

### ...AND THANKS AGAIN TO OUR SPONSORS !

As you have seen, the ASCE, Phila. Section Sponsorship Program was once again popular this season, with 19 firms participating in it. We extend our special and collective THANKS to each sponsor for their financial commitment and support.

Sponsor logos have also been included in a special Sponsors section of our website, in addition to their business cards published in each edition of *THE NEWS*. This year, we provided direct links from the Section's website to the sponsors' to allow folks to visit these websites and review potential employment openings and positions.

Of course, the key to success is repetition (or something like that), so we'll be contacting current sponsors later this summer to see if they'll go again in 2011-12. We hope the program will be as successful then as well.

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.

### 2011 SECTION AWARDS TO BE PRESENTED AT SPRING SOCIAL

As is our usual custom, this year's ASCE, Phila. Section Awards will be presented at the **Annual Spring Social and Dinner Dance on May 13**. Information and details on the Social are given elsewhere in *THE NEWS*.

A total of five Award recipients have been nominated for these honors and approved by the Section Board of Directors. The honorees are:

- **Tim Haahs**, Tim Haahs — Philadelphia Civil Engineer of the Year
- **Mike Wagner**, Urban Engineers — Philadelphia Young Civil Engineer of the Year
- **Ara Mouradian**, Gannett Fleming — Geotechnical Engineer of the Year
- **Carl Baumert**, Keast & Hood — Structural Engineer of the Year
- **Thom May**, Urban Engineers — Environmental/Water Resources Engineer of the Year

We hope you will join us at the Social to honor our Awardees for this year.

In the October edition of *THE NEWS*, we will present more information on the awardees as well as a detailed report on the Social.

## 2011 SPRING SOCIAL ON YOUR MARK, GET SET... FRIDAY, MAY 13, 2011

This year's **ASCE, Philadelphia Spring Social and Awards Dinner** will feature a transportation topic of sorts, as we will enjoy the **Simeone Foundation Automotive Museum** in the Auto Mall in Southwest Philadelphia on **Friday, May 13**. The details are provided below.

The Social will start at 6:00PM with a cocktail hour, followed by a buffet dinner. Some "business" matters, such as the installation of new Section officers, the presentation of Section awards, the recognition of our Delaware Valley Science Fairs awardees, and a vote on the updated Section Constitution, will be featured as well.

The Museum is located at 6825 Norwitch Drive, just off Essington Avenue. Please visit the website ([www.simeonefoundation.org](http://www.simeonefoundation.org)) for more information and directions.

The cost of the Social will be \$60 per attendee. **RESERVATIONS MUST BE SUBMITTED BY FRIDAY, MAY 6**. Please send your check for the number of attendees, payable to "Philadelphia Section ASCE," to ASCE, Engineers' Club of Philadelphia, 215 S. 16th Street, Suite 16, Philadelphia, PA 19102. Reservations can also be made on the Engineers' Club message center, **215-985-5703**, or via e-mail at [info@asce-philly.org](mailto:info@asce-philly.org). You may also electronically reserve through our website ([www.asce-philly.org](http://www.asce-philly.org)) and pay via PayPal, a new service available for this. **NO WALK-INS WILL BE ACCEPTED.**

The Museum features the private collection of renowned neurosurgeon **Dr. Frederick Simeone** and includes over sixty of the rarest and significant racing cars ever built. "The first race was conceived when the second car was built." From the dawn of the automotive era, racing has been used to demonstrate the superiority of one manufacturer over another. It is this "Spirit of Competition" that is celebrated at the Museum.

We invite all Section members and their guests to attend and thank the current Section officers as they take their last laps and approach the "finish line" of their terms. We hope to see you there!

## APRIL DINNER MEETING

Wednesday, April 13, 2011

Villanova Conference Center, Radnor, PA

### Two Breakout Sessions

by Robert Wright, Editor

Once again, just like last month and all of the meetings in the 2010 part of this season, those attending our ASCE, Phila. Section meeting had to deal with rainy weather as they traveled to the wilds of the Delaware County side of County Line Road to reach the Villanova Conference Center. Our second attempt at a multiple-topic meeting (the first being in the same place and the same month last year) brought out over 100 participants looking to hear about the two topics being offered – **Marcellus Shale** and **jointless bridge deck design**.

Section President **Tom Brady** welcomed everyone and opened the meeting, with a blessing of the meal offered by President-Elect **Ann Tomalavage**, and the festivities were begun as attendees were called to the buffet. A trivia contest was attempted to be conducted, but no submitters were to be had, so the valuable prizes that could have been won were stored away for an upcoming meeting.

A number of Past Presidents of the Section were in attendance and were honored as part of the evening's features. (Please see the separate article on this.)

