

### ASCE, PHILA. SECTION MEETING SCHEDULE 2010—11

The ASCE, Philadelphia Section Meeting program for the upcoming season is falling into place, and the dates shown below are the Section meetings remaining for this season. We would suggest that you use this to mark your calendar at this time and hold the dates. In coming issues of *THE NEWS*, we will provide updates as information becomes available. We also suggest you visit the Section website for the latest changes in our meeting program.

We also noted the success of the varied locations of meetings and will continue to schedule a mix of Center City and suburban venues to make them as convenient as possible for you. More details will be provided on meeting locations in upcoming editions of *THE NEWS*.

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 after our joint meeting with ASHE in January. As always, you are welcome to attend the meeting presentation without dinner at no cost if you prefer to do so.

REMAINING DATES, all in 2011, are:

- Thursday, February 10
- Thursday, March 10
- Thursday, April 14

### THANKS TO OUR SPONSORS!

Our ASCE, Phila. Section Sponsorship Program continues to grow and we now have 18 firms participating in this program thus far this season. We appreciate the financial commitment and support these firms have demonstrated for the benefit of the Section, and we extend a heartfelt, special and collective THANKS to each sponsor accordingly.

Even though our season is more than one-third over at this point, it's not too late to become a sponsor. If you have an interest in joining our sponsorship program, please contact **Bob Wright** at [newseditor@asce-philly.org](mailto:newseditor@asce-philly.org) for more details.

### DECEMBER JOINT DINNER MEETING

Society of American Military Engineers, Philadelphia Post  
 American Society of Civil Engineers, Philadelphia Section  
 Construction Management Association of America, Mid-Atlantic Chapter  
 Engineers' Club of Philadelphia  
 Project Management Institute, Delaware Valley Chapter  
 Pennsylvania Society of Professional Engineers, Philadelphia Chapter  
 Association for the Advancement of Cost Engineering, Delaware Valley Chapter  
 Institute of Industrial Engineers  
 Society of Naval Architects and Marine Engineers

**WEDNESDAY, DECEMBER 1, 2010**

**Down Town Club** • Public Ledger Building, 6th & Chestnut Streets, Center City Philadelphia  
 Cocktails 5:30 PM • Dinner 6:30 PM • Meeting 7:30 PM

**SUBJECT: Panama Canal Expansion Program**

**SPEAKER: David Nisula**, Assistant Program Manager, CH2M Hill

**COST: \$45**

Reservations MUST be made online at [www.regionline.com/multisociety2010](http://www.regionline.com/multisociety2010). NO RESERVATIONS WILL BE ACCEPTED THROUGH THE SECTION'S WEBSITE OR THE ENGINEERS' CLUB.

We strongly suggest you reserve a space if you intend to attend this meeting. Please note there are nine societies co-sponsoring this event and a large crowd is expected. Attendees are welcome to attend the meeting after dinner at no charge as they desire, and we anticipate that those who arrive without reservations will not be able to be accommodated for dinner.

*Continued on Page 5*

### Resolve to attend ALL Section Meetings This Year!

### JANUARY JOINT DINNER MEETING

American Society of Civil Engineers, Philadelphia Section  
 American Society of Civil Engineers, Reading Branch  
 American Society of Highway Engineers, Delaware Valley Section

**WEDNESDAY, JANUARY 19, 2011**

**Radisson Hotel, Valley Forge** • 1st Avenue and Gulph Road, Valley Forge, PA  
 Cocktails 6:00 PM • Dinner 7:00 PM • Meeting 8:00 PM

**SUBJECT: South Street Bridge Replacement Project**

**COST: \$35** before January 15 (\$20 for government employees), \$45 January 16 and after and at the door.

**RESERVATIONS MUST BE MADE THROUGH DELAWARE VALLEY SECTION, ASHE. The Philadelphia Section will NOT be accepting any reservations for this meeting.** Payment for reservations must be received at ASHE by the January 15 deadline. Those who reserve past this date and walk-ins will be charged the higher rate.

Walk-ins will be subject to acceptance on a space-available basis. THERE IS NO GUARANTEE THAT SPACE WILL BE AVAILABLE IF YOU DO NOT RESERVE A SPACE.

Checks for reservations should be sent to **Delaware Valley Section ASHE**, 1500 Walnut Street, Suite 1105, Philadelphia 19102. Checks should be made to "*Delaware Valley Section ASHE.*" More information will be provided in the January edition of *THE NEWS*.



