Cranston Engineering, LLC 2 PDH

10:00 – Noon

An Introduction on into STEM for Early Education

An Introduction to STEM for Early Education - Hands On Time. An Educator's perspective about growing our next generation of Science, Technology, Engineering, and Math workforce. Founder Dean Kamen says, "It is not about robots. We are not using kids to build robots—we are using robots to build kids." FIRST programs are holistic — language arts, math, science, history, research and presentations, teamwork, and interpersonal skills.FIRST has curriculum for the classroom, and teams for those that want to compete. MK Baldwin. Retired

2 PDH

