



PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL EngineerS 215 S. 16th Street. Suite 16. Philadelphia. PA 19102

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The Sidney Robin Memorial Newsletter of the Philadelphia Section ASCE

### Our 101st Year

November 2013

### ASCE, PHILA. SECTION MEETING SCHEDULE 2013–14

Vol. 86-3

The ASCE, Philadelphia Section Meeting program for the upcoming season continues to take shape. Our meeting program committee is busy lining up speakers and topics for what we hope will be an interesting and informative series of meetings. The TENTATIVE dates have been provided below for your planning purposes. We would suggest that you use this to mark your calendar at this time and hold the dates.

In coming issues of *THE NEWS*, this information will be "fine-tuned" to provide updates as they are available. We also suggest you visit the Section website for the latest changes in our meeting program. As we have done, each month's edition of *THE NEWS* will feature detailed information on that month's meeting along with as much information as is available for the following month's meeting. The "look-ahead" schedule will show details that are available for future meetings at that time for your advance awareness.

Dinner meetings generally follow a schedule of a cocktail hour starting at 5:30 PM, dinner at 6:30 PM, and the meeting presentation following at approximately 7:30 PM, unless otherwise noted. We also intend to follow our second-Thursday pattern except where joint meetings will preclude this. As always, you are welcome to attend the meeting presentation without dinner at no cost if you prefer to do so.

#### January 15, 2014 (Wednesday)

Joint meeting with American Society of Highway Engineers, Delaware Valley Section Topic to be determined Radisson Hotel, Valley Forge Cocktails 6PM, dinner 7PM, meeting 8PM

February 13, 2014: Topic to be determined

March 13, 2014: Topic to be determined

**April 10, 2014:** "Breakout" – several topics Topics to be determined

Villanova Conference Center, Radnor

#### IF YOU WANT A GUARANTEE, BUY A TOASTER.

- Clint Eastwood

#### **NOVEMBER DINNER MEETING**

American Society of Civil Engineers, Philadelphia Section Construction Management Association of America, Mid-Atlantic Chapter

#### **THURSDAY, NOVEMBER 14, 2013**

**Loews Hotel**, 12th & Market Streets, Center City Philadelphia • Commonwealth Room – 2nd Floor Cocktails 5:30 pm • Dinner 6:30 pm • Meeting 7:30 pm

**SUBJECT:** Challenges and Opportunities Facing SEPTA

SPEAKER: Jeffrey D. Knueppel, P.E., Deputy General Manager, Engineering, SEPTA

**RESERVATION DEADLINE – MONDAY, NOVEMBER 11.** The cost per attendee is \$60, with a half-price (\$30) cost for government agency employees and students, for reservations received by this deadline.

**RESERVATIONS RECEIVED AFTER NOVEMBER 11:** Reservations received after the deadline and "walk-ups" without prior reservations paying at the door will be charged \$70 (government agency employees and students will be charged the regular \$30 rate), but will be subject to acceptance on a space-available basis. Please note that payment via PayPal will NOT be available at the close at the reservation deadline.

THERE IS NO GUARANTEE THAT SPACE WILL BE AVAILABLE IF YOU DO NOT RESERVE A SPACE. Walk-ins and anyone without a reservation will be handled on a space-available basis.

Reservations can be made via e-mail at **info@asce-philly.org** or electronically through our website (**www.asce-philly.org**) and pay via PayPal. As noted above, the PayPal option will NOT be available as a payment option after the reservation deadline.

Advance payment can be made by check as an option to electronic payment. Checks should be made payable to "Philadelphia Section ASCE" and sent to ASCE, Engineers' Club of Philadelphia, 215 S. 16th Street, Suite 16, Philadelphia, PA 19102. Checks will also be accepted at the registration table at the dinner.

As always, guests will be welcome to attend the presentation without dinner at no charge. This may be subject to room capacity constraints in the event of a large turnout for dinner.

Mr Knueppel will provide a summary of the SEPTA capital needs for its planned program of improvements over the next several years. He will describe how an aging system of infrastructure continues to operate and what measures SEPTA is taking to prepare and prioritize infrastructure

 $Continued\ on\ Page\ 2$ 

#### Resolve to attend ALL Section Meetings!

#### **DECEMBER DINNER MEETING**

American Society of Civil Engineers, Philadelphia Section
Engineers' Club of Philadelphia
Society of American Military Engineers, Philadelphia Post
Construction Management Association of America, Mid-Atlantic Chapter
(Sponsoring societies tentative as of presstime)

#### **MONDAY, DECEMBER 9, 2013**

**DoubleTree Hotel**, Broad and Locust Streets, Center City Philadelphia Cocktails 5:30 PM, Dinner 6:30 PM, Meeting 7:30 PM

SUBJECT: US Open Logistics

More information and details on the evening's speakers, price and reservations will be provided in the December edition of *THE NEWS*.