During this time, Past President **Kristen Bowman Kavanagh** and Section Secretary **AnnMarie Vigilante** shared the honors (we'll call it that!) of reading the amended Section Constitution into the record, prior to the vote that will be taken on it at the Spring Social. The Constitution and



## PRESIDENT'S MESSAGE

My Fellow ASCE Members,

As I close out my term as President and continue with my adventures (as Bob described in The News sendoff message last month), I am proud of the accomplishments that occurred over the past year and want to promote our many achievements.

• **Outreach regarding the PA Infrastructure Report Card:** Within the first few weeks of my Presidency we released the updated Report Card. I, along with the other ASCE sections throughout Pennsylvania, have kept the legislators focused on infrastructure investment through Letters to the Editor and op-ed articles. I will be meeting with Rep. Milne and Rep. Geist on May 10 as part of Legislative Day and will continue to stress the need for improvements to our infrastructure.

• **Provide PDH meetings:** Our dinner meetings throughout the year offered a PDH for attending the program. Additionally, our Technical Groups and Institutes had lunchtime and evening programs offering PDH opportunities.

• **Social Events Outside our Monthly Dinner Meetings:** a Philadelphia Union game and Happy Hours in Conshohocken and in Philadelphia occurred.

• **Revitalize the Reading Branch:** In October, we held a joint meeting with the Reading Branch and celebrated its 35th Anniversary. The new Board will continue to plan activities to reach out to members in the Chester, Montgomery County and Berks area.

• **Hold Multidisciplined Meetings:** Our meetings dealt with subjects that encompassed several civil engineering fields. Our April dinner meeting offered breakout sessions on topics covering Geotechnical Engineering, Structural Engineering, and Environmental/Water Resources.

• **Plan for the 100th Anniversary:** Jenn Walsh is chairing this committee. Planning the program and researching venues has begun as we get ready to celebrate 100 years as a Section.

In addition, we once again successfully managed our finances during the recession and are safely "in the black." Although we hit a minor roadblock last year with National to revise our Section Constitution and Bylaws, we are now only weeks away from completing our revisions with the final vote at our Spring Social on May 13.

I have been a member of ASCE since college. I encourage all the younger members to get involved with the Section as much as possible. I want to thank **Chris Rood** for recommending me to first serve on the Section Board as Membership Secretary. It has been a very rewarding experience and I thank all of you for being able to serve you as President this past year.

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



ASCE, Philadelphia Section Science Fairs winners Ian Moore, Eric Todd, Alyssa Eggly and Jessica Oriente join with Fairs Judge Chris Rood and show their plaques.

## SECTION GOLF SHIRTS AVAILABLE

The ASCE, Philadelphia Section is offering a golf shirt, which you can wear on the golf course or anywhere, to show your support and pride of our Section.

Information on colors and styles available, prices, and ordering are available on our website ([www.asce-philly.org](http://www.asce-philly.org)).

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

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SUMMER '11 ISSUE

JULY 1, 2011

## A THOUGHTFUL SCHOLARSHIP ESSAY

As you may be aware, our ASCE, Phila. Section and Engineers Week scholarships require the submission of an essay on a given topic as part of the application process. The essays are evaluated to determine the candidate's ability to express him/herself and helps the Selection Committee gain some insight as to why a candidate deserves a scholarship and/or what the candidate intends to do in his/her future Engineering career.

Our Engineers Week Section Scholarship recipient this year, **Jennifer Harnden**, a junior at Widener University, had what several thought was an interesting view of what led her to the Engineering field. We thank Jennifer for giving us permission to share her great essay with you and we think you will find it insightful and enjoyable.

The single event in my early education that I am most grateful for is "take your daughter to work day." I can still remember being eight years old sitting behind the wheel of a backhoe. As a young girl that experience stuck with me and eventually led me into the field of Civil Engineering. I was fortunate enough to have had a father in the construction business and to be exposed to a wide variety of careers at a young age — not all girls were and are so lucky. I can't help but imagine how many brilliant female minds Engineering has missed out on and the great things they could have done for society as a whole. Five to ten years from now I hope to bring the field of Engineering out of the trenches and into the spotlight by changing how we draw from and put back into society. If we educate younger generations on the opportunities at hand, and continue to expand our service footprint society will begin to thrive around us in a continuous give and take relationship.

One important skill you may never see listed on a resume is passion, and because our passions are developed at an early age it is important to expose young minds to a variety of learning opportunities. While in industry I will work to provide educational opportunities to high school students through programs like the "ACE Mentor Program," a program I was fortunate enough to participate in. ACE offers "career direction for high school students in Architecture, Construction, and Engineering." During weekly meetings industry mentors helped students from local schools with a cumulative design project. Joining together as an Engineering community and supporting programs like this not only gives back to society but develops and rejuvenates the Engineering field for years to come.

