

Our 99th Year

Vol. 84-7

March 2012

REMINDER: SCIENCE FAIRS COMING UP

The Delaware Valley Science Fairs will be conducted on **Wednesday, April 4**, at the Greater Philadelphia Expo Center in Oaks. The ASCE, Phila. Section will once again participate in the Fairs and offer four Special Awards for projects that have a Civil Engineering theme, with two awards for Grades 6 through 8 and two for Grades 9 through 12.

As usual, judges are needed for this effort. The judging will require you to spend most, if not all, of your day (approximately 8 AM to 3 PM) at the Fairs, examining and short listing possible projects in the morning and then interviewing the students who assembled them and finalizing the selections in the afternoon.

If you are interested in being a Special Awards judge for the Section please contact **Chris Rood** at chris.rood@aecom.com. We hope you can join us for a rewarding and interesting day.

“THERE HAS NEVER BEEN A BETTER TIME TO BUILD”

President Obama spoke before a joint session of Congress and the American people to deliver the annual State of the Union address. During last year’s State of the Union address President Obama discussed the nation’s infrastructure crisis and referenced ASCE’s 2009 Report Card for America’s Infrastructure as a reason why action must be taken to repair and maintain our nation’s roads, bridges, ports, water systems, dams, and rail. While the President did not directly reference ASCE’s Report Card in his speech this year, he did take time to call on Congress to pass legislation that will repair the nation’s infrastructure.

President Obama proposed utilizing half the money that the United States will save from the end of the wars in Iraq and Afghanistan to repair the infrastructure here at home. “So much of America needs to be rebuilt,” Obama said in his annual address, adding the United States has “crumbling roads and bridges.” Obama framed the issue as a potentially job creating measure, which would aid the nation’s construction workers, who were hard-hit by the recession.

While the President did not provide a specific dollar amount for his plan, the Congressional

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MARCH JOINT DINNER MEETING

American Society of Civil Engineers, Philadelphia Section
 American Society of Civil Engineers, Lehigh Valley Section
 American Society of Civil Engineers, Reading Branch (tentative)

THURSDAY, MARCH 8, 2012

Crowne Plaza Valley Forge • 260 Mall Boulevard • King of Prussia, PA
 Cocktails 6:00 PM • Dinner 7:00 PM • Meeting Presentation 8:00 PM
 (please note the later times than our “normal” ones)

SUBJECT: Pennsylvania Turnpike Mid-County to Lansdale Reconstruction Project
SPEAKERS: Gary Graham, Assistant Chief Engineer, Pennsylvania Turnpike Commission and **Richard N. Cochrane, PE**, Project Manager, McTish, Kunkel & Associates

RESERVATIONS MUST BE SUBMITTED BY FRIDAY, MARCH 2.

For reservations submitted by the deadline, the cost per attendee will be \$40, with a half-price (\$20) cost per government agency employee and students. Reservations received after the deadline and “walk-ups” without prior reservations paying at the door will be charged \$50 (government agency employees and students will be charged the regular \$20 rate), but 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 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. Reservations can also be made on the Engineers’ Club message center, 215-985-5701, or via e-mail at info@asce-philly.org. You may also electronically reserve through our website (www.asce-philly.org) and pay via PayPal. **PLEASE NOTE THAT PayPal WILL NOT BE AVAILABLE AS A PAYMENT OPTION AFTER THE RESERVATION DEADLINE.**

This project includes the full depth total roadway reconstruction of 10.5 miles of the Pennsylvania Turnpike’s Northeast Extension, from the Mid-County Interchange to the Lansdale Interchange, Montgomery County. Upon its completion, the existing four-lane facility with a four-foot median and eight to 10-foot shoulders will be converted into a six-lane facility with three 12-foot travel lanes north and southbound, a 26-foot median, and 12-foot shoulders.

This project is being constructed in two parts: the southern section, which includes the area between the Mid-County Interchange (Milepost A20) and Berks Road (Milepost A26) in Plymouth, Whitpain and Worcester Townships; and the northern section, which includes the area between Berks Road (Milepost A26) and the Lansdale Interchange (Milepost A31) in Worcester, Upper Gwynedd and Towamencin Townships.

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Resolve to attend ALL Section Meetings!

APRIL DINNER MEETING

American Society of Civil Engineers, Philadelphia Section

THURSDAY, APRIL 12, 2012

The Mansion at Villanova Conference Center • 601 County Line Road, Radnor, PA
 Cocktails 5:30 PM, Dinner 6:30 PM, Meeting 7:30 PM

Following the pattern established two years ago, this meeting will consist of a dinner with subsequent “breakout” sessions on several different topics. More information will be provided in the April edition of *THE NEWS*.