#### PRESIDENT'S MESSAGE

Happy Fall to the Section Members!! Our year is off to a strong start with so many great events planned for the upcoming months. We always like to get together with our colleagues from other organizations to hold joint events. It allows us to bring new and interesting topics to our members, and it also allows for a great networking opportunity with members of different societies. This creates a great

exchange of knowledge and develops ways we can all help one another in our profession. We have several joint events coming up in November, December and January with more details provided in this newsletter. As a Section, we recently attended the ASCE National Convention in Charlotte, North Carolina to showcase some of the events and programs we held during the 100th Anniversary Celebration. Thank you to **Joseph Platt** and **Jesse Gormley** (of the YMF) for representing our section at this conference.

Another very important endeavor that is underway is the development of the 2014 Report Card for Pennsylvania's Infrastructure and **Ann Tomalavage**, a Past President of the Section, is leading this charge over the next several months. The target release date is Spring 2014 and so far we have over 20 Section members assisting in this important effort. This effort comes at a very important time as we await the outcome of the Pennsylvania Transportation Funding Bill that is extremely critical to our infrastructure. Now is the time to reach out to your legislators to stress the utmost importance for their support of this comprehensive, long-term, multi-modal transportation infrastructure funding bill for our Commonwealth. Transportation funding is imperative for enhanced safety for all Pennsylvanians, and will help sustain and improve our interstate economic competitiveness. Our transportation networks are public assets that must be duly maintained for the public benefit. In addition to ensuring public safety and economic competitiveness, an increase in transportation funding will secure employment for those responsible for the design and upkeep of Pennsylvania's transportation assets (by tabrizian at tf).

The time to act cannot wait, and we need everyone to be reaching out to their legislators to ask for their support of this transportation funding plan which is scheduled to be before our legislators again during the week of November 11.

We hope to see all of you at the variety of upcoming events we have planned throughout the year and as always I encourage you to reach out to myself or any of the officers or board of directors with any ideas or suggestions to improve what we are doing at a Section level.

Sincerely, Jennifer K. Walsh, P.E., PTP President, ASCE Philadelphia Section

#### **NOVEMBER DINNER MEETING**

 $Continued\ from\ Page\ 1$ 

repair and replacement projects when the funding becomes available. He will outline a "doomsday" plan already prepared by SEPTA to respond to future funding shortfalls, if necessary – a plan no one wants to have to use but a plan that may become a reality if capital funds are not received on schedule. He will also discuss new initiatives like SEPTA's new fare collection system that is being proposed as well as implementation of new vehicles throughout the system and the needs over the long term.

Mr. Knueppel oversees SEPTA's Engineering, Maintenance and Construction (EM&C) Division and the Operations Division and reports directly to General Manager Joseph Casey. He was appointed to this position in August 2012. Prior to this promotion, he served as Assistant General Manager/Chief Engineer of the EM&C Division, a position he held for the last six years of his 25-year career with the Authority. His EM&C Stimulus Team has been recognized throughout the transit industry for working quickly to provide job opportunities on \$191 million in stimulus projects that made meaningful improvements to an aging transportation infrastructure.

Mr. Knueppel is a graduate of the Cooper Union for the Advancement of Science and Art in New York, where he received undergraduate and graduate degrees in Civil Engineering, and he is a registered Professional Engineer in the Commonwealth of Pennsylvania. He is a member of ASCE, AREMA and APTA. He is also involved with the March of Dimes and its successful annual Luncheon. He resides in Perkasie with his family.

### THANKS TO OUR SPONSORS (AND, ARE YOU ONE?)!

Our ASCE, Philadelphia Section Sponsorship Program is underway once again. We thank those who have made the financial commitment for this season so far, and the business cards of those sponsors (16 total thus far) are included in the sponsor section of *THE NEWS*.

Additionally, sponsor logos are displayed in a special Sponsors section of our website. Through a click on the particular sponsor's logo, we provide direct links to its own website so prospective employees can review all available and up-to-date positions being offered by that firm.

If you have an interest in joining our sponsorship program, please contact **Bob Wright** at **newseditor@asce-philly.org** for more details.

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> COPY DEADLINE FOR DECEMBER 2013 ISSUE NOVEMBER 15, 2013

#### YOUNGER MEMBER FORUM NEWS

Amanda Kessler, Forum Editor Chris Gray, P.E., Forum President 2013–14 TimHaahs 550 Township Line Road, Suite 100 Blue Bell, PA 19422 484-342-0200 cgray@timhaahs.com

#### **PHILLIES GAME - ADDITIONAL INFO**

We provided a "rogue" (i.e. non-YMF member, to remain anonymous) report on the August 21 Phillies game last month. Here's some more information on this event courtesy of the YMF itself!

As you may recall, the Philadelphia, Delaware and South Jersey YMF join forces to host this event every year, and they invite their members, as well as guests of these members to network during a tailgate and enjoy a baseball game at Citizens Bank Park. This year, 120 tickets were sold for the game and there were about 75 members and guests that attended the tailgate. The weather was in our favor that day with bright sunny skies and the home team topped off the day with a winning score of 4–3. And everyone got a Cole Hamels bobblehead to commemorate the evening.

