



**GEO-
INSTITUTE**
Delaware Valley
Chapter

DELAWARE VALLEY GEO-INSTITUTE

DVGI October 2017

Volume 17, Issue 7

October 2017 DVGI Dinner Meeting

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SPEAKER:

James A. McKelvey, P.E., D.GE
 Director, Geotechnical Design, Earth Engineering Inc.

TOPIC:

Pocono Raceway- The Tunnel Turn Rehabilitation

DATE:

Tuesday, October 17th, 2017

LOCATION:

Valley Forge Casino Resort Hotel, Parkview Ballroom
 1160 First Avenue, King of Prussia, PA 19406

TIME:

5:30 PM Social Hour, 6:30 PM Dinner and
 7:15 PM Presentation

Registration and Payment Online at www.dvgi.org

Development of the Pocono Raceway in Long Pond, Pennsylvania began in 1965 with the first race on the 2½-mile track being held in 1971. The track is unique on the Indy Car and NASCAR circuits featuring a three turn design, with each individual turn mimicking the curve radius and banking of other important racing tracks around the country. Turn 2, modeled after the 8-degree banked turns at the Indianapolis Motor Speedway, had two tunnels constructed beneath the race track, providing vehicular access to the infield. During the 1980's, both tunnels displayed interior deformation, and were internally braced. However, the added bracing significantly reduced the vertical clearance within the tunnels, hampering vehicular access to the infield. Towards the end of the 2013 racing season a truck impacted the last brace within the outbound tunnel, causing significant deformation of the tunnel in this location. The track owners decided rehabilitation of the tunnels was needed to improve infield access by replacing the interior bracing with an alternate solution while improving the aesthetics of the tunnel entrances.

This presentation will discuss the design and construction of the soil nail reinforcement used to temporarily support the tunnels while the interior bracing was removed and the design and construction of the permanent concrete shells that would serve to support the overlying race track. The design and construction of the tunnel entrances will also be discussed, which featured both permanent soils nails and mechanically stabilized earth systems to support the sculpted shotcrete fascia.

ABOUT THE SPEAKER:

Jay McKelvey is a practicing geotechnical engineer with over 28 years' experience and is registered as a professional engineer in six states. Having received a BS and MS in Civil Engineering from Drexel University, Jay has published over 30 technical papers in journals and conference proceedings. In addition to his Diplomate of Geotechnical Engineering status within the Academy of Geoprosessionals, he has been elected to Fellow within ASCE and serves on the ASCE national technical committees for earth structures and geosynthetics. Jay also serves on the editorial board of ASTM's Geotechnical Testing Journal and is currently the Past Chair of DVGI.

*One Professional Development Hour (PDH)
 will be provided for this dinner meeting.*



September 2017 Dinner Meeting

Accelerating Reliable Geotechnical Solutions in Project Delivery Benjamin S. Rivers, P.E., Federal Highway Administration

U.S. Department of Transportation
Federal Highway Administration

Drivers – Accelerating Project Delivery

Mobility, Safety and Infrastructure Condition – System Performance

Related FHWA Strategic Objectives:

- Deliver projects faster and more efficiently by promoting best practices, mainstreaming innovations, and exercising available program flexibilities
- Accelerate Technology and Innovation Deployment
- Advance strategies to improve freight movement...which support national economic priorities
- Improve the reliability of travel and of freight movements on the National Highway System
- Achieve and sustain a state of good repair of pavements, bridges, and tunnels
- Improve workforce productivity and responsiveness to customers and partners by deploying integrated systems and technologies
- Reduce fatalities and serious injuries on all public roadways

RESOURCE CENTER

(Image courtesy of presenter).

System performance of our nation's highways relies on the adequacy of infrastructure condition, safety and operational mobility. Part of the larger strategy to minimize system disruptions is integrating reliable technologies and methods to reduce highway improvement project delivery times. Within geotechnical practices, opportunities to shave off time during project delivery exist from the early stages of planning to the late stage of construction. Reliable performance of highway infrastructure also depends on being able to reliably characterize geotechnical conditions that influence the design, construction and long-term performance of our highway infrastructure.

This presentation introduced tools and technologies that have great potential to reduce project delivery time, while providing reliable geotechnical solutions. GeotechTools.org is a web-based application that allows vetted alternative geotechnical solutions to be compared and perused, in consultation with the geotechnical engineer, during the early stages project development. DIGGS is a geotechnical data exchange standard that has the potential to revolutionize workflow and project delivery schedules. In addition, a number of rapid, reliable and mature geotechnical site characterization technologies are available, but are simply underutilized. Examples of these include CPT, MWD, certain geophysical methods, and geotechnical data management systems. The benefits and limitations of these geotechnical tools and technologies was discussed. Interested individuals were encouraged to register with and explore www.geotechtools.org before the meeting; registration is free.