PRESIDENT'S MESSAGE

I want to reminisce a little about a person and a company who contributed so much to the body of knowledge and practice of Civil/Environmental Engineering, particularly industrial wastewater treatment. I first met **Roy F. Weston**, founder of his eponymous (didn't expect to see that word, did you?) company, when I was in college. I heard him speak at a conference held by the Water Resources Association of the Delaware River Basin (WRADRB) in the early '70s. I was so impressed by his vision of the environment. He was one of the first to speak of sustainability. I vowed to work for him at some point. After I graduated, I took a detour to DuPont, went to graduate school, worked briefly at EPA, and did research at a company that manufactured reverse osmosis and ultrafiltration equipment. I was definitely not cut out for research.

My next job was (finally) with Roy F. Weston, Inc. (now Weston Solutions). I was definitely cut out for consulting. I enjoyed traveling all over the country and the world helping mostly Fortune 500 industrial clients minimize, manage, and treat their wastewater. I learned how textiles, steel, gasoline, dyes, oxidizers, and many chemicals are made; how power plants operate; and how natural gas is pumped from one station to the next. I also learned all about their wastewater. I worked with some of the best minds in wastewater. I'm grateful for how much I learned from them during my time at Weston.

Today I had lunch with about ten of these great minds. They're all retired now. It was so good to be with them again. As I talked with **Bill Sitman**, whose employee number was 004, I thought of how he helped me figure out how to treat some of the trickiest wastewaters and gave me excellent advice before I traveled internationally, but today we talked mostly about his granddaughter. She was little when I left Weston about 14 years ago. I sat across from **Walt Hoover**, employee number 007, who is a Section member, as well as a Life Member and Fellow. One person who wasn't able to join us today was **Paul Higgins**. When several of us were in Egypt in 1983, developing methods to treat textile, food, and pharmaceutical wastewater at our respective plants, Paul came over about halfway through our assignment with one suitcase full of nothing else but Tastykakes and gin!

Hope you all had a Happy Valentine's Day! And on March 8, you can say Happy Birthday to my brother **Bill Malarkey**, a past president of the Section.

Sincerely,
Ann M. Tomalavage, P.E., PMP, LEED AP
President, ASCE, Philadelphia Section

BEANNACHTAÍ NA FÉILE PÁDRAIG!*

Since we have another "special" day we need to note in March, you know that the Section will do its best to control the Editor, but having the last "look" at *THE NEWS* gives him a little more control than he probably should have. In any event, the Editor seems to think that these "special" days need particular consideration, and given his mostly Irish heritage, he is providing what some call "lame" but what he thinks is an acronym for "Lightly Amusing Message from Eire". We have not one, but TWO ditties for the day, the second being a repeat of last year's. As we hoped last year, if you have no other reason to hoist a few green beers for the occasion, we think the messages below give you the proper inspiration to do so.

Happy St Pat's day to ye
From your President, nee Malarkey
Though she's now Tomalavage
She still wears the Irish "badge"
Slainte** from us at Philly ASCE

And, our "rerun" from last year, an Engineer's variation of an Irish prayer:

May the road rise to meet you
[in accordance with AASHTO vertical curve and geometric guidelines]

May the wind be ever at your back
[using the 85th percentile velocity and direction data according to the local wind rose plot]

May the sun shine warm upon your face
[at the optimal angle determined by latitude, allowing full utilization of alternate energy resources]

And the rain fall softly on your fields
[to be retained and infiltrated to decrease the burden on the stormwater conveyance system]

And until we meet again,
May God hold you in the hollow of his hand.
[we ain't touching that one!]

*Beannachtaí na Féile Pádraig! (ban-ochth'-thee na fay'-le paw'-drig) – Happy St. Patrick's Day!
** *Slainte* (slahn'-tcha) – good health

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1429 Shaner Drive

Pottstown, PA 19465

610-326-0205

ann@malarkey.us

Secretary – AnnMarie L. Vigilante, P.E.

