



SC ENGINEERING

CONFERENCE & TRADE SHOW

The 2024 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 6, 2024

4 PDH for the day

Time	Program Description
7:00 AM - Noon	Exhibit Booth Set Up
8:00 AM - 5:00 PM	Registration
8:30 AM - 10:15 AM	SCSPE Board and Annual Meeting
8:30 AM - 10:00 AM	ASCE-SC Board Meeting
12:10 PM	ACEC CEO Roundtable
12:00 PM- 12:50 PM	Boxed Lunch
1:00 PM- 1:50 PM	(1 PDH) SC State Board of Registration for Professional Engineers and Surveyors
2:00 PM- 2:50 PM	(1 PDH) SCDOT Update, Julie Barker, PE
3:00 PM- 3:50 PM	(1 PDH) SCDHEC Update, Jill Stewart
4:00 PM- 4:50 PM	(1 PDH) Legislative Round Table
5:00 PM- 6:00 PM	Trade Show Reception

————— **Dinner on your Own** —————



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Friday, June 7, 2024

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

2:00 PM – 2:25 PM
Break

Visit with Vendor

6:30 – 7:00 PM
Banquet Cocktails

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

Friday, June 7, 2024

7 PDH for the day

Time	Business Tracks - Track 1 (4 Total PDH Business)
8:00 AM - 8:50 AM	<p><i>Planning for Success, Creating Your Ideal Life</i></p> <p>Goal setting is important for success, but without an action plan that serves as a clear roadmap, we may stumble. Learn the top issues people face personally and professionally when it comes to developing a plan. Participants will walk away with a new mindset and learn how to align short term and long-term goals. As a certified Ideal Life Coach, Brett will share strategies for success using the “I GOT This” framework, a neuroscience-backed goal-setting approach designed to help you progress towards an enhanced version of yourself, all while maintaining motivation and inspiration to keep moving forward.</p> <p><i>Brett Groller, Brett Groller Coaching</i></p> <p>1 PDH</p>
9:00 AM - 9:50 AM	<p><i>Implementing Your Strategic Plan: Strategy to Reality</i></p> <p>Many firms have a strategic plan, but few actually successfully implement them. Whether you have a strategic plan or need to develop one, this session will give you the tools to make it happen. We provide proven tools for strategy implementation and share lessons learned from applying them.</p> <p><i>Stu Haney, PE, AEC-OPS, LLC</i></p> <p>1 PDH</p>
10:15 AM - 11:05 AM	<p><i>The 36 Hour Workweek Rethinking the 9-5</i></p> <p>The North Charleston Sewer District (NCS D) implemented a six month trial for a four day, nine hour/day, thirty-six hour workweek in July 2023. With high turnover and a record number of vacancies since Covid-19, NCS D wanted to try something innovative to boost employee retention and attract new talent.</p> <p>Workforce preferences have changed since the pandemic. Historically, many utilities provided a fair salary, excellent benefits, and regular working hours. However, work-life balance is now one of the most important job related benefits with flexible work hours becoming routine in society. Public utilities are in a tough position as government agencies need to be available to the public. Additionally, making infrastructure repairs or running a treatment plant from home is not feasible.</p> <p>This presentation will follow NCS D’s journey through conception, research, planning, approval, implementation, reporting, and results. Topics will include a recap of “A Global Overview of the 4 Day Week,” NCS D’s justification to the Commission, tracking metrics, work routine/schedule changes, communications, employee feedback, and final results.</p> <p><i>Jarred Jones, North Charleston Sewer District</i></p> <p>1 PDH</p>
11:15 AM - 12:05 PM	<p><i>Relationships & Connections: Business Development as a Seller/Doer</i></p> <p><i>Frank Mundy, PLS, VHB</i></p> <p>1 PDH</p>