## PRESIDENT'S MESSAGE

In October, I had the opportunity to attend the 2010 President and Governors Forum at ASCE Headquarters in Reston, VA. Over 50 people attended from ASCE Sections from all across the country including a few representatives from Hawaii. In the morning session, we had an opportunity to share ideas among Sections of the same size.

The afternoon session's focus was on **The Vision for Civil Engineering in 2025**. I first heard about Vision 2025 at last year's national convention in Kansas City. Since the convention, the publications *The Vision for Civil Engineering in 2025* and *Achieving the Vision for Civil Engineering in 2025: A Roadmap for the Profession* have been developed. Vision 2025 represents the collective wisdom of more than 60 experts from around the world and these publications present an aspirational global vision for the future of civil engineering addressing all levels and facets of the civil engineering community.

*The Vision for Civil Engineering in 2025: Trusted Leaders for a Modern World* is:

Entrusted by society to create a sustainable world and enhance the global quality of life, Civil Engineers serve competently, collaboratively, and ethically as master:

- planners, designers, constructors, and operators of society's economic and social engine — the built environment;
- stewards of the natural environment and its resources;
- innovators and integrators of ideas and technology across the public, private, and academic sectors;
- managers of risk and uncertainty caused by natural events, accidents, and other threats; and
- leaders in discussions and decisions shaping public environmental and infrastructure policy.

This vision is to guide policies, plans, processes, and progress within the Civil Engineering community and beyond — and around the globe. The Civil Engineering community is global and, as such, should share a common vision and work together to achieve it. Meeting this challenge will require active engagement on a variety of environmental and infrastructure fronts. The path to transform Vision 2025 into concrete action has been laid out in the Vision 2025 Roadmap document. The Roadmap is articulated through the five Vision statement outcomes and a series of "supporting outcomes." These are followed by high-level action steps called "tactics" to achieve each supporting outcome. The publications *The Vision for Civil Engineering in 2025* and *Achieving the Vision for Civil Engineering in 2025: A Roadmap for the Profession* are located on ASCE website ([www.asce.org](http://www.asce.org)) under the Issues and Advocacy Section and can be downloaded for your reading pleasure.

ASCE has a passion for preparing the Civil Engineering profession for tomorrow's world. As Civil Engineers we must embrace and help implement the Roadmap to achieve Vision 2025.

I hope you all enjoy the last few weeks of Fall, and hope you have a Happy Thanksgiving!

Sincerely,  
Thomas W. Brady, P.E.  
President, ASCE, Philadelphia Section

## PROFESSIONAL DEVELOPMENT REQUIREMENTS ASCE, SECTION MEETINGS WILL HELP YOU MEET THESE

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 in 2011. This is effective as of October 1, 2009. 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](http://www.dos.state.pa.us/eng) for your information.

The ASCE, Phila. Section's meeting program will be able to be counted toward your continuing education requirement, depending on the topic (and the Section will use its judgement of this to advise if a particular meeting may not be able to qualify). A verification program, including sign-in/attendance recording and "receipts," has been implemented this season to help you obtain your professional development hours (PDH's).

An important reminder, though, is that the responsibility for record-keeping and accounting for your qualifying hours remains with the individual, thus YOU should keep accurate documentation. The Section is providing our certificates for your files and use in the event you are audited by the State Board and this should only serve as a backup to your personal data.

## CALDWELL SEES A SOCIETY ON THE MOVE — ASCE'S NEW PRESIDENT LAYS OUT FUTURE-ORIENTED STRATEGY

With a promise to "do my duty to you and to our profession with humility, honesty, accountability, respect, strength and courage," **Kathy J. Caldwell, P.E., M.ASCE**, began her year as ASCE's 2011 President last week at ASCE's 140th Annual Conference in Las Vegas. Caldwell, president of Florida-based Caldwell Cook & Associates and an adjunct Civil Engineering professor at the University of Florida, plans to help advance Civil Engineering and ASCE's related initiatives with a strategy she calls "MOVE." The acronym stands for **M**omentum, **O**pportunity, **V**ision, and **E**ngagement. Find out how Caldwell will apply her strategy by viewing the information on this on National's website.

A video profile of what drew President Caldwell to Engineering is also available on National's website.

## ASCE, PHILADELPHIA SECTION OFFICERS AND BOARD OF DIRECTION – 2010-11 SEASON

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## COPY DEADLINE FOR

JANUARY '11 ISSUE

DECEMBER 21, 2010

# ANACE\*

## IF YOU LOVE BRIDGES...

...and we know many of you do, so here's something to think about for that next vacation. Renate Theissi has created the Brückenmuseum (German for "museum of bridges") in Edelsbach, Austria. The 39-year-old woman notes, "When my girlfriends played with dolls, I built my first bridge model. I've never wasted my time with men or romance or anything like that. I'd much rather have an old timber framework bridge than a man."