#### **VILLANOVA DAY OF SERVICE**

On September 28, five members of the YMF visited the Depaul House as part of the St. Thomas Villanova Day of Service. This is an annual event where students, faculty, alum, and various other groups go into the community for a day of service. This year, over 4,000 people spent the day at 150 different sites around Philadelphia. The Depaul House USA provides a facility for men to come off the streets and begin to turn their lives around. The YMF spent the day alongside students from Villanova preparing and serving a BBQ for the men while engaging in conversation with everyone. The YMF looks forward to participating in the Villanova Day of Service again next year.

#### YMF WELCOME BACK BOWLING EVENT

On October 15, YMF hosted "Welcome Back Bowling" at **Pep Bowl** in Philadelphia. The event was intended to provide an opportunity for local engineering students to network with industry professionals. The event was exceptionally successful with 51 students and professionals coming out to bowl, 30 of which were students. The increase in the number of students was largely a result of our ambitious college contacts chairs Nha Truong and Mike Zettlemoyer, who provided constant communication with local colleges. Everyone enjoyed socializing and networking in a casual, fun atmosphere. We hope to see many of the new faces at future YMF events.

#### PHILABUNDANCE HUNGER RELIEF

The YMF will be volunteering at the local food bank, **Philabundance** on **November 26** from 6PM to 8:30PM. Volunteers will assist with packing and sorting donated food. Additional food donations are always welcome. Please RSVP at **www.ymfphilly.org/rsvp.htm** by **November 21** (limited space available) to reserve your spot.

#### **ASCE/ASHE HAPPY HOUR**

After last year's highly successful joint happy hour, the ASCE YMF and ASHE Young Members Group have teamed up once again to host a happy hour at the **Rock Bottom** brew pub in the King of Prussia Plaza. This year's event will take place on **December 12** from 5PM–8PM. Come join us for networking and appetizers, then head into the mall for your holiday shopping!

# ONE-DAY COURSE ACCELERATED BRIDGE CONSTRUCTION AND RAPID DELIVERY

Temple University and our ASCE, Philadelphia Section's Structural Engineering Institute will be "joining forces" to offer a one-day course on the above topic.

*DATE/TIME:* **November 22**, 9:15 AM to 4:30 PM *LOCATION:* Temple University Student Center, Room 220, 1755 N.13th Street, Philadelphia

REGISTRATION: RSVP due by November 18. Reservations can be made through our website (asce-philly.org). For additional information, please contact **Dr. Ali Khan (Mohidin@temple.edu** or **856-273-1855**).

COST: \$80 (\$40 for government employees and students)

PROGRAM DETAILS: The Federal Highway Administration (FHWA) has given rapid construction a top priority, as declared by their Every Day Counts campaign. A majority of the states have adopted specialized methods of accelerated construction, using prefabricated and preassembled bridges and by awarding designbuild contracts. As a result, small span bridges can be constructed over one weekend, medium span bridges within a few weeks rather than a few months and long span bridges in a few months rather than a few years. Topics to be covered include policy making, planning, LRFD methods, fabrication, transportation and erection aspects, design-build contract management and case study analysis. Speakers include experts from academia, government agencies and the construction industry.

Participants will be eligible to earn six professional development hours (PDH).

#### "CHANGING OF THE GUARD"

#### NEW CHAIRS AT DVGI, SEI

This season, two of our ASCE, Phila. Section's Technical Groups, the Delaware Valley Geo-Institute (DVGI) and Structural Engineering Institute (SEI), have had new Chairs installed.

**Robert Sabanas** of GAI Consultants has taken the helm at DVGI, succeeding Bill Petersen, who led the group for several years.

New SEI Chair **Khalid Shaikh** of InVision Engineers has succeeded Dr. Nazhat (Nancy) Aboobaker, also of InVision Engineers, who led the group last season.

We welcome Bob and Khalid and wish them good luck in their respective roles as group Chairs.

#### SECTION SCHOLARSHIP PROGRAM OPEN FOR APPLICATIONS

The ASCE, Philadelphia Section's Scholarship Program is now open for applications for the 2013-14 season. It will follow the same format as it did for the last two seasons.

The Section offers three distinct undergraduate scholarships annually:

ASCE Delaware Valley Engineers Week Scholarship

ASCE Student Scholarship

ASCE Section Member Scholarship

Scholarship winners will be recognized as the Section's guests at our March 2014 dinner meeting.

#### **ENGINEERS WEEK SCHOLARSHIP**

As part of the Delaware Valley Engineers Week celebration, the Section will continue to offer one \$2,000 undergraduate scholarship. Completed applications must be submitted by November 18. Please visit the Engineers Week website, www.dvewc.org, for applications and specific requirements.

#### STUDENT SCHOLARSHIP

- At least one \$1,000 scholarship will be awarded by the Section to an undergraduate Civil Engineering student who meets the following requirements.
- The applicant must be matriculating in a fulltime Civil Engineering or Architectural Engineering program at one of the five colleges which have Student Chapters in the Philadelphia Section: Drexel University, Swarthmore College, Temple University, Villanova University, or Widener University.
- The applicant must be an active participant in the ASCE Student Chapter.
- The applicant must be in their sophomore or junior year (and Pre-Juniors at Drexel).