Project Manager

Langan Engineering & Environmental Services

P.O. Box 1569, Doylestown, PA 18901-0219

(215) 491-6500

avigilante@langan.com

PUBLICATIONS COMMITTEE

Editor of *THE NEWS*

Robert Wright

Staff Writers

James Markham Joe Synchron

SEND COPY TO:

ASCE, c/o Engineers' Club of Philadelphia

215 S. 16th Street, Suite 16

Philadelphia, PA 19102

**COPY DEADLINE FOR
APRIL 2012 ISSUE
MARCH 16, 2012**

UPDATES ON TRANSPORTATION FUNDING

David Shaffer, Director, Audit and Accounting of Kreisler Miller, has authored an informative article on the "The State of Pennsylvania's Transportation Funding." It is available at <http://www.kmco.com/articles/looking-forward/the-state-of-pennsylvanias-transportation-funding/>.

Also, **Rep. Patrick Meehan** has provided this informative piece on "If We Want to Fix Our Transportation System, We Must Fix Our Government," which appeared in "Roll Call" in January.

Americans rightly decry the political gridlock in Washington, D.C., but I'd bet they curse the traffic gridlock across the country even more.

I think federal lawmakers can and should address both.

Anyone who takes to the roads these days knows the sorry state of our infrastructure, and that long slog getting home from work every day is not just a quality of life issue, it's also a safety issue and, in a time of high unemployment, an economic one.

Consider there are more than 69,000 structurally deficient bridges in the United States, and 5,900 of them are in Pennsylvania, according to the Federal Highway Administration. Our infrastructure rates a D grade from the American Society of Civil Engineers, and the group estimates that our failure to keep our roads and bridges safe and efficient will cost us \$2.1 trillion in lost economic growth over the rest of the decade. That means nearly 900,000 jobs.

And yet, Congress has failed to pass a reauthorization of the federal highway policy that expired in 2009. We must do better.

The reasons for ensuring a safe, modern and efficient transportation system are apparent. It will help prevent car accidents and save lives. It will spur long-term growth by allowing industries to spend more precious capital on innovation and hiring and less on moving raw materials and finished products. And it will entice global employers to increase their presence in the United States and bring jobs to our shores.

In my first year in Congress there have been some needlessly political debates in Washington, but I am encouraged that there are many of us who care more about getting something done than scoring points. And on transportation policy, there is cause for optimism that those focused on solutions will win out.

In December, **Reps. John Carney** (D-Del.), **Aaron Schock** (R-Ill.), **Jim Cooper** (D-Tenn.) and I organized a letter to President Barack Obama urging him to support a six-year surface transportation reauthorization that is fully paid for. Our premise was simple: Our roads and bridges need urgent safety and efficiency improvements, and our economic recovery will depend in part on a safe, modern and efficient transportation network.

Sixty-two Democrats and 49 Republicans signed it. The letter was supported by stakeholder groups as diverse as the National Association of Manufacturers, the Teamsters Union and the BlueGreen Alliance. Only Mother's Day resolutions

garner as much widespread, bipartisan support.

The group also recognized that with a \$15 trillion debt, more deficit spending is impossible. New revenues will be needed to fund critical projects. In the past, Democrats and Republicans have supported measures to use royalty payments from new oil and gas leasing to fund transportation projects, and Democrats and Republicans have sought to direct repatriated foreign earnings to transportation and jobs measures. We should be able to come to agreement on new revenues without new taxes.

Given our fiscal constraints, we need to prioritize the federal transportation dollar. We cannot tolerate more "bridges to nowhere." Federal policy should focus on our urgent, highest-priority needs and leave the bike paths to local authorities. First up should be our bridges, and a long-term transportation law should put potentially unsafe bridges at the head of the line for transportation dollars. Across the country there are more than 69,000 reasons to do so.

Addressing our highway gridlock will require a solution to our political gridlock, and vice versa. Doing so will produce not only better roads and bridges but better government and one worthy of the taxpayers who fund both.

Rep. Patrick Meehan is a member of the Homeland Security; Oversight and Government Reform; and Transportation and Infrastructure committees. He chairs the Homeland Security Subcommittee on Counterterrorism and Intelligence.

BETTER TIME TO BUILD

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Budget Office has estimated savings from the wars would result in "about \$440 billion less" in spending in 2012-2021.

"There's never been a better time to build," Obama said, adding that he will also sign an executive order within weeks to clear away red tape for construction projects, a move that ASCE has supported in the past.

Since last year's State of the Union address, Congress has only been able to extend the surface transportation and FAA programs, instead of pass these critical reauthorization bills. Additionally, since last January the National Dam Safety Program has expired and drinking water and wastewater state revolving funds continue to operate off of a 1987 authorization. At a time when the nation needs to create jobs and grow the economy in order to remain competitive, funding the nation's infrastructure can prove to be the key. ASCE will continue to keep Key Contacts updated as Congress and President Obama work to improve the nation's infrastructure.