To that end, she has spent over \$100,000 of her life savings to purchase dozens of old bridges and hand-build detailed scale models of hundreds more, all of which are on display in her backyard. Her collection of bridge-building books numbers over four thousand. Her bed is made from a bridge model.

Thanks to *Roads & Bridges* for this information.

## OLD STUFF ABOUT ASPHALT

**Helena K. Allison**, Senior Traffic Engineer, City of Napa, California, has provided some information on asphalt for your edification.

Most of us know the meaning of word asphalt. Asphalt has been studied, written about and analyzed many times by thousands of experts in countries around the world. Asphalt is the most versatile pavement material used for highway surfaces, recreation, city roadways and intersections, industry and airports.

There are very good reasons why 94% of all paved surfaces are made of asphalt. Asphalt is smooth, durable, safe (better skid resistance over a long period of time), economical, easy to maintain, 100% recyclable, resistant to deicing chemicals, environmentally friendly and quiet. The structural pavement section can be designed to handle any load—from motorcycles to passenger cars, from heavy trucks to construction equipment. Mixes for the surface can be customized to reduce splash during rain storms, provide visual alert and absorb noise.

Asphalt pavement adds up to the best value for the taxpayer's dollar, with the lowest life-cycle cost and the highest residual value, whether it is on an airport surface, a parking lot in your town, on the road or highway, or on a tennis court.

Asphalt pavements provide smooth driving surfaces combined with the excellent traction required by professional stock car racing on a racetrack. Of the 33 NASCAR racetracks in the U.S., 31 have asphalt surfaces. Of the 88 racetracks listed for the NASCAR Short Track series, 66 are asphalt, one is concrete and 21 are dirt or clay.

Airport runways at San Francisco International, Oakland International, Baltimore-Washington International, Logan International in Boston and many other airports around the world all use HMA (hot mix asphalt) for the runway surfaces. HMA airport runways provide passengers with

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## NOVEMBER DINNER MEETING

November 4, 2010

Down Town Club, Center City Philadelphia

### *Communicating Technical Issues With Levity and Panache*

*by Robert Wright, Editor*

The second meeting of the 2010-11 season started off just as the October meeting had, with a rainy day, but this time in Center City as we returned to the Down Town Club. A joint effort sponsored by the **Engineers' Club of Philadelphia (ECP)** and co-sponsored by the **American Society of Heating, Refrigeration and Air Conditioning Engineers, Philadelphia Chapter (ASHRAE)**, the **Construction Management Association of America, Mid-Atlantic Chapter (CMAA)** and our **ASCE, Phila. Section** brought out a lively crowd of over 100 attendees presumably looking for some professional help with their presentations. They would not be disappointed.

ECP President (and Section Past President) **Bob Wright** got things going with a welcome to the audience and an introduction of Section President Elect **Ann Tomalavage** who led the invocation, using the modified Army Corps of Engineers prayer relating to Engineering that she gave in October.

Section President **Tom Brady** made a few announcements on Section activities and welcomed the featured Student Chapter, **Swarthmore College**, to the podium. The Chapter was represented by Past Section President and Student Chapter Advisor **Dr. Faruq Siddiqui**, accompanied by Chapter Officers **Frances Hunter**, **Will Campbell** and **Rebecca Yang**, who presented updates on the Chapter's activities.

CMAA Chapter President **Rocco Vespe** and ASHRAE Chapter President **Robert Finkboner** each came to the podium to give their welcomes and announcements.

Following dinner, ECP President Wright introduced the evening's speaker, **Dr. Fred Kulhawy** of **Cornell University**, reading a small portion of Dr. Kulhawy's impressive resume. Dr. Kulhawy noted that his presentation was originally developed as part of the Hal Hunt Lecture series in 1989 for the Deep Foundations Institute's annual meeting.

Dr. Kulhawy began with some basics, including definitions on what communications, levity and panache should be, along with some guidance with a quote from Albert Einstein that "Everything should be as simple as possible, but not one bit simpler." He gave some examples of the misuse of grammar, words and punctuation that are commonly found and should be avoided. He additionally presented some advice from Joseph Pulitzer, "Put it before them briefly so they will read it, clearly so they will appreciate it, picturesquely so they will remember it, and, above all, accurately so they will be guided by its light". This would include the reduction of jargon, even when the audience is a technical one, to help make your point.