#### Application Requirements:

- The applicant's name, GPA and/or class rank, and an address/telephone number where they can be reached must be included with the scholarship application. Additional information for consideration (such as need) is allowed. A letter and/or resume is an acceptable means to provide this information.
- A recommendation letter from the applicant's faculty advisor is not required but is strongly suggested.
- The applicant will be required to submit an essay, limited to 1,000 words, on a topic to be determined.

#### Submittal Deadline:

- Applications (including recommendations) must be submitted by January 27, 2014.
- Scholarship winners will be notified by February 24, 2014.

#### **SECTION MEMBER SCHOLARSHIP**

At least one \$1,000 scholarship will be awarded by the Section an undergraduate Civil Engineering student who is the child of an active Philadelphia Section member and meets the following requirements.

#### OCTOBER DINNER MEETING

October 9, 2013

Loews Hotel, Center City

#### Dilworth Plaza Reconstruction

by Robert Wright, Editor

On the heels of our celebrations of our 100th Anniversary season and the summer during which we recovered from same, we ended our summer "hibernation" and opened "Season 101" on a cloudy fall day in Center City. Over 80 folks found their ways to the Loews Hotel to hear about a project just a couple of blocks away that was changing the face of one of our Civil Engineering Landmarks.

Vice President AnnMarie Vigilante ably filled in for President Jenn Walsh (who was unable to attend the meeting) and welcomed everyone back from our summer hiatus to kick off the season. She then brought Past President Ruben David to "front and center" and he delivered one of his usual good blessings, which was followed by dinner. As the meal was winding down, Vice President Vigilante returned to the podium for several announcements and brought Michael Radbill, Engineering Management Technical Group Chair, to the front to introduce the evening's featuredfeatured speaker, Andrew (Drew) Scott, Senior Vice President of Urban Engineers, and Project Manager for the Dilworth Plaza effort.

Mr. Scott acknowledged the project team members in the room, representing the client, the Center City District (CCD), and subconsultants Kieran Timberlake (architecture), Olin (architecture and landscape architecture), and CVM (structural engineering). The subs joined with Urban's Facilities group (formerly known as Marvin Waxman Engineers) for this assignment. The team was selected and charged in 2008 to review the conditions at Dilworth Plaza, essentially the west "yard" of one of our Landmarks, City Hall, and develop an improvement program that would update and better reflect the activities facilitated by the Plaza. The Plaza's purpose has always been connectivity, sitting atop the junction of SEPTA's two rapid transit lines and the subway-surface tunnel, and serving the downtown commercial core as a gathering point and nice-weather lunch spot. Since its original construction, the residential component of the surrounding area has skyrocketed, and this has led to increased use of the Plaza. CCD has identified a population of 185,000 people who live and work within a 10-minute walking radius of the Plaza.

Mr. Scott outlined a brief history of the Plaza, which, until the 1970's, was mainly occupied by a street (West Broad Street/West Center Square), literally at City Hall's doorstep, a half-block east of 15th Street. The Plaza removed that roadway and widened 15th Street to accommodate the displaced traffic, allowing a public space/pedestrian area to be realized in the expanse created from the former roadway and adjacent parcels on the east side of 15th Street. The Plaza featured several elevation differences to accommodate the subway concourse beneath it, connecting the noted transit lines and linking the City's underground concourse network.

Over time, the Plaza's underground passageways proved to be problematic and a safety perception concern, as well as places for the growing homeless population. It was also found that the landscaping on the Plaza, designed to introduce greenery to an area very much devoid of it, obliterated views of City Hall from several approaches.

The focus of the improvement plan was to remove the steps and elevation differences as much as possible, minimize the myriad of underground space, enhance the perception of safety and make the Plaza totally accessible through the installation of surface to concourse elevators. SEPTA has concurrent efforts in the works to provide elevators between concourse level and subway platforms, as well as an upgrading of the 15th Street/City Hall subway stations and the creation of a single fare line/ entry location within the Plaza that will be reached by two glass-enclosed stairways. This will allow one entry point for all three subway lines and permit the removal of the labyrinth of separate and non-linked entrance/exit locations that contribute to confusion for riders. Mr. Scott showed other proposed features of the Plaza, including a new café at the north end (which will help generate revenue to sustain and maintain the Plaza), a fountain, and a lawn area. Landscaping would follow the previous patterns of planting, basically providing a buffer of sorts between the pedestrian areas and adjacent street frontages. Trees would have less-dense canopies that will be more transparent to enhance the features and views of City Hall.