Friday, June 7, 2024

7 PDH for the day

Time	Geotech Tracks - Track 1 (3 Total PDH Geotech)
2:00 PM - 2:50 PM	<p style="text-align: center;"><i>Sequoyah Lake Dam: Improvements and Natural Rock Spillway Evaluation</i></p> <p>Sequoyah Lake Dam is a high hazard dam constructed in 1921. Over the years the dam has undergone various safety improvements such as increasing freeboard, improvement of the emergency spillway, and replacement of secondary discharge and lake drain controls. Recently, during application for FEMA funding, the dam embankment was evaluated for global stability under static and seismic loading and hydraulic capacity under the ½ PMP. Of special concern was the condition and integrity of the original spillway which had been formed by partial blasting of a channel into natural rock.</p> <p>This presentation will outline study methods related to the embankment including seismic refraction testing by ECS to confirm the depth and competency of the underlying granitic rock. Following visual assessment of the exposed rock and plunge pool at the bottom of the spillway, rock coring was performed by ECS at selected locations adjacent to the active spillway to document competency of the base rock.</p> <p>While the embankment reconstruction plans are still under review by FEMA & the GA Safe Dams group, we recommended flattening the upstream and downstream slopes to meet current minimum factors of safety against global stability failure. During the downstream slope flattening, we recommended installation of a combination blanket and chimney drain in the new fill slope. We also recommended the natural rock primary discharge spillway be left in place with only minor improvements. It is our opinion that a new realigned cast in place concrete spillway was not needed after 100 years of service.</p> <p style="text-align: right;"><i>Bob Goehring, ECS Southeast, LLC</i> 1 PDH</p>
4:00 PM - 4:50 PM	<p style="text-align: center;"><i>Forensic Study & Remediation of Reinforced Soil Slope at JC Penny, Alabaster, Alabama.</i></p> <p>Since 2009, a 70 ft tall, reinforced soil slope (RSS) supporting a big box retail store deformed and caused damage to the building. This presentation will outline the 14 yearlong forensic engineering study to determine and document the causes of the slow-moving failure. It will also provide insight into the success and failure of over \$10M of repairs undertaken to keep the store open.</p> <p style="text-align: right;"><i>Robert Goehring, ECS Southeast, LLC</i> 1 PDH</p>
10:15 AM - 11:05 AM	<p style="text-align: center;"><i>Reducing Slope Instability Risk Using Manufactured Turf/Earth Reinforcement Systems</i></p> <p>The presentation is a comprehensive overview of Turf/Earth Reinforcement Mat Systems (TERMS), focusing on their application for countering shallow-plane instability on steep slopes. The document begins by distinguishing between erosion and slope failure, emphasizing the importance of understanding shear strength in soil masses and identifying various shear stressors. It delves into the different modes of failure and explores reinforcement strategies to mitigate these issues.</p> <p>The methodology includes a detailed slope stability analysis, starting with data collection on soil properties and the interactions between soil and water. This analysis is crucial for computing the factor of safety, a key measure in assessing slope stability. The core of the study is the examination of TERMS, including their purpose, components, and the properties that contribute to their high performance. The discussion extends to installation and constructability issues, highlighting the practical aspects of applying these systems.</p> <p>A section is dedicated to failure analysis through quantified risk reduction. This part explores the infinite slope condition, outlines the input parameters, and describes the solution approach for slope stability modeling. By incorporating TERMS into the design, the factor of safety against potential slope instability is increased, offering a quantified risk reduction.</p> <p>Lastly, a case study to illustrate the practical application of TERMS in real-world scenarios. It underscores the effectiveness of TERMS, especially for reinforcing constructed roadside slopes, pond and lake shorelines, and other steep inclines. This comprehensive approach to slope instability through the use of TERMS provides a novel solution to a common geotechnical problem.</p> <p style="text-align: right;"><i>Michael Jotzke, Western Green</i> 1 PDH</p>