Dr. Kulhawy remarked that he has amassed over 40 cartoons on one of his favorite subjects, the Leaning Tower of Pisa, and he has used these in presentations to reference issues on proper design, construction, testing and coordination on projects. These further illustrate the point that there is no such thing as a "little" mistake in Civil Engineering. He added that the derivation of Civil Engineering, from military and public works production, lent a bit of fun to the name, and he displayed a cartoon showing a comparison of civil and "nasty" Engineering.

Engineering has many stereotypes and Dilbert is perhaps one of the more popular ones, as Dr. Kulhawy presented with several cartoons. He showed an excerpt from a Yellow Pages edition in the United Kingdom which listed the category of "Boring" and indicated that one should "see Civil Engineers", a reference to who could perform and analyze core borings but something that could be taken another way. This is a good example of the need for Engineers to wordsmith and choose words and phrases more carefully when presenting, particularly to those outside the profession.

Dr. Kulhawy stated that at least one technical society had advised authors to avoid humor and levity in papers and articles as this was viewed as unprofessional, and he related his own experience in the publication of a technical journal that he was asked to edit. He noted that humor adds a level of interest to the article in his view.

Dr. Kulhawy took a few shots at consultants (con + insult = consult) and lawyers for the benefit of those in the audience.

Dr. Kulhawy concluded his presentation with the emphasis that communication tools need to be used well to be most effective, and this includes the proper use of language. Words should be chosen carefully and levity is definitely a "plus".

An interesting question and answer period followed. On behalf of all the societies represented at the meeting, ECP President Wright presented Dr. Kulhawy with the Section's speaker gift as a token of the combined group's appreciation for a job well done.

As a last order of business, Younger Member Forum President **Mike Wagner** went through the answers for the trivia contest conducted during dinner and awarded a special prize to the winning table.

You may have noticed that your Editor was sitting next to the speaker at this meeting. We'll have to wait and see in coming editions of *THE NEWS* whether any of Dr. Kulhawy's pointers were retained and put to good use.



## WHERE'S TOM?

ASCE, Phila. Section President **Tom Brady** has raised a challenge to our members. Each month, we will show a photo of Tom at a different location. You will be asked to keep track of the locations where Tom appears in the photos. The first photo was provided in the Summer edition. In April, you can send a list of your guesses to Tom and the participants will be entered into a drawing for a prize to be awarded at the Spring Social.

*Good luck!*

## PSPE PHILADELPHIA ENGINEERS WEEK BANQUET

The Pennsylvania Society of Professional Engineers (PSPE), Philadelphia Chapter, will conduct its **2011 National Engineers Week Banquet on Saturday, February 26, 2011** at the **Springfield Country Club** (400 West Sproul Road, Springfield). This event will recognize, promote and celebrate the role that Engineers fill in the Greater Philadelphia and Delaware Valley Region.

The price per person is \$60.00 for reservations received before **December 31, 2010**, \$65.00 for reservations received afterward. Reservations can be made on the Chapter's website, [www.pspe-philly.org](http://www.pspe-philly.org), using PayPal. Sponsorships and table-top exhibits are also available.

**ADVICE FOR THE DAY: IF YOU HAVE A LOT OF TENSION AND YOU GET A HEADACHE, DO WHAT IT SAYS ON THE ASPIRIN BOTTLE: "TAKE TWO ASPIRIN" AND "KEEP AWAY FROM CHILDREN."**

— Author Unknown

## ENVIRONMENTAL AND WATER RESOURCES TECHNICAL GROUP

*January Dinner Meeting*

**THURSDAY, JANUARY 27, 2011**

*SUBJECT: Retrofitting Stormwater Basins*

*SPEAKER: Crystal Gilchrist, AICP, Executive Director of the Perkiomen Watershed Conservancy*

*TIME: 6:00 PM (5:30PM Registration/Networking)*

*LOCATION: Michael's Restaurant and Delicatessen, 130 Town Center Road, King of Prussia, PA*

*COST: will be provided in the January edition of THE NEWS*

Ms. Gilchrist will share the Conservancy's experiences with the numerous stormwater basin retrofit projects it has completed in the Perkiomen Creek watershed. The initial project included a PADEP Growing Greener grant to retrofit six basins in Lower Providence Township. Subsequently, the Conservancy has used **TreeVitalize** funds to work with a Homeowners Association in Perkiomen Township and has obtained another **Growing Greener** grant to retrofit additional basins in Upper Hanover Township. Ms. Gilchrist will provide a description of the planning process from the Conservancy's point of view and discuss how these types of projects can help communities improve water quality, reduce the quantity of stormwater discharges and meet their Municipal Separate Storm Sewer System (MS4) permit requirements.