This rejuvenation should not be limited to our field or our country. As Engineers have been doing in recent years, we need to reach out to other countries and communities that could use our help. While in the work force I hope to become more involved in charity programs like **Habitat for Humanity and Engineers Without Borders**. Programs like these not only improve the lives in our country but of third world countries across the globe. I would think that applying your passion to improve humanity has the possibility of being one of the most rewarding experiences.

## SECTION OFFICERS AND BOARD OF DIRECTION 2011-12 SEASON

At the **Spring Social** on **May 13**, the ASCE, Philadelphia Section's officers and Board members for the current season will be officially installed. This slate was that recommended as a result of a meeting of the Nominating Committee and any nominations made from the membership. They are as follows:

*President:* **Ann M. Tomalavage**, Malarkey Consulting, Inc.

*President Elect:* **Jeremy D. Colello**, Pennoni Associates, Inc.

*Vice President:* **Jennifer K. Walsh**, McMahon Associates Inc.

*Secretary:* **AnnMarie L. Vigilante**, Langan Engineering & Environmental Sciences

*Treasurer:* **Guy DiMartino**, Traffic Planning & Design, Inc.

*Assistant Treasurer:* **Joseph Platt**, Traffic Planning and Design, Inc.

*Membership Secretary:* **Cathy G. Farrell**, Michael Baker, Jr., Inc.

### *Directors:*

**Vicki L. Brown**, Widener University ('11-'13)

**Eve S. D'Onofrio**, ES Design LLC ('11-'12)\*

**Spencer Finch**, Pennsylvania Environmental Council ('10-'12)

**Marc Preim**, STV Inc., ('11-'13)

**Theodore Thomson**, Duffield Associates ('10-'12)

**Keith Yamatani**, Kleinfelder ('11-'13)

### *Past Presidents:*

**Thomas W. Brady**, Louis Berger Group  
**Kristen Bowman Kavanagh**, Flow Science Inc.\*\*

**Mark J. Tiger**, Michael Baker, Jr., Inc.\*\*

*President, Reading Branch:* **E. J. Walsh**, McCarthy Engineering

\* *Fills unexpired term of Jennifer Walsh.*

\*\* *With the expected passage of the new Constitution and Bylaws, only the immediate Past President will serve on the Board, and only for a one-year term.*

We wish these brave and generous folks our collective good luck for the coming season.

Thanks to the Nominating Committee for the development of this coming season's slate. Past President **Kristen Bowman Kavanagh** chaired the Committee, with assistance from President **Tom Brady**, **Jim Markham**, **Megan Syrnick**, **Ann Tomalavage** and **Bob Wright**.

As I approach my senior year I find myself taking a step back and considering the impact I hope to leave on society. Knowing this world and profession will continue long after all of us are gone I have realized it's not one person's contributions, but developing a team work of contributions... a legacy. A legacy of development and services that will not only last ten years from now or twenty years from now but hundreds of years from now, one that will ignite the passion of an eight year old girl in the seat of a backhoe.

## SECTION AT SCIENCE FAIRS FOR 18TH YEAR

It seemingly has become an ASCE, Phila. Section tradition to present Special Awards at the Delaware Valley Science Fairs, and we have been there to do this for the past 17 years. To continue this trend this year, our contingent of esteemed (?) judges spent April 6 at the Fairs, held at the Greater Philadelphia Expo Center in Oaks, to sort out over 900 individual student projects to find those with some Engineering potential.

While many of the projects did not have a connection to Civil Engineering and were therefore removed from consideration (some of these concerned such topics as diseases, insects, social networking and blood spatter (at least two efforts looked at this!)), our intrepid judges did find enough to make the decision somewhat difficult. (And it is rarely an easy decision to start with!) After a lot of reviewing and a lot of walking, the judges came up with two winners in each of the categories of Grades 6-8 and Grades 9-12.

The winning students and their projects were:

Grades 6-8 First Place — **Alyssa Eggy**, 6th grade, Alder Avenue Middle School, Egg Harbor Township, NJ. Alyssa's project had the self-explanatory title of "*Breaking Bridges*."

Grades 6-8 Second Place — **Ian Moore**, 8th grade, Baldi Middle School, Philadelphia. Ian took second spot with the interesting topic of "*What Bondant Can Support the Most Weight in a Geodesic Dome?*"

Grades 9-12 First Place — **Jessica Oriente**, a 9th grader at Villa Joseph Marie School in Holland, conducted various experiments on "*Swaying Bridges*." (Can you tell some of the judges were Bridge Engineers?)

Grades 9-12 Second Place — **Eric Todd**, 10th grade, Methacton High School, Norristown, presented on "*Bridging the Gap – The Effect of an Arch on a Cable-Stayed Bridge Deck*." (As we said, Bridge Engineers...)