Mr. Scott explained that the project was funded originally from private sources and state Redevelopment Capital Assistance (RACP) dollars. A TIGER (Transportation Investment Generating Economic Recovery) grant was later made available, administered by the Federal Transit Administration (FTA), along with City Capital Program funds and money raised by CCD. The inclusion of federal funding into the project changed some of the design requirements and approvals fairly late in project development, and this affected the delivery schedule to some extent. Conceptual design had to be stopped for a period while the funding and related approvals were pursued and obtained. Required environmental clearance documents and other sign-offs from the City's Historical Commission and Art Commission were pursued vigorously and approved. Permit reviews from City Licenses and Inspections had to take into account the fact that the Plaza was "not a building", thus in need of a different type of scrutiny, particularly as the Plaza acts as a "safe haven" area for evacuations of City Hall and the nearby Municipal Services

A significant element in the Plaza is related to sustainable design, both in the response to the City's stormwater handling and diversion requirements and in the use of materials. To allow for maximum transparency in the structural elements of the subway entrance stairway headhouses, Mr. Scott reviewed the utilization of structural glass panels that did not require a frame, the first use of such materials in the United States. The unique materials and aspects of the project also caused some early-on confusion on Buy America requirements stipulated by FTA, and this confusion resulted in several significant construction change orders to fully satisfy these requirements.

Mr. Scott covered several challenges in the design and construction of the Plaza. A public art element, "Pulse", was developed following a competition and artist selection, and this piece will mimic the movement of subway trains using an atomized and colored water fountain effect. The proposed fountain itself will be programmable for various displays and spray heights. The fountain basin will be able to be used for walkable gathering space and an ice rink. The MEP support systems needed for "Pulse" and the fountain will be encased in thick reinforced concrete slabs for aesthetic purposes. Only selected segments of these slabs will be able to support live loads, such as temporary shells/ stages for orchestra concerts. Slab thicknesses in many areas of the Plaza are restricted by headroom clearances needed for the subway and concourse areas, thus several slabs are relatively shallow and are not able to support anything above typical pedestrian loading values.

Several maintenance, provider, grant and cost sharing agreements had to be developed to delineate the various responsibilities of the City, SEPTA and CCD (through its 20-year lease of the Plaza, which is City property, and its commitment to future maintenance of the improvements). Mr. Scott showed examples of utility lines that were not charted on any plans and as-built plans that proved to be inaccurate. A number of features were discovered, including a stairway that extended from nowhere to nowhere. An unprecedented long-weekend closure of the Market-Frankford Line was scheduled in January 2013 to allow unimpeded work on the Plaza where it roofed over the subway tracks.

Mr. Scott reminded that the Occupy Philadelphia protesters had basically taken over the Plaza just prior to the anticipated start of construction nearly a year ago, but the City was able to convince the group to move to allow work to start. Since then, the project has progressed on schedule, with the structural work and concrete pours recently completed. It remains on target for completion on Labor Day 2014.

Several insightful questions were posed by the audience and Mr. Scott ably responded to them.

Vice President Vigilante thanked Mr. Scott for his informative presentation.

#### **SCHOLARSHIPS**

Continued from Page 3

Eligibility Requirements:

- The applicant must be the child of an active Philadelphia Section member.
- The applicant must be matriculating in a fulltime Civil Engineering or Architectural Engineering program at an accredited college or university.
- The applicant must be an active participant in the ASCE Student Chapter at his/her school.
- The applicant must be in their sophomore or junior year (and Pre-Juniors at Drexel).
- Application requirements and submittal deadline are the same as for the Student Scholarship above.

We encourage all eligible students to apply. Good luck!

### PROFESSIONAL DEVELOPMENT REQUIREMENTS

As you may be aware, Professional Engineers, Land Surveyors and Geologists in Pennsylvania are required to obtain continued professional development (CPD) credit to renew their licenses. If you renewed your license recently (and if you didn't, you're a little late – it was due on October 1), this was the second "round" that had the CPD requirements apply to it. Thus, many of us should at least "know the drill" at this point.

The specific requirements for PE's, LS's and PG's are available on the Department of State's website at www.dos.state.pa.us/eng for your information. Basically, a licensee needs to have 24 professional development hours' (PDH) worth of valid instruction, training, etc. to be able to renew his/her license. Generally, this allows an hour to be counted more than once for licensees holding more than one license (e.g. someone with a PE and a PLS). For those of you who, for whatever reason, manage to exceed the 24 PDH requirement, the good news is you can create a "stockpile" and carry over up to 12 PDH's into the succeeding licensure period.

We remind you that our Section's meeting program is generally able to count toward your continuing education requirement (meetings that the Section believes would not count will be prefaced as such in the meeting announcement) for many states (New York and Florida being two main exceptions). We continue to have a verification program in place to help our members obtain and track PDH's. Also, through our monthly meeting schedule, we will offer at least a half-dozen opportunities for you to pick up PDH's. Over a two-year licensure period, this could amount to half of what one needs to meet many states' requirements.

It appears that Delaware is on course to add a professional development requirement for its PE's in 2014. We will monitor this to determine how our meeting program can meet what DE will be requiring.

Also, there are some possible revisions to the professional licensure legislation in PA that are being considered. Information on this will be provided when it becomes available.

# ENVIRONMENTAL AND WATER RESOURCES TECHNICAL GROUP

#### NOVEMBER DINNER MEETING THURSDAY, NOVEMBER 7

SUBJECT: Soils and Stormwater Management SPEAKER: Matthew Hostrander, CPSS, SEO, Gilmore & Associates, Inc.