*DIRECTIONS:* Directions to the restaurant can be found at [www.michaelsdeli.com/directions.asp](http://www.michaelsdeli.com/directions.asp). Attendees are eligible for one (1) Professional Development Hour (PDH) for attending this presentation. Please contact **Jerry Snyder** at **(610) 631-5241** for more information.

## SECTION HAPPY HOUR

The ASCE, Phila. Section is looking to conduct more social events for our members. After the successful Philadelphia Union soccer game outing in October, we have planned a **Happy Hour** in November so members can get together without a technical meeting or presentation, just to network, socialize, kick back, etc.

The **Happy Hour** will take place on **Thursday, November 18** starting at **5:30 pm**, at the **Great American Pub**, 123 Fayette Street, in beautiful downtown Conshohocken. The event is free and appetizers are complimentary — drinks will be available for individual purchase.

This event is open to all who are willing to socialize with Civil Engineers. We hope to see you there!

No PDH's will be able to be earned at this event, just in case you were wondering.

## STRUCTURAL ENGINEERING INSTITUTE

*Dinner and Technical Meeting*

**THURSDAY, NOVEMBER 18**

*SUBJECT: World Trade Center "Super Tall" Tower 1 and Tower 7, Design and Construction*

*SPEAKER: Kenneth Lewis, Skidmore, Owings & Merrill LLC*

*TIME: 5:30PM Social (cash bar); 6:15PM Dinner; 7:00PM Program*

*LOCATION: Down Town Club, Public Ledger Building, 6th & Chestnut Streets, Center City (reduced-rate validated parking available at One Independence Mall Garage, 7th & Ranstead Sts.)*

*COST: \$55 ASCE members; \$60 non-members; \$15 students*

Attendees are eligible to earn two (2) Professional Development Hours (PDH).

Mr. Lewis will talk about the history, challenges and inspiration that went into the design of the super tall tower going up at "Ground Zero", the most well known contemporary building in New York City — One World Trade Center. He will also discuss transformation of design and construction techniques in SOM's other super-tall buildings including Burj Khalifa in Dubai, by applying pioneer planning work in Chicago's tall buildings by SOM's structural Engineer, Fazlur R Khan.

Mr. Lewis was involved in development of sustainability design guidelines for the WTC. He is working as a principal with the Center for Architecture Science and Ecology, a research and education collaboration between Rensselaer Polytechnic Institute (RPI) and SOM.

To register, contact **Dr. M. Ali Khan** at [mohidin@temple.edu](mailto:mohidin@temple.edu) or **(609) 332-1136** by **November 15**.

Make your check payable to **SEI-Phila Chapter** and mail to SEI Treasurer Vijay Gupta, PhD, PE, c/o A.D. Marble & Co. 375 E. Elm St., Suite 200, Conshohocken, PA 19428.

Please advise of any dietary or accessibility requirements. There will be a choice of dinner entrees (chicken, fish or vegetarian) available.

## DELAWARE VALLEY GEO-INSTITUTE MEETINGS

DVGI has scheduled the following meetings for this season:

- November 16, 2010 – Yeager Airport Reinforced Slope
- January 18, 2011 – Double-Lined Grout Curtain
- February 22, 2011 – Student Night
- March 15, 2011 – Short course and Dinner by Geo-Structures
- May 17, 2011 – Geothermal Systems

More information will be provided in future editions of *THE NEWS* and on our website.

## DECEMBER DINNER MEETING

Continued from Page 1

Discounted parking is available at One Independence Mall Garage, 7th & Ranstead Streets. Parking stubs must be validated at the meeting registration table.

The presentation will cover the following items:

- Overview of the Panama Canal Expansion Program, the components that make up the program, and the various ramifications of the expansion outside of Panama, particularly on the US East Coast
- A status update on the key projects within the Canal Expansion
- Discussion of the project management of the Expansion, and the roles of the various parties and some of the tools being used in this effort.

**David Nisula** is a local product, growing up in Northeast Philadelphia and graduating from Drexel University. Over his career, he has performed the principal roles of the engineering profession, including design engineer, design manager, resident engineer, quality manager, construction manager, and project manager.