ABOUT THE SPEAKER:

Mr. Rivers has more than 20 years of experience in consulting and with the FHWA. He is currently focused in FHWA program areas related to subsurface investigations, earthwork, post-grouted drilled shafts, and geohazards, and on providing technical assistance to DOTs and FHWA Division offices on all geotechnical engineering aspects within transportation. He currently serves as a Geotechnical Engineer with the Federal Highway Administration Resource Center based out of Atlanta. Mr. Rivers is a graduate of North Carolina State University where he received his Bachelors in Civil Engineering in 1994 and his Masters in Geotechnical Engineering in 1996.



(Image courtesy of presenter).



ANNOUNCEMENTS

Upcoming Dates for 2017-2018 Dinner Meetings and events are as follows:

- ◆ **October 17th Dinner Meeting:** James A. McKelvey, P.E., D.GE
“Pocono Raceway - The Tunnel Turn Rehabilitation”
- ◆ **November 14th Dinner Meeting:** Robert J. Palermo, P.E.
“Foundation Design and Construction of the New Tappan Zee Bridge”

One PDH will be awarded for most dinner meetings that you attend.

If you are interested in presenting at one our monthly meetings or have ideas about potential speakers, please get in touch with a DVGI board member.

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ANNOUNCEMENTS



Geosynthetic Institute

GSI Webinars for 2017—(1.5 PDH/each)

From 11:30 AM—1:00 PM (Eastern Time)

Topics, Dates and Registration at www.geosynthetic-institute.org/webinar.htm

Cost: GSI Members \$200; Nonmembers \$250

Date	GSI No.	Title
October 25	W-2	MSE Wall Back Drainage Design
November 8	W-3	MSE Wall Remediation and Monitoring
December 13	W-4	MSE Wall Field Construction Inspection Practices

HAVE DVGI PUBLISH YOUR ARTICLE, ADVERTISEMENT, OR JOB POSTING

- Do you have an interesting article on a project or individual in your organization that you would like to have published in the DVGI newsletter?
- Would you like to get the word out about a job opening, new venture, etc. to our membership via the newsletter?

Please submit your articles or news items for consideration in the next edition of the newsletter or get in touch about our reasonably-priced advertising by contacting Theresa Loux (tloux@aeroaggregates.com).

DVGI Merchandise Available for Purchase

Coffee mugs (\$8) and lapel pins with the DVGI logo (\$5) are available for purchase. See Russ Preuss if you are interested in purchasing either of these items.

ASCE/G-I Members:
Read past and present issues of Geo-Strata magazine online at www.asce.org



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MEMBER SPOTLIGHT

Jeremy Brown, P.E.

Schnabel Engineering, DVGI At-Large Board Member

Jeremy Brown is a Senior Engineer at Schnabel Engineering in West Chester, PA. Jeremy has over a decade of experience in geotechnical/foundation engineering and construction. He has a particular depth



Jeremy Brown, P.E. (Image courtesy of J. Brown)

of experience in the design and construction of shallow/deep foundation systems, earth retaining structures, rock slope stabilization, and embankments/slopes. Jeremy has experience in several markets, including Transportation, Power/Energy, Dams & Water Resources, Commercial, and Industrial.

Jeremy partners with owners, A/E firms, and contractors to help them achieve their project or program goals. He earned his B.S. Civil Engineering degree from Penn State University and M.S. Engineering (Structural/Geotechnical focus) from University of Wisconsin-Platteville.

Jeremy resides in Chester County with his wife Sarah, and their two-year-old daughter, Frankie. In his free time, he enjoys hanging out with family and friends, playing golf, grilling, and rooting for Philly sports teams.



Jeremy's wife, Sarah, and daughter, Frankie (Image courtesy of J. Brown)

Q & A with Jeremy:

Q: What got you first interested in the geo-world?

A: The unknown of what is below ground and the challenge of investigating that unknown then designing for it.

Q: What is your favorite thing about your Alma Mater?

A: The outstanding network of people.

Q: What advice would you give to students studying a geo-profession?

A: 1) Learn everything you can from craft personnel on construction sites. 2) Solving problems is a collaborative effort between construction and design personnel. 3) The geo-profession is very broad; try to get a variety of experience early on in your career to help decide where to specialize.

Q: What are your hopes for our industry?

A: For the industry to help promote new innovations in technology that deliver more efficient and cost-effective designs.

Q: What is your favorite thing to do in Philadelphia?

A: Go to an Eagles or Phillies game, and then get a good cheese steak or roast pork sandwich.

Q: What aspect of your job do you enjoy the most?

A: Every day is different.

Q: What is the most challenging aspect of your job?

A: Managing several projects simultaneously, each with their own unique challenges and needs.

Q: What do you like most about Schnabel?

A: The entrepreneurial spirit.

We will continue to feature DVGI members in upcoming issues of the Newsletter. Please feel free to contact any of the board members with any general comments or member spotlight suggestions. Board member email addresses can be found on Page 3.