TIME: 5:30 PM - Registration/Networking; 6:00 PM - Dinner; 6:45 PM - Presentation

LOCATION: Michael's Restaurant and Delicatessen; 130 Town Center Rd.; Valley Forge Center, Route 202; King of Prussia, PA COST: \$30.00 per member; \$20.00 per full-time

COST: \$30.00 per member; \$20.00 per full-time student

As populations grow and available development space decreases, we are continuing to ask that soils do more with less space. This introduction to soil science will provide the participant with an understanding of the soil characteristics that impact today's projects through an overview of investigation techniques and field classification of soil texture, structure color, and infiltration properties. The field data will then be tied into the big picture for stormwater best management practices. Available online resources will be introduced, including an orientation on the Natural Resources Conservation Service's Web Soil Survey, a very robust and useful tool that is available to everyone.

Mr. Hostrander is a Certified Professional Soil Scientist and has been with Gilmore & Associates for over 11 years. He is well versed in soil sciences for both septic design and stormwater management designs. He has lectured on Applied Soil Science for Delaware Valley College's Watershed Management Course and at the Engineers' Club of Philadelphia, as well as at various symposiums hosted by Gilmore & Associates for local municipal officials. He received his Bachelor of Science degree from Delaware Valley College in 2002, and was certified as a Professional Soil Scientist by the Soil Science Society of America in 2008.

### *DIRECTIONS* to the restaurant can be found at http://www.michaelsdeli.com/directions.asp

RSVP: 1:00 PM, Tuesday, November 5

Post reservations to the website: www.ascephilly.org. Payment by PayPal can be done from the ASCE reservation website. Payment by check or cash can be provided at the meeting. Checks should be made payable to "Philadelphia Section ASCE." Reservation cancellations must be made 48 hours in advance or you will be charged for the meeting. Contact Eve D'Onofrio at 610-630-1660 if you have any questions.

Attendees are eligible for one (1) Professional Development Hour (PDH) for attending this presentation.

### ADVANCE PLANNING FOR ENGINEERS WEEK

The Delaware Valley Engineers Week Committee will be celebrating Engineers Week 2014 from February 14 through February 22 and will continue its schedule of three events which will highlight the various contributions of Engineers and Engineering students in the Delaware Valley. Please note this information in your calendar and plan to participate.

#### **AWARDS AND PROCLAMATION LUNCHEON**

Friday, February 14, 2014 DoubleTree Hotel, Center City

- This event is both the kickoff event of Engineers Week and the main event of the Delaware Valley celebrations.
- A poster session, with presentation of student paper winners, will be conducted starting at 11:00 AM.
- All Delaware Valley Awards and Scholarships will be presented.
- Engineers Week proclamations will be displayed.
- Project and individual awards of all participating engineering societies in the Delaware Valley will be recognized.
- The 2014 Engineer of the Year and Young Engineer of the Year will make brief remarks.

#### YOUNG ENGINEER SOCIAL EVENT

Tuesday, February 18, 2014

Manayunk Brewery, Philadelphia (Manayunk)

• This event will be a happy-hour type event geared to younger engineers. The Young Engineer of the Year will make brief remarks.

#### CELEBRATION OF ENGINEERING RECEPTION

Thursday, February 20, 2014

Villanova University Conference Center, Radnor

- The culminating event of Engineers Week will be a social/networking gala event to celebrate engineering, with cocktails, appetizer stations, and dessert stations.
- Award recipients will be honored with posters/ exhibits/running PowerPoint in the networking area.
- Future City Competition Regional winners will display their first place model.
- The Engineer of the Year and Young Engineer of the year will provide brief remarks.

More information will be provided on price, location, and other details in the coming months. Please visit www.dvewc.org for up-to-date announcements.

As always, volunteers are needed! If you are interested in volunteering for one of the many activities of Engineers Week, please visit **www.dvewc.org.** 

### IF I WERE TWO-FACED, WOULD I BE WEARING THIS ONE?

- Abraham Lincoln

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### HISTORICAL PERSPECTIVE - "YEAR 101"

Last month, we provided some opening dates of significant local Civil Engineering projects and achievements for your reference and knowledge. They may even be helpful for winning a bar bet or a trivia contest (as we've been told). We will continue this as a monthly feature this season in recognition of our 100th Anniversary season.

Those for November are:

Frankford El – November 5, 1922

**South Street Bridge** over the Schuylkill River (the current one, replacing one built in 1923 which replaced one built in the 1870's) – November 6, 2010

**Center City Commuter Rail Connection** (also known as the Tunnel) – opened for full service November 10, 1984 (limited service between Suburban Station and Market East began on April 28, 1984)

Also, we reported last month that one of our landmarks, **City Hall**, was among a handful of efforts for which we could not pin down a definite date of opening. In the case of City Hall, various records indicated conflicting dates. Thus, we advised that the opening was in 1901 but did not provide a specific date for this event.

Astute reader **Carl Baumert** was able to provide the following based on information he has researched during his work on the restoration of City Hall. In two places in the Historic Structure Report on the building prepared by John Milner Architects, the date of June 26, 1901 is mentioned.

In the first instance, the project director submitted his final report to the Commission for the Erection of the Public Buildings, which was overseeing the construction of the building, on that date.