Mr. Nisula has held a number of leadership roles within CH2M HILL, including staff and operations management positions. Prior to beginning his work supporting the expansion of the Panama Canal, he led the Ports and Maritime business for CH2M HILL's Northeast region, and had significant managerial and design roles in approximately \$1 billion in port development, including the redevelopment of Maher Terminal in Elizabeth, New Jersey and the semi-automated Portsmouth Container Terminal in Portsmouth, Virginia. He is a registered Professional Engineer in the states of Pennsylvania, New Jersey and Massachusetts, as well as a PMI Certified Project Management Professional.

Mr. Nisula is currently serving as the Assistant Program Manager for the \$5.25 billion Panama Canal Expansion Program for CH2M HILL's Program Management Team. He has filled a number of other key roles on the Panama Canal Expansion Program, from Home Office Project Delivery support, to civil engineering assistance on the development of the Locks Design/Build RFP, to management of the implementation of the Program Management Information System (PMIS) for the Panama Canal Authority (ACP). As a result of the various roles that he has filled within the Program, he has contributed to virtually every major activity in the management of this world class program.

**A STUDY IN THE WASHINGTON POST SAYS THAT WOMEN HAVE BETTER VERBAL SKILLS THAN MEN. I JUST WANT TO SAY TO THE AUTHORS OF THAT STUDY: "DUH."**

— Conan O'Brien

## SECTION SCHOLARSHIP PROGRAM OPEN FOR APPLICATIONS

The ASCE, Phila. Section's Scholarship Program is open for applications for the 2010-11 season. It will follow the same format as it did last season, when it changed slightly from previous years as far as schedule of submissions and awards.

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 2011 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 22, 2010. Please visit the Engineers Week website, [www.dvewc.org](http://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 full-time 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 ONE of the following topics:
  - (1) With the heightened need for additional infrastructure funding and the increased political and public awareness of this need, how would you suggest that Civil Engineers capitalize on this and use their knowledge to increase political and public support of additional funding without sounding self-serving?
  - (2) How do you explain what Civil Engineering is to Non-Engineers? How can some of those ideas be expanded to enhance the public knowledge of the Civil Engineering profession so that people understand what we do and

students are attracted to the field?

### SUBMITTAL DEADLINE:

- Applications (including recommendations) must be submitted by **January 31, 2011**.
- Scholarship winners will be notified by **February 28, 2011**.
- Applications and recommendations should be submitted by mail or email to:

**Mr. Jeff Bade**, Scholarship Committee Chair  
American Society of Civil Engineers  
215 South 16th St., Ste. 16  
Philadelphia, PA 19102  
[jbade@hardesty-hanover.com](mailto:jbade@hardesty-hanover.com)  
(609) 538-8233

### 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.

### ELIGIBILITY REQUIREMENTS:

- The applicant must be the child of an active Philadelphia Section member.
- The applicant must be matriculating in a full-time 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!**

## YOUNGER MEMBER FORUM NEWS

*Scott Ceipitz*, Forum Editor

*Michael Wagner*, Forum President 2010–11

Urban Engineers Inc.

530 Walnut Street, 14th Floor

Philadelphia, PA 19106

(215) 922-8080

[mgwagner@urbanengineers.com](mailto:mgwagner@urbanengineers.com)

### GUSTINE LAKE INTERCHANGE CONSTRUCTION TOUR

On October 6, YMF, with assistance from **Michael Baker Corporation**, organized a site visit to the PennDOT reconstruction project located where City Avenue, Ridge Avenue, Kelly Drive, and Lincoln Drive intersect. A complete walkthrough was conducted, led by the Contractor, **Buckley & Co., Inc.**, while discussing in depth information on the structure, construction facilitation, and historical aspects. The event was a success with a fully booked turnout of ASCE members ranging from students to working professionals. Immediately following the tour was an ASCE sponsored happy hour social at the Manayunk Brewery & Restaurant, in which complimentary snacks were provided during a Phillies playoff game.

**ANACE\****Continued from Page 3*

more comfortable takeoffs and landings. Asphalt allows for fast construction which also makes it an ideal choice for rehabilitation of busy airport surfaces and aviation facilities.

Now that you know where asphalt is used and why it is such a great product, let's find out where it all started.

**Laura Ingalls Wilder**, author of *Little House on the Prairie*, tells of her first encounter with what was then an asphalt pavement. She was on a wagon journey through Topeka, Kansas, with her parents in 1894.

"In the midst of the city, the ground was covered by some dark stuff that silenced all the wheels and muffled the sound of hoofs," Wilder wrote. "It was like tar, but Papa was sure it was not tar, and it was something like rubber, but it could not be rubber because rubber cost too much. We saw ladies all in silk and carrying ruffled parasols, walking with their escorts across the street. Their heels dented the street, and while we watched, these dents slowly filled up and smoothed themselves out. It was as if the stuff was alive. It was like magic."