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Friday, June 7, 2024

Time	General Tracks - Track 2 (7 Total PDH General)
8:00 AM - 8:50 AM	<p><i>NSPE: NSPE Code of Ethics for Engineers, Cannon II</i> <i>Susan Habina Woolard, PE</i> 1 PDH</p>
9:00 AM - 9:50 AM	<p><i>Case Study: Demolition of the Original Air Traffic Control Tower at John F Kennedy International Airport</i> The presentation describes planning requirements for demolition of the original air traffic control tower located in John F Kennedy International Airport. The design team and construction manager's concerns were demolition on an active airport where an error cutting off electrical power could shut down the entire airport. These and other considerations may be useful for planning tomorrow's projects. <i>Henry, Hessing, PE, F ASCE, Retired civil engineer</i> 1 PDH</p>
10:15 AM - 11:05 AM	<p><i>Lessons Learned from Emergency/Urgent Response Projects</i> We rely on roads to get us to work, clean water to keep us hydrated, pipelines and power lines to provide power to buildings and foundations to support those buildings. What happens when something happens unexpectedly that reduces or removes our ability to use these components? How do we respond? These situations turn routine aspects of a project into critical ones. In this presentation, we will discuss lessons learned from the presenters' experience with emergency response projects and apply those lessons learned to more conventional projects. The two presenters will give insight from the engineer and the general contractor's perspective. <i>Jonathan Thrasher, PE, S&ME</i> 1 PDH</p>
11:15 AM - 12:05 PM	<p><i>My Grandfather Would Roll Over in Their Grave</i> <i>Thomas "Tom" Jordan, Davis & Floyd</i> 1 PDH</p>
2:00 PM - 2:50 PM	<p><i>Interactive Engineering: Fun with Shapes and Colors</i> Observing the geometry of team-building, problem-solving, and storytelling: 1. Common Plots 2. Org Charts 3. SWOT Analysis 4. RACI Matrix 5. RAG Analysis 6. Heatmaps <i>Adam Way, PE, AECOM</i> 1 PDH</p>
3:00 PM - 3:50 PM	<p><i>An Overview of the UFC 3-600-01 - Fire Protection Engineering for Facilities</i> The presentation will review key aspects of the UFC 3-600-01 and how Engineers need to integrate the requirements in their design. <i>Ralph Foster, PE</i> 1 PDH</p>
4:00 PM - 4:50 PM	<p><i>Reflections On Process Flow Mapping</i> This engaging presentation will reflect on Process Flow Mapping via reflections from through hiking the Appalachian Trail. To backpack 2,137 miles from Georgia to Maine is a process encompassing many subprocesses. Engineering, too, involves process flows and maps from product design to manufacturing processes to sales processes. Per Edward Deming, "If you can't describe what you are doing as a process, you don't know what you are doing." This engaging presentation includes audience participation exercises to prompt attendees in documenting and improving their processes to best support their customers. <i>Jon Tirpak, Sabattis, LLC</i> 1 PDH</p>