Past President and "chief judge" **Chris Rood**, the Section's long-time coordinator of the judging for the Fairs, attended the award ceremony on April 7 and presented commemorative plaques and checks to the winning students. The First Place winners were invited to attend the Spring Social, as we usually do, and we hope they will be able to attend so the rest of us can see the Engineers of the future and allow them to display their winning efforts.

Thanks to the students and to those who participated in this event, including Section Judges **Chris Rood**, **Chris Menna** and **Bob Wright** (the non-bridge Engineer in the group!).

This year's Fairs featured over 1000 student projects. More information on the Fairs can be found at [www.drexel.edu/dvsf](http://www.drexel.edu/dvsf).

**This would be a much better world if  
more married couples were as deeply  
in love as they are in debt.**

— Earl Wilson

## LIFE MEMBERS HONORED

Our ASCE, Phila. Section welcomed a total of 18 newly-minted Life Members to its fold earlier this year. As you may know, this is a momentous occasion, and it's fairly easy to do if you:

- have reached the age of 65,
- have paid dues for a minimum of 30 years, and
- have had 10 years continuous membership immediately preceding the attainment of Life Membership.

Life Members are exempt from dues and need only pay a small service fee to receive ASCE *News and Civil Engineering* magazine.

Inducted into Life Membership in 2011 are:

Emin Aktan  
 Ronald Chadderton  
 John Chambers  
 Richard Faris  
 Robert Guthrie  
 Richard Horvath  
 Joseph Krulikowski  
 Hing Lui  
 David Lynch  
 William Martin  
 Stephen McEvoy  
 Rao Mokka  
 Michael Radbill  
 John Spitko  
 George Stanley  
 Joseph Syrnick  
 Joseph Thompson  
 Carter Young

We were pleased to be able to have Mr. Horvath, Mr. and Mrs. Krulikowski, Mr. Martin, Mr. and Mrs. Radbill, Mr. and Mrs. Spitko, Mr. Stanley, Mr. Syrnick and Mr. Young in attendance at the April Section meeting as our guests for their citation and congratulations.

ASCE appreciates the lifelong support of these members. We thank them for their contributions and years of dedication to our profession.

## PAST PRESIDENTS HONORED

It has become another in a series of ASCE, Phila. Section traditions to honor our Past Section Presidents at our April meeting. Each April, we invite them to come out, be recognized, and enjoy a dinner courtesy of the Section (not necessarily in that order of priorities!) to cite their contributions to the Section. Some of our Past Presidents are virtual "fixtures" at our meetings, and some only attend occasionally because of their busy schedules, but in any event, we are always happy to see them.

This year, we were pleased to see 15 of them taking the time to be at the April meeting:

Robert Koerner, 1975-75; Joseph Syrnick, 1980-81; William Malarkey, 1983-84; John Durrant, 1984-85; J. Richard Weggel, 1989-90; Frank Depman, 1990-91; Moustafa Gouda, 1991-92; Robert Wright, 1993-94; Alvin Zion, 1996-97; Darin Gatti, 1997-98; Thomas Branigan, 2000-01; Chris Rood, 2001-02; Christopher Menna, 2005-06; Carol Martsolf, 2006-07; and Kristen Bowman Kavanagh, 2009-10

Thanks to the newest member of the group, Kristen, for contacting the Past Presidents and getting them to come out.

## CONSTRUCTION TECHNICAL GROUP TRANSPORTATION AND URBAN DEVELOPMENT TECHNICAL GROUP Engineers' Club of Philadelphia

### Luncheon Meeting

**TUESDAY, MAY 31, 2011**

**SUBJECT: Subsurface Utility Engineering**

**SPEAKER: Richard A. Horenburger, P.E.,** Chief Operating Officer, Underground Services, Inc. SoftDig®, Subsurface Utility Engineers

**TIME: 12:00 PM–1:30 PM**

**LOCATION: Municipal Services Building,** 16th floor, Conference Room Z, 15th Street and JFK Boulevard, Philadelphia, PA

**COST: \$15.00 per person; \$20 after May 25**

Mr. Horenburger will review the need for wider use of "Subsurface Utility Engineering" (SUE) in construction and engineering projects to safely design and construct civil projects involving existing subsurface utilities, such as gas, water, sewer, communications, etc. He will discuss the documented cost benefits of SUE; legal requirements in Pennsylvania for SUE utilization; the ASCE standards for SUE establishing 4 Quality Levels (A/B/C/D); the basics of how SUE/locating is done and on what type of projects; the type of data that is collected and used in design; and a brief review of several case studies showing SUE time and cost saving benefits. This presentation will be of interest to Owners, Consultants, Contractors and anyone involved in design or construction where underground utilities might be an issue.