This dark, resilient material, called at various times blacktop, tarmac, plant mix, asphalt pavement, asphalt concrete or bituminous concrete, played an important role in the history and in changing the landscape of the U.S. since the 19th century.

But let's not forget that the history of asphalt began thousands of years before the discovery of America. Ancient Phoenicians, Egyptians and Romans used the binding and insulating effects of natural asphalt.

The word asphalt comes from the Greek "asphaltos" which means secure. Asphalt occurs naturally in both rock asphalt (a mixture of sand, limestone and asphalt) and asphalt lakes.

The recorded use of naturally occurring petroleum asphalt dates back to about 4000 B.C. Asphalt began to be used as cement for jewelry in 3500 B.C., and in 2500 B.C. asphalt and other petroleum oils began to be used in ancient Egypt for embalming mummies. The Persian word for asphalt is mumiyah which may be related to the English word for mummy.

The first documented use of asphalt as a road-building material was in Babylon around 625 B.C., in the reign of King Nabopolassar.

In *A Century of Progress: The History of Hot Mix Asphalt*, published by the National Pavement Association, author Hugh Gillespie notes that "an inscription on a brick records the paving of Procession Street in Babylon, which led from the palace to the north wall of the city, 'with asphalt and burned brick.'"

From 300 B.C. to A.D. 250, there were reported occurrences of asphalt oil seepages in ancient Mesopotamia, along with the use of asphalt to waterproof temple baths and water tanks, and the use of liquid asphalt as an illuminant in lamps.

The first reported use in Italy of asphalt as a coloring material in paintings was in A.D. 750.

Roughly a thousand years passed before European builders began using asphalt as a paving material.

Englishman John Metcalf, born in 1717, built 180 miles of Yorkshire roads. He insisted on drainage, requiring the use of stones in the foundation, covered with excavated road material to raise the roadbed, followed by a layer of gravel.

In the late 1700s and early 1800s, Pierre-Marie-Jerome Tresquet of France, followed by Thomas Telford and John Loudon McAdam (both of Scotland), perfected the leveling, draining and construction of roads using layers of broken stones and gravel.

During the period of 1860-1880, to reduce the road maintenance and road dust, builders began using hot coal tar to bond the rocks together. Such roads were named after McAdam and known as tarmacadam or later shortened to tarmac.

The first bituminous mixtures produced in the U.S. were used for crosswalks and sidewalks. In 1870, in Newark, New Jersey, Belgian chemist Edmond J. DeSmedt developed and laid the first true asphalt pavement surface in the United States. He is also responsible for paving Pennsylvania Avenue in Washington D.C., in 1876 using 54,000 square yards of asphalt from Pitch Lake in Trinidad (Venezuela).

The first asphalt facility to contain virtually all basic components of the facilities we are familiar with today was built in 1901 by Warren Brothers in East Cambridge, Mass. It did not have pollution control equipment and cold feed. The first drum mixers and dryer-mixers were adapted to be used for HMA from Portland cement concrete mixers in 1910.

Mechanization was developed further in 1920 with the improvement of a cold feed system for portable and semi-portable systems. Vibrating screeds and pressure injection systems were added in the 1930s.

Over the last several decades the industry has continued to improve and has developed new, advanced pavement materials such as colored asphalt, synthetic asphalt, Stone Matrix Asphalt, gap graded Superpave and others.

We have come a long way since the first paved road in the United States some 140 years ago. We now have superhighways, tarmac airport runways and colored asphalt at crosswalks. With a constant improvement in equipment, production, chemical development and quality, we will be able to see how much progress we have made in the durability, smoothness and safety of our asphalt roadways and other surfaces.

Cities continue to pave and improve the street and road surfaces in their jurisdictions to serve the general public making their streets safe. Our City of Napa is proud to note that we continue to repave and improve our streets, setting a 10-mile-per-year goal to repave streets with our own city forces.

Thanks to Ms. Allison and the APWA Reporter for permission to reprint this.

\*ANACE - Almost Nothing About or Concerning Engineering

**ADVANCE PLANNING FOR ENGINEERS WEEK**

The Delaware Valley Engineers Week Committee will be offering slightly different events for Engineers Week 2011 compared to those in previous years. Please note this information in your calendar and plan to participate. Prices and other details will be provided and updated as these are finalized.