In the second, the Statement of Financial Transactions and Architect's Report, prepared by the above-noted Commission, this sentence appears: "When City Hall was turned over to the City of Philadelphia on 26 June 1901...".

Thus, it appears that June 26, 1901 is the date. Thanks to Carl for this edification.

### OCTOBER DINNER MEETING PDH'S - WHERE ARE THEY...?

If you missed signing up for your PDH for our October 9 dinner meeting (Dilworth Plaza Renovations), as they say, it wasn't you, it was us – our Section's Board would like to apologize for not having sign-in sheets and certificates available for this meeting.

If you attended the entire meeting (and you're on your honor on this, just to remind you!) and would like a certificate to verify your attendance and PDH, please e-mail or call Director **Spencer Finch** (sfinch@langan.com, 215-446-2940) and a certificate will be sent to you. As usual, this will be your documentation of attendance at the meeting. But, it will be your only documentation, since we did not have a sign-in sheet at the meeting.

Please accept our apology for any inconvenience this may have caused, and we hope to be back to "normal" for our November Dinner Meeting (see the particulars of this on page 1).

#### HARRY M. PERKS

Prominent Section member Harry Perks passed away on September 29 after a long illness. Over a career that spanned nearly 60 years, Mr. Perks served as President of Day & Zimmerman and later was principal of his own firm, Perks Reutter Associates. Interspersed within these assignments were positions he held in government. Mr. Perks served as a Deputy Superintendent in the School District of Philadelphia, where he oversaw a major construction program in the early 1960's to respond to increased enrollment during the Baby Boom. In 1985, he accepted appointment as the Streets Commissioner for the City of Philadelphia. In 1990, Mr. Perks was hired by the Pennsylvania Convention Center, becoming its Executive Director, where he spearheaded the opening of the Center and the initial efforts of planning of the its westward expansion. He is survived by his four sons and their families, which include 7 grandchildren and three great-grandchildren. His wife, Gladys, passed away in 2010.

The *Philadelphia Daily News* described Mr. Perks as "the man behind practically everything good" in Philadelphia. In addition to other accolades and awards, he was honored as our Section's Philadelphia Civil Engineer of the Year in 1993 and elected to be the Delaware Valley Engineer of the Year in 1995. To cite his numerous contributions to the local engineering profession, he was selected to receive the George Washington Medal of the Engineers' Club of Philadelphia in 2005.

A memorial service, followed by a luncheon, will be conducted on October 26 at Central Baptist Church in Woodbury, NJ.

#### **DON'T FORGET ABOUT YOUR DUES!**

Your dues statement/invoice for 2014 was dutifully delivered to you from National in mid-September. As noted on the invoice, you can pay by check or electronically. Please don't forget to pay your ASCE and Philadelphia Section dues. Your dues are vital to the support of the Section's activities.

Also, if your dues statement looks a little higher than in the past, you will notice your Section dues has increased by \$5 (from \$30 to \$35). After nearly nine years since the last increase in Section dues (\$5 as well, in 2005), the increased cost we face in the operation of our Section has unfortunately forced our hands. We will do our best to hold the dues at this level for as long as we can and appreciate your understanding and ongoing support.

# WHEN CHOOSING BETWEEN TWO EVILS, I ALWAYS LIKE TO TRY THE ONE I'VE NEVER TRIED BEFORE.

- Mae West

#### FREDERICK C. SCHMITT, PH.D.

Temple University Professor and Section member Fred Schmitt passed away on October 11 after a four-month battle with lymphoma. Dr. Schmitt was a Life Member of our Section and was involved in several of our committees and activities throughout his career. He was active in several other technical societies, including the Pennsylvania Society of Professional Engineers, as well.

He was a faculty member of the Civil and Environmental Engineering Department at Temple. He also served as the Department head for several years. He was an effective educator and well liked and respected by his students, and this was reflected in his receipt of our Section's Educator of the Year award in 1991. He held PE licenses in 48 states. He received his Ph.D. in civil engineering from Drexel University in 1971.

Dr. Schmitt is survived by his wife, Margaret, two children, two step-children and five grandchildren, as well as three sisters and one brother. He was predeceased by his first wife, Barbara. Memorial contributions may be made to the Fred Schmitt Memorial Fund at the Brandywine Valley Baptist Church, 7 Mt. Lebanon Rd., Wilmington, DE 19803.

#### CONSTRUCTION AND TRANSPORTATION/URBAN DEVELOPMENT TECHNICAL GROUPS MEETING REPORT

The Construction and Transportation/Urban Development Technical Groups teamed with the Engineers' Club of Philadelphia to produce a presentation on the New York City Transit Number 7 Line Subway Extension Project. The meeting was conducted at the Municipal Services Building at lunchtime on September 26. Kieran Spillane, PE, Vice President of Parsons Brinckerhoff and Project Manager, gave an interesting and insightful overview of this \$2 billion effort which will extend the 7 Line (also known as the Flushing Line) from its current terminus at Times Square one station west and south to 34th Street/11th Avenue.