Participation in this presentation entitles each attendee to one (1) PDH for the Commonwealth of Pennsylvania's Professional Engineer Continuing Education Requirements. PDH certificates will be distributed at the end of the presentation.

For reservations, please contact the Engineers' Club of Philadelphia at [reservations@engrclub.org](mailto:reservations@engrclub.org) or (215) 985-5703 no later than May 25.

## NOTICE OF VOTE ON REVISIONS TO SECTION CONSTITUTION

As you may be aware, our ASCE, Phila. Section's Board has been working on revising our Constitution and Bylaws for over a year. We are happy to report that the end is near. The draft documents were approved by ASCE National's Committee on Geographic Units on April 10 and by the Section Board on April 13. The proposed revisions to the Constitution were then read aloud to the membership at our April 13 Section meeting. The final step for approval of the Constitution is a membership vote at the Spring Social on May 13.

The complete text of the proposed revisions is posted on our website ([www.asce-philly.org](http://www.asce-philly.org)) for your review. If you have any questions or are unable to attend the voting meeting in person and would like a ballot mailed to you, please contact Past President, **Kristen Bowman Kavanagh** at [kbbkavanagh@flowscience.com](mailto:kbbkavanagh@flowscience.com).

We look forward to counting your vote!

## 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)

The YMF has hosted some big events and has some exciting activities planned for the summer.

### STUDENT CONFERENCE

Drexel University played host to the 2011 ASCE Mid-Atlantic Student Conference over the weekend of April 15-17. More than 300 Engineering students from regional schools such as Temple, Villanova, Penn State, Lafayette, Maryland, Delaware, and others descended on Philadelphia to take part in the Conference and participate in the Concrete Canoe and Steel Bridge Competitions. The overall winners of the Concrete Canoe Race were University of Pittsburgh at Johnstown (1st), United States Naval Academy (2nd), and Drexel (3rd), while the Steel Bridge finalists were Lafayette (1st), Drexel (2nd), and Penn State (3rd). Some of these teams will now be continuing onto the nationals coming up next month to compete against schools across the country! The **Drexel Student Chapter** would like to extend a very special thank you and express their appreciation to all of the sponsors, judges, speakers, and planners who made this event possible as well as a great success.

### CRITICAL ISSUES SEMINAR

The Seminar, hosted by ASCE and the Mid-Atlantic Section, Institute of Transportation Engineers (MASITE), took place on April 19 at the Field House in Center City. The topic of discussion this year was the Marcellus Shale Drilling. The event was a success, with 26 people in attendance to hear from the four panelists who represented PennDOT, Pennsylvania Environmental Council, Marcellus Shale Coalition, and academia. Among the items discussed were disposal and reuse of the fracking water, sustainable development in the regions of drilling, and any changes in Engineering curriculum.

### SUMMER!

Some exciting events planned for this summer include helping the **Philadelphia Mountain Bike Association (PMBA)** help clear new trails or restore existing trails in the Wissahickon Valley of Fairmount Park. This community service event takes place on **June 25**. More information will be provided on our website.

The YMF will once again jointly sponsor a night at the **Phillies** with the Delaware Section and South Jersey Branch. The Phils will take on the New York Mets on **August 23**.

For more information regarding upcoming events and photos from previous ones, please visit our website ([www.ymfphilly.org](http://www.ymfphilly.org)).

# ANACE\*

## WHY IS CLIFF LEE BACK WITH THE PHILLIES?

With baseball season upon us, as it turns out, maybe us engineers had something to do with Cliff Lee being back here. An article by Bud Kennedy of the *Fort Worth Star Telegram* that appeared in December explains this.

We finally found the hero to deliver public transit to Arlington.

Unfortunately, **Kristen Lee** and her husband, **Cliff**, gave up and moved to Philadelphia.

Of all the words written after the Texas Rangers' playoff ace turned down a new contract, the most jarring might have come from his wife, like Lee, a native of Benton, Arkansas. She prefers Philadelphia for the cultural opportunities and the dining, she said.

But mostly — she really likes the trains. Kristen Lee wanted her husband to return to the Phillies because of "how easy it is to get from point A to point B" in Philadelphia, she was quoted as saying by the *Philadelphia Inquirer*. The Phillies play three miles from City Hall. The stadium is a \$2 ride from downtown on the Broad Street Line, plus a three-block walk.

Arlington has a train from Dallas and Fort Worth. Barely. The Trinity Railway Express skirts the north edge of Arlington and stops six miles from the stadium.

So everybody drives. And waits in traffic.

"Even in Dallas," Kristen Lee was quoted, "[from] where we were staying, it was hard to get to the ballpark."