**AWARDS AND PROCLAMATION LUNCHEON FRIDAY, FEBRUARY 18, 2011**

*Doubletree Hotel, Center City Philadelphia*

The Awards and Proclamation Luncheon will include:

- A poster session with presentation of student paper winners from 10:00 am to 12 noon prior to the Luncheon
- The Awards and Scholarships presented at the Banquet in previous years will now be featured at the Luncheon
- Engineers Week proclamations will be displayed
- Project and individual awards of all participating Engineering societies in the Delaware Valley will be recognized
- The Engineer of the Year and Young Engineer of the Year will make brief remarks

**YOUNG ENGINEER SOCIAL EVENT TUESDAY, FEBRUARY 22, 2011**

*(Location to be determined)*

This event will follow the format of last year's Social with a happy-hour/networking setup geared to younger engineers instead of a formal dinner. The Young Engineer of the Year will make brief remarks.

**CELEBRATION OF ENGINEERING RECEPTION THURSDAY, FEBRUARY 24, 2011**

*(Location to be determined)*

The culminating event of Engineers Week will be a social/networking gala event to celebrate Engineering, as was conducted last year in place of a formal banquet, with cocktails, appetizer stations, and dessert stations. Other features of the event include:

- 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, followed by a brief recognition of the Hall of Fame, Outstanding Service, and Engineering Achievement award recipients

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

Additionally, while not officially an Engineers Week event, the **Philadelphia Future City Competition** will be conducted on **Saturday, January 22, 2011** at the **Sheet Metal Workers Hall in South Philadelphia**. This will be the 16th successful year of the competition in our area. Mentoring opportunities are available now and many volunteers will be needed the day of the competition. 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](http://www.dvewc.org).

## 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.

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### ENGINEERING MANAGEMENT

The Chair position is currently open (see below).

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You won't see many Want Ads in *THE NEWS*, but here's one. As reported last month, the ASCE, Phila. Section is still looking for an energetic, enthusiastic and driven individual to take on the chair of the Engineering Management Technical Group. Our current Chair, **Bill Mulloy**, has stepped down after several successful years at the "helm" of the Group.

The basic duties of the Chair are the direction of the Group, the planning of a program of events for the season (meetings, tours, etc.), coordination with the Section Board and other Technical Groups, and related duties.

Anyone who may have an interest or has questions about the position should contact President **Tom Brady** (contact information is given on page 2).

## GOVERNOR SLAMS BRAKES ON UGA ENGINEERING PLAN

While we as Engineers know we need more people in our profession, we don't hear this from outside our "bubble" very often. In Georgia, the rivalry between the Bulldogs and Yellow Jackets is taking on a new meaning...

The State Board of Regents postponed until November a decision on the University of Georgia's (the Bulldogs, if you don't follow college sports) plan to offer three new Engineering programs after Gov. Sonny Perdue urged them to slow down and build support among lawmakers and the public.

The governor spoke shortly before the regents were to discuss UGA's request to offer Civil, Electrical and Mechanical Engineering degrees – areas long dominated by Georgia Tech (the Yellow Jackets). The request has evolved into a heated debate as some question the wisdom of expanding the second-most-expensive degree program when the state is still struggling economically. For others, the proposal has escalated a long-held rivalry between the state's two most respected public colleges.

Perdue reminded the regents – all of whom he appointed or re-appointed – that while they are a governing board, they need to check with him and the Legislature to make sure they're "pulling in the same direction." He described the relationship as "interdependence." While the board has had a collaborative relationship in the past, Perdue said the regents seem more interested in quickly passing UGA's plan.

The delay means the regents will consider UGA's request and a similar request from Georgia Southern University at the same meeting. The Statesboro school wants to morph three existing Engineering technology degrees to Engineering degree programs.

It also means the regents will take up the issue after the November elections.

While some described UGA's proposal as a minor addition to its current offerings of Engineering degrees, Perdue said it could have significant implications for this system. He said he was surprised to hear that the proposal was viewed by many as a "foregone conclusion."

He reminded the regents of the strained finances facing the state. While college enrollment continues to grow, state finances have yet to rebound and the federal stimulus money is going away.

Georgia Tech President G.P. "Bud" Peterson expressed concerns over UGA's costs estimates and the state's need for more Engineers. Tech officials have said they are in the best position to expand any programs.

UGA President Michael Adams said the university went through a four-year process developing the Engineering proposals and followed the same procedures that have been used when developing other academic programs. Allowing UGA to expand its Engineering offerings would give students options, provide the state with more workers and let the university compete for additional grants.

Thanks to the *Atlanta Journal-Constitution* for this information.

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