This area, known as Hudson Yards, is planned for significant development, which will require subway access and connection to the remainder of the City's rapid transit and commuter rail system. The extension will provide this needed access to respond to the ongoing and future development as well as to serve the recently renovated Jacob Javits Convention Center. The extension is anticipated to foster transit oriented development in one of Manhattan's most underserved and underdeveloped areas.

Over 50 attendees (or, in the 7 Line's scale of measurement, about 1/2 of a single car's capacity in an 11-car train), enjoyed Mr. Spillane's presentation, possibly a record for attendance for these groups' meetings.

#### TECHNICAL GROUPS/CHAIRS

Information on the ASCE, Philadelphia Section's Technical Groups is given below. Director Keith Yamatani will be coordinating the activities of the Groups. If you have any topics that you think would be of interest to the Groups, please feel free to pass this information along to the appropriate Group Chair.

#### **CONSTRUCTION**

Dennis MacBride **SEPTA** 1234 Market Street, 12th Floor Philadelphia, PA 19107-3780 215-580-3404 dmacbride@septa.org

#### **DELAWARE VALLEY GEO-INSTITUTE (DVGI)**

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#### **ENGINEERING MANAGEMENT**

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#### **ENVIRONMENTAL AND WATER RESOURCES**

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#### STRUCTURAL ENGINEERING INSTITUTE (SEI)

Khalid Shaikh InVision Engineers, PC 16 Manley Road Pennington, NJ 08534 215-896-6264 info@invisionEngineers.com

#### TRANSPORTATION AND URBAN DEVELOPMENT

William T. Thomsen Urban Engineers, Inc. 530 Walnut Street, 14th Floor Philadelphia, PA 19106 215-922-8080 wtthomsen@urbanEngineers.com











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## ANACE\*

#### **HOW PAVING MATERIALS FACTORED INTO** THE INDY 500...

Carl Fisher was an early promoter of autos and coast-to-coast highways at the turn of the 20th Century. He, along with other proponents of the "machine," as many called it, conducted numerous publicity stunts to emphasize the need and build a market for personal vehicles. He was involved in several auto-related businesses based in Indianapolis (including concerns that developed the first electric starter and electric headlights) and was among a group that hoped to make it the auto center of the country — at the time it was vving with Detroit for this title.

In 1908, he and several partners bought a farm northwest of Indianapolis and formed the Indianapolis Motor Speedway Company in an unincorporated area that became known as Speedway. A 2.5-mile rectangular track was constructed for the purposes of auto racing. Determining that the paving materials most common then - mainly concrete and brick - were too expensive, the track was designed with a pavement consisting of crushed stone and asphalt laid on the existing clay, which was graded accordingly. A 12,000-seat grandstand was erected for spectators. The track included wooden garages and its own hospital. The designers introduced superelevation to enhance speeds – it was said by the original drivers on the course that speeds of two miles a minute, unheard of then, could easily be achieved. The track also featured side-road ditches to provide a safety measure and separate the track from the grandstands.

On preliminary runs with motorcycles, users complained about the loose rock being kicked up from the paving and becoming shrapnel. On the first formal race trials, the same problem was reported. The partners decided that the initial wear and tear on the pavement would solve this issue, and believed it to be related to the hard rubber tires used for racing. However, in the first formal race on the track in August 1909, there were many similar incidents. By the end of the three-day opening event, three drivers/crew members and two spectators were killed and many others were injured. (A car blowing a tire on day 3 ended up in the bleachers, the cause of death of the two spectators and one crew member in the car - most cars carried a team, a driver and a "mechanician"). Among the injured was Louis Chevrolet, a young French racecar driver who recently agreed to produce autos for General Motors. Airborne aggregate and gravel shattered his driving goggles and resulted in glass and debris in one eye.

The county's coroner blamed Fisher for the deaths and called for closure of the course. Auto clubs across the nation, including the recentlyformed American Automobile Association (AAA), which had supported and sanctioned many of these early races to promote auto interest, chimed in for the track's shutdown as well. There were some observations that the ditch designed to keep cars from leaving the track actually contributed to two of the driver deaths which would have been otherwise survivable.

Within weeks Fisher reacted to the nationwide criticism and convinced the partners to change the problematic pavement. Over 3.2 million bricks were hastily purchased and laid to replace the asphalt. The ditches were removed and concrete walls constructed in their place. Over \$100,000 worth of improvements were effected. After the work was completed, the first "Indy 500" race took place in 1911, with 80,000 fans crowding into the stands and around the track to view it. This shocked many critics who wondered why anyone would make the long trip from the city to the country to see cars racing. Fisher drove the pace car at what became known as the Brickyard. Thanks to "The Big Roads" for this information.

\*ANACE—Almost Nothing About or Concerning Engineering



#### 100TH ANNIVERSARY GALA PHOTOS POSTED

Although our 100th year has come to a close, we continue to celebrate the accomplishments of the past hundred years. Relive the moments from our 100th Anniversary Gala in the Event Archive section of our website (www.asce-philly.org). Look for upcoming posts and information about the ASCE 100th Anniversary Coffee Table **Book** and ordering options.



PHILADELPHIA SECTION AMERICAN SOCIETY OF CIVIL EngineerS

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