Arlington proudly calls itself the "Center of Everything." But that means it's also a slow drive from everywhere.

Kristen Lee's fondness for transit isn't limited to commuter rail. She's also happy to be a 1½-hour train ride away from road games in New York or Washington. "We liked the easy travel on a train for our kids to other cities," Kristen Lee was quoted.

Maybe the Rangers went about this deal all wrong. Maybe instead of offering Lee \$138 million, they should have offered him the same \$120 million as the Phillies, then donated the other \$18 million to help the Lees launch a campaign for better Texas public transportation.

True, Arlington has a transit plan -- but only a tiny one. The city is about to add a van service for low-income residents to go along with vans for older residents and those with disabilities.

Meanwhile, in a financial analysis by New York-based TheStreet.com, the North Texas region was ranked as the No. 1 worst and most expensive car commute in the country.

It is proving particularly costly to Arlington.

\*ANACE – Almost Nothing About or Concerning Engineering

## BIORETENTION / BIOINFILTRATION — ASK THE RESEARCHER SUMMIT

JUNE 20-21, 2011 — VILLANOVA UNIVERSITY

This event is co-sponsored by **Villanova University** and its partners, **North Carolina State University**, and the **University of Maryland-College Park**.

For the first time, three national experts in bioretention research are joining forces to present this summit — **Drs. Robert Traver** (Villanova University), **Allen Davis** (University of Maryland), and **William Hunt** (North Carolina State University). They will discuss many of the most pressing design issues associated with bioretention, including: choosing appropriate hydrologic and water quality design targets; benefits of the bioretention bowl and internal water storage features; the importance of fill media; optimal design configurations; thermal removal/mitigation; and various construction methods. The event also includes a unique opportunity for participants to submit questions in advance of the training for the researchers to answer during the course of the workshop.

The ultimate goal of the training is to improve the state-of-the-art for designers, plan reviewers, and regulators and to provide better functioning designs going into the ground that improve hydrology and water quality. A tour of Villanova's bioretention and bioinfiltration research sites is included in the event schedule.

The fee for the conference, which includes class materials, coffee breaks, and a wine and cheese reception, is **\$250 before June 10**, and **\$295 after that date**. Current Villanova Civil Engineering graduate students and VUSP members receive a **\$50 discount**. Enrollment is limited. Group discounts are available.

A certificate for Continuing Education Units (CEU's) for Professional Engineers will be provided for attendees.

For more information and registration, please visit the VUSP website ([www.villanova.edu/vusp](http://www.villanova.edu/vusp)).

Also, please mark your calendars for the **Philadelphia Low Impact Development Symposium** (Greening the Urban Environment), which will be conducted at the **Loews Philadelphia Hotel** in Center City on September 25-28, 2011. More information will be provided in The News in the future. Please visit [www.bae.ncsu.edu/stormwater/2011lid/](http://www.bae.ncsu.edu/stormwater/2011lid/) for details.

## THE DIFFERENCE BETWEEN SCHOOL AND LIFE?

**In school, you're taught a lesson and then given a test. In life, you're given a test that teaches you a lesson.**

— Tom Bodett

## TRAINING/SEMINAR OPPORTUNITIES

### AISC SEMINAR — PRACTICAL CONNECTION DESIGN FOR ECONOMICAL STEEL STRUCTURES

You either design connections or review them on submittals. This course will help you do both. With recent national emphasis on new structural integrity requirements for connections, your understanding of connection design and behavior is even more critical.

This seminar will de-mystify connection behavior and design and show you how to make connection choices that are economical and constructible. You will learn the appropriate limit states for common connections, how the load path progresses through the elements of these connections, and how to simplify the design and review of these connections in your practice. You also will understand how to apply the principles learned for common connections to other more complex connections.

The seminar will be conducted locally on **May 26**. The location and speaker had not been confirmed as of presstime. Please visit [www.aisc.org/seminars](http://www.aisc.org/seminars) for more information on this.

ASCE members may register at AISC member prices. This seminar is worth 8 PDH's.

### TRENCHLESS TECHNOLOGY/BURIED ASSET MANAGEMENT

The **Mid-Atlantic Society for Trenchless Technology (MASTT)** will conduct a two-day seminar on this topic. It will consist of at least ten 30-minute presentations and is anticipated to provide 15 professional development hours (PDH's).

The seminar will be conducted on **May 25 and 26** at the **Ramada Philadelphia Airport Hotel** in Essington. A \$175 fee per person is available to ASCE members. Please visit [www.mastt.org](http://www.mastt.org) for more information and reservations.