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JOB POSTING



VILLANOVA
UNIVERSITY

Adjunct Faculty Position in Geotechnical Engineering for Spring 2018 Graduate Course

*Villanova University, Department of Civil and
Environmental Engineering*

The Department of Civil and Environmental Engineering at Villanova University invites applications for an adjunct professor to teach the geotechnical graduate course *CEE 8106 Embankments and Slopes* in the spring 2018 semester. The course meets one night a week from 6:15 pm to 9:15 pm on Villanova's campus. Spring classes run from January 16th through May 3rd, 2018.

The goal of the course is to provide students with a comprehensive understanding of the design of slopes and embankments in geotechnical engineering. Students are expected to learn about theory and analysis methods commonly used to evaluate stability and seepage in natural and engineered slopes, and apply those methods in design examples. Additional topics covered in the course have included slope reinforcement, dam design, and case studies.

Candidates for the adjunct faculty position should have a graduate degree in Civil and Environmental Engineering or a related field. Prior teaching experience is preferred, but not required. Engineering consulting experience also is desirable, but not required. Applications must be submitted online at <https://jobs.villanova.edu> (Posting number 2013107F). Application packages should include: (1) a cover letter, (2) resume or curriculum vitae, and (3) a one page statement briefly describing your teaching philosophy and prior teaching experience, if applicable. Review of applications will begin immediately and continue until the position is filled.

Villanova is a Catholic university sponsored by the Augustinian order. Diversity and inclusion have been and will continue to be an integral component of Villanova University's mission. The University is an Equal Opportunity/ Affirmative Action employer and seeks candidates who understand, respect and can contribute to the University's mission and values.

Questions regarding this position should be directed to Dr. Kristin Sample-Lord (kristin.sample-lord@villanova.edu).



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EVENTS AND CONFERENCES

EWRI Presents Waters of the United States - a Legal Look at Why You Should Care What It Means (1 PDH)



The presentation will explore the legal implications of this changing definition and how it could impact environmental and construction projects.

Speaker: Andy Levine
(Stradley Ronon Stevens & Young, LLC)

Date/Time: Thursday, October 19, 2017
from 5:30 - 7:30 pm

Location: Pepper's; 239 Town Center Rd,
King of Prussia, PA

Fees: Members \$30
Government Employees & Students \$25

RSVP by Tuesday October 17th, 2017 via online reservations. <http://sections.asce.org/philadelphia/events>

Case Studies - Chlorinated Hydrocarbon Constituents in Groundwater in Fractured Bedrock: Using Conceptual Site Models to Investigate and Remediate Impacted Sites (1 PDH)



Speakers: David Side, P.G. (Amec Foster Wheeler)
Mike Edelman, P.G. (TRC Solutions)

Date/Time: Wednesday, November 15, 2017 at 12 pm

Location: PADEP Office
2 East Main Street, Norristown, PA

Fees: Members \$15
Government Employees and Students \$10

RSVP by Tuesday, November 13th, 5:00 pm via online reservations. <http://sections.asce.org/philadelphia/events>

November Dinner Meeting (ASCE Members Only) - Tips for Achieving Success on a SEPTA Project



Jeff Kneuppel will discuss how to be successful in addressing the unique requirements of SEPTA's and its multimodal transportation system.

Speaker: Jeff Kneuppel, P.E., SEPTA

Date/Time: Thursday, November 9, 2017

Location: Maggiano's Little Italy
1201 Filbert Street
Philadelphia, PA 19107

Fees: Members \$40
Government Employees & Students \$20
\$50 after RSVP Deadline

RSVP by 5 PM on Monday November 6th. RSVP via online reservations. <http://sections.asce.org/philadelphia/events>



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EVENTS AND CONFERENCES



PANAM-UNSAT

DALLAS, TEXAS | NOVEMBER 12-15, 2017

Second Pan-American Conference on Unsaturated Soils



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AUSTIN, TEXAS | JUNE 10-13, 2018

Calling All Volunteers! It's PA Infrastructure Report Card Time Again!

ASCE in Pennsylvania needs your help to research, analyze, write and promote the 2018 Report Card for Pennsylvania's Infrastructure. The report card is one of ASCE's greatest tools to convey to elected officials and the public the status of Pennsylvania's infrastructure. The committee is looking for people in each of the following categories to help evaluate the state's conditions: Dams, Drinking Water, Hazardous Waste, Levees, Solid Waste, Waste Water, Aviation, Bridges, Inland Waterways, Ports, Rail, Roads, Transit, Parks and Recreation, Schools and Energy.

We're also looking for people publicize the report card once its released. Volunteers can anticipate a 4-8 hour/month commitment over a six month period with most of the work occurring on your schedule. New volunteers, students and younger members are welcomed!

If interested in helping with the Report Card in some fashion, please fill out the following survey, which will help track our volunteer pool. <https://www.surveymonkey.com/r/VHRYNCY>

Please reach out to Jason Bowes at jbowes@gpinet.com or 570-703-0458 for more information or with any questions.



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