Friday, June 7, 2024

Time	Civil Tracks - Track 3 (6 Total PDH Civil)
8:00 AM - 8:50 AM	<p style="text-align: center;"><i>Stormwater Tunnel Extension</i></p> <p>There is a long history of tunneling in the Charleston area of South Carolina, and the most recent tunnel project is the Medical District Drainage Tunnel Extension at Ehrhardt Street (MDTE) which serves the medical district on the Charleston peninsula. The MDTE is an extension of the US 17 Spring/Fishburne Stormwater Drainage Improvement Tunnel System which was put into service during the construction of the MDTE. The MDTE tunnel project consisting of a vortex structure with a 54-inch internal diameter (ID) drop shaft that connects to an existing, active stormwater tunnel system by a 9-foot ID cast-in-place concrete tunnel that is 900 feet long. The connection to the existing tunnel system required a reinforced concrete bulkhead to be installed in the existing tunnel and a new tunnel portal constructed in an existing 20-foot ID concrete shaft.</p> <p>This paper will focus on the design and construction of the elements required for connecting to the live tunnel system. The bulkhead was installed in an existing 8-foot ID concrete tunnel and consists of a 2-foot thick reinforced concrete wall and an 16-foot long reinforced concrete tunnel liner section. The bulkhead design engages the surrounding ground and existing concrete tunnel liner to resist the forces from the 144 feet of head that occurs when the tunnel system is full. Additional discussion will address use of the existing shaft for construction, observed ground conditions, selection of initial support, coordination with commissioning of the existing surface collection system and existing tunnel system occurring concurrently with construction.</p> <p style="text-align: center;"><i>Jonathan Ard, PE, Black & Veatch</i> 1 PDH</p>
9:00 AM - 9:50 AM	<p style="text-align: center;"><i>The Game Changing Uses of RTK and Utility Locating</i></p> <p style="text-align: center;"><i>Jason McNaughton, ICE</i> 1 PDH</p>
10:15 AM - 11:05 AM	<p style="text-align: center;"><i>Geostructural and Ground Improvement Solutions in Clemson, SC</i></p> <p style="text-align: center;"><i>Will Degen Bennett Livingston, PE, PC. GE</i> 1 PDH</p>
11:15 AM - 12:05 PM	<p style="text-align: center;"><i>Underground Utility Location</i></p> <p style="text-align: center;"><i>Alex Whitten</i> 1 PDH</p>
2:00 PM - 3:50 PM	<p style="text-align: center;"><i>Drone Program Quickstart</i></p> <p style="text-align: center;"><i>Bobby Mullinax, SmartDrone</i> 1 PDH</p>
4:00 PM - 4:50 PM	<p style="text-align: center;"><i>Evolution of the Seismic Design Criteria per the ASCE 7 Standard</i></p> <p>This presentation discusses the evolution of the seismic design criteria per the ASCE 7 Standard. It includes a discussion of the brief history of the ASCE 7 Standard, review of updates to the seismic ground motion long-period transition maps, site classification and site-specific ground motion procedures for seismic design, and the major changes to the seismic design criteria in ASCE 7-22. An example site is used to demonstrate how changes to the ASCE 7 affect seismic site class and seismic design category, as well as considerations for site-specific response analyses.</p> <p style="text-align: center;"><i>Barnabas, Bwambale, ECS Southeast, LLC</i> 1 PDH</p>



Friday, June 7, 2024

Time	Transportation Tracks - Track 4 (7 Total PDH Civil)
8:00 AM - 8:50 AM	<p align="center"><i>Paving Solutions</i> Paving Solutions with FDR <i>Stan Bland, PE, Southeast Cement Promotion Association</i> 1 PDH</p>
9:00 AM - 9:50 AM	<p align="center"><i>SCDOT - SC+EV and NEVI Program Implementation</i> <i>Glen Bramlitt, SCDOT</i> 1 PDH</p>
10:15 AM - 11:05 AM	<p align="center">MISSING TITLE <i>Hesha Gamble, PE</i> 1 PDH</p>
11:15 AM - 12:05 PM	<p align="center"><i>Regional Mobility Program</i> <i>Machael Peterson</i> 1 PDH</p>
2:00 PM - 2:50 PM	<p align="center"><i>Bridge Package, 16 - Design Build Project in Pickens County</i> <i>Jeff Mulliken, PhD, PE, CarolinaTEA</i> 1 PDH</p>
3:00 PM - 3:50 PM	<p align="center"><i>Asphalt Sustainability in Today's Market</i> Discuss how the asphalt has led the world in the production of the most recycled product and how the industry continues to strive to become carbon neutral in the future. Focus will be on not only recycling, but the increased pressure to reduce CO2 and provide the customers a nutrition label known as an EPD. <i>Cliff Selkinghaus, SCAPA</i> 1 PDH</p>
4:00 PM - 4:50 PM	<p align="center"><i>Design of Flexible Pavements: Past, Present, & Future</i> <i>Husam Sadek, S&ME</i> 1 PDH</p>



Friday, June 7, 2024

Time	Other Tracks - Track 5 (3 Total PDH)
TBD	<i>Coal Combustion and Cleanup</i> William Stevick, PE, Santee Cooper 1 PDH
TBD	<i>Effluent Limitations Guidelines Rule History and Compliance</i> William Stevick, PE, Santee Cooper 1 PDH
TBD	<i>The Circular Economy and Plastics Recycling</i> James Young, PE, Flour 1 PDH

Saturday, June 8, 2024

Time	All Day Track (4 Total PDH)
8:00 AM - 11:50 AM	<i>The New Differentiator: From Technical Excellence to Client Success</i> Mel Lester, PE 4 PDH

Enjoy your stay in Greenville, SC!