## ...AND NOW WE SHUT DOWN FOR THE SEASON!

As we did last year, the Section added two editions of *THE NEWS* to its distribution schedule, one of the side benefits of going to a primarily electronic distribution system. The savings realized from going to this system (mainly lower postage and printing costs) have permitted us to provide these additional editions. The previous November/December and April/May issues have been broken into individual months, to allow us to cover more news and provide more up-to-date information on upcoming meetings and events.

Accordingly, this is our last edition for the 2010-11 season (seems like it just started, but we know how time flies). After this edition, the presses will shut down for some much-needed fine tuning and maintenance before next season gets here (before we know it). As has been the case, we will likely end our hiatus long enough to crunch out a Summer edition, which should be hitting the streets, so to speak, in July.

We hope you enjoy your summer and see you again in the Fall!

## PROJECT MATTERS

by Mark D. Steele, PE, CCE, m.ASCE

This column is Part 2 of 2

### SIX PIECES OF THE PROJECT SUCCESS PUZZLE

Last month's column introduced the importance of a systems approach to project management and described the first three of six pieces of the project success puzzle: Alignment of Purpose; Coordinated Effort; and Open, honest, effective communication.

This column focuses on the next three pieces:

4. Detailed planning
5. Rapid execution
6. Learning and adaptation

As with the first three, each of these could take up a book or a significant paper in and of itself. This and my previous column can only serve as an introduction to get you thinking about these ideas.

#### 4. DETAILED PLANNING

Detailed planning includes organizational design (team membership, roles and responsibilities, project controls, etc.), contracting strategy, risk management, procurement planning, integrated project execution documents, early technical design and Engineering, and the clarification of critical assumptions. Planning costs little compared to execution. A qualified team could spend a year on planning a project without significantly impacting the overall budget. Too many project stakeholders want to rush to get shovels in the ground before they know where they are going overall. This contributes to costly change orders, work interferences, and costly misalignments between budgets, expectations, and reality.

Various tools and methods can be useful during the detailed planning stage including:

- **Backwards planning** – beginning with the objective in mind and working backwards to the present
- **Idealized design** – a method for designing organizations focused on systemic alignment and overall project effectiveness
- **Design visualization tools** such as models, 3D, and computer simulations allowing stakeholders to visualize the impact of various early design decisions on the overall project.

Detailed planning costs little compared to execution. Failure to plan properly can cost a lot more. Detailed planning also sets the stage for the next piece of the puzzle: Rapid Execution.

#### 5. RAPID EXECUTION

Most of us have probably seen the TV show, *Extreme Home Makeover*, in which a crew takes a family from their home and sends them on a week-long vacation. Meanwhile, the crew demolishes the home and builds a new one, along with donated assistance from contractors and volunteers. The well-known charity, **Habitat for Humanity**, celebrates teams that can build a spec house in the least time with the world record being around 4 hours from start to finish. Finally, housing contractors can compete in a competition to show who can build the fastest house. They typically plan for months and build in hours.

Each of these provides an example of rapid execution in residential construction. Each also relies heavily on the sort of detailed planning described in the previous section.

The simple fact is that rapid execution of the project typically costs less and benefits the project owner more than extended or even "paced" progress. Rapid execution does not necessarily imply an earlier start date. This is not a call to get "shovels in the ground" as quickly as possible. Instead, rapid execution is an attempt to minimize the duration of the execution period of the project. A seven-day house construction might take three months to plan but will still be more cost effective than the same project performed in such a way that it takes only a month to plan but three months to construct. Likewise a factory that can be built in twelve months costs more if built in eighteen.

The keys to rapid execution often include the following:

- Upfront focus on detailed planning
- Well done Engineering and a well-understood scope of work
- Early involvement of stakeholders critical to execution
- Modularization and off-site fabrication where possible
- Minimization of cushions built into the project schedule and proactive float management at the project level
- Procurement of long-lead items and careful integration of procurement, materials management, and equipment staging.

#### 6. LEARNING AND ADAPTATION

No plan, however detailed, can be perfect. In warfare, there is a relevant quote that says that "No plan survives first contact with the enemy." This is true of any planning. No one can perfectly predict what will happen during the course of the project. In order to overcome this fact, the project team should be designed to be a learning organization. This does not mean that the detailed planning described under section 4 is not essential. Instead, it means that as the project team performs detailed planning, it should incorporate the ability to learn and adapt into the core of the project. In this approach, properly designed project controls become early warning signals that key project assumptions require modification. The team records decisions (along with the assumptions and reasons for the decision) so that they might be modified later if conditions are found to be different than expected. And lessons learned from similar projects are incorporated wherever relevant.

As mentioned in the introduction, each of the six "pieces" of the puzzle could be the topic of significant writing in and of itself. I hope that, for now, you do not just brush aside these principles as "obvious" and "simple" but take the time to think about your own projects and where these principles are, and are not, being successfully applied. It should also be clear that the six pieces do not stand alone. They fit together and in some cases rely upon each other. Missing just one of them might cause the puzzle to fail.

Mark is an Engineer with over 22 years of Engineering, construction, project management, and leadership experience and a passion for helping people create effective projects. He can be reached at [marksteele88@gmail.com](mailto:marksteele88@gmail.com) or on his new blog at [projectsonpurpose.com](http://projectsonpurpose.com). This article is solely the opinion of the author and does not necessarily represent the opinion of any other organization or employer.

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## APRIL DINNER MEETING

*Continued from Page 1*

Bylaws are on our website for your review, just in case you were not among those taking copious notes during the insightful reading. (Please see the separate article on this.) If you think you've heard this before, you did — we did this at last April's meeting also and were required to do it again to reflect the changes to the proposed Constitution requested by National. We hope this is the last time also!

Past President Kavanagh welcomed the incoming "class" of Life Members with the assistance of President-Elect Tomalavage. (Please see the separate article on this.)

With the evening's business closed, President Brady directed the attendees to the separate meeting rooms to hear the presentations of their choice on the following topics:

- **Integral Abutment Bridges for Pennsylvania** (sponsored by Structural Engineering Institute) – this presentation was handled by Past President and current Region 2 Governor **Christopher Menna, P.E.**, and his colleague **Hisham Himmet**, of the Philadelphia Department of Streets.

- **Panel Discussion on Marcellus Shale Constructability and Development** (co-sponsored by Delaware Valley Geotechnical Institute (DVGI) and Environmental and Water Resources Technical Group) – the panel featured **Archie Filshill, PhD**, President, CETCO Contracting Services; **Edward Buchak**, Partner, Surface Water Modeling Group, Environmental Resources Management, and **Anthony Elberti, P.E.**, Project Engineer, Gannett Fleming, Inc.

About 35 attendees, including this author, opted for the former presentation, which was informative and interesting.

The usual synopsis of the meeting that is provided for your reading enjoyment is not being provided this time. (Your Editor can only be in one place at one time!)



## WHERE'S TOM?

Remember to submit your entries to meet the challenge raised by President **Tom Brady**.

Each month, there was a photo of Tom in a different location. Please send your list of locations/guesses to [tbrady@louisberger.com](mailto:tbrady@louisberger.com) by **May 10**. Those participants with correct guesses will be entered into a drawing for a special prize to be awarded at the Spring Social. **Good luck!**

**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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The Chair position is currently open (see below).

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*We are still looking for a chair for the Engineering Management Group. Please contact President **Tom Brady** (contact information is given on page 2) for more information on this or if you are interested in this esteemed position.*

**It seems that we learn lessons when we least expect them but always when we need them the most, and, the true gift in these lessons always lies in the learning process itself.**

- Cathy Lee Crosby

**UPDATE ON 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 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.

New Jersey has also instituted requirements for continuing education effective January 12, 2011. A current licensee shall be required to obtain 15 continuing professional competency credits during the current licensure period (which expires April 30, 2012), two of which shall be in professional practice ethics, to meet the requirements for the 2012-2014 biennial renewal period. Please visit the New Jersey State Board of Professional Engineers and Land Surveyors website for more information on this ([www.nj.gov/lps/ca/pels/pels\\_licensee.htm](http://www.nj.gov/lps/ca/pels/pels_licensee.htm)).

The Section is reviewing how to have our Section meeting program meet the New Jersey requirements to allow our members to obtain the credits they need for their New Jersey licenses. We will keep you updated on what happens here.

**MEMBERS IN THE NEWS BEST ON CAREER STRATEGIES PANEL**

As part of the University of Delaware's Alumni Weekend festivities, on Saturday, June 4, a distinguished panel of Engineering alumnae will discuss successful career strategies. The presentations will be followed by a Q&A session. This event provides an opportunity for new women engineering professionals to exchange ideas, expand their professional network and reconnect with fellow Blue Hens. Among the panelists will be Section Member **Susan L. Best '76, P.E.** of the Engineers' Club of Philadelphia.

**DREXEL STUDENT CHAPTER WINS AEI COMPETITION**

Congratulations to the winners of the second annual ASCE Charles Pankow Foundation Annual Architectural Engineering Student Competition, held March 31 in conjunction with the 2011 Architectural Engineering Institute (AEI) Conference in Oakland, CA. Teams from California Polytechnic State University, **Drexel University**, and Kansas State University took first place in five categories, each with \$1,000 top prizes. In the finals, students were challenged to address the design issues for a new contemporary art museum in San Francisco, including all Engineered aspects of the design and construction management of such a high-performance building. Design submittals included best practices in sustainable, green building design and construction, all while taking under consideration that the site would be within a high seismic area.

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