MEMBERS IN THE NEWS

FRITZINGER ELECTED TO FELLOW GRADE

Scott Fritzinger was recently approved for elevation to the renowned Fellow grade of ASCE membership. We congratulate Scott on this esteemed honor.

ZION RETIRES (AGAIN?)

Past Section President **Al Zion** recently retired from Hill International after 22 years of service there, primarily serving Philadelphia International Airport. A reception was held to cite Al's "second" career on February 9. Al joined Hill following an over-20-year career with the City of Philadelphia, in the Departments of Recreation and Public Property. Good luck in your retirement, Al!

NIKOLIC A NEW FACE OF CIVIL ENGINEERING

Our Outreach Chair for the Younger Members Forum, **Adrienne Nikolic**, was recently named by ASCE as one of the 10 new faces of Civil Engineering! (<http://www.asce.org/Diversity/Diversity-Programs/New-Faces/2012-New-Faces-of-Civil-Engineering/>)

Adrienne has always been a great asset to the YMF Board, and this year she has boosted our student outreach efforts to new heights. She has organized fantastic lessons and experiments in the classroom, and has been getting out to the science fairs and career fairs. She is teaching about the things we take for granted, like clean water, and using those lessons to get students interested in Civil Engineering as a career. Adrienne is very deserving of this recognition from ASCE and we congratulate her on this honor.

NEW MEMBER BENEFIT: CIVIL ENGINEERING MAGAZINE APP

For those of you who like "apps," ASCE encourages members to take advantage of a new member benefit from *Civil Engineering Magazine*. It's easier than ever to enjoy the magazine's enlightening news and features anywhere you go with the new *Civil Engineering* app. It's available for ASCE members who use Apple's iPhone, iPod touch and iPad, as well as users of Android phones and tablets.

More features are available via Civil Engineering's other recent online additions: new Web-exclusive articles posted weekly to asce.org/cemagazine, and exclusive enhanced online content accompanying the magazine's monthly print version at civilengineering-digital.com.

**BOOKS GIVE NOT WISDOM WHERE NONE WAS BEFORE.
BUT WHERE SOME IS, THERE READING MAKES IT MORE.**

— John Harington, British writer and inventor of the flush toilet

FEBRUARY DINNER MEETING

February 16, 2012

Crowne Plaza Hotel – Cherry Hill, NJ

Master Plan for the Central Delaware – Transforming Philadelphia’s Waterfront

by Robert Wright, Editor

Our annual trip to New Jersey, when we meet in a place called Cherry Hill that, to the best of our knowledge has no hills at all, presented us with another rainy day, back to the weather pattern we have had on our meeting nights this season except for January. (No complaints – this could have easily been snow, as it was February.) A lively crowd of over 80 attendees came to the Crowne Plaza to hear about Philadelphia’s Waterfront Master Plan – ironically, ASCE, Phila. Section members, making up about half the crowd, had to cross the Delaware to hear about the plan.

South Jersey Branch President **Inchul Yoon** opened the evening and, after a brief talk by the meeting’s sponsor, **Oldcastle Precast**, went into the presentation, introducing the featured speaker, **Sarah Thorp**, Director of Planning for the Delaware River Waterfront Corporation (DRWC), the successor to the Penns Landing Corporation as the caretaker of the riverfront.

THE WATERFRONT MASTER PLAN

Ms. Thorp explained that the Plan was completed last September and released to the public after a \$1.5 million, two-year study which included numerous design firms, including local efforts by PB and KS Engineers. The Plan deliberately focused away from the Penns Landing area, the main topic of several recent development proposals and ideas, and looked at what has become known as the Central Waterfront. This is a 6-mile long section of the riverfront, stretching from Oregon Avenue to Allegheny Avenue, encompassing approximately 1100 acres of usable space.

The history of land use in this area has been one of port-related commerce and various industries. The City of Philadelphia would not allow such industry on the Schuylkill River as this was the source of drinking water and protected as such, so the Delaware River, by default, became the “working” river. Recent trends have transformed much of this area into entertainment and residential uses, with much of the heavy industry now gone, and the buildings that remain finding new uses. As a result, less than 10% of this land is publicly owned, which brings a challenge to finding uses for it, as privately-owned parcels will need to be acquired to allow the Plan to be fully realized.

The Plan as developed is a 25-year outlook/projection with short- and long-term goals and measures. Ms. Thorp noted that the short-term aspirations include three focus areas in which accomplishments are anticipated within the first five years of the program – Washington Avenue, Penns Landing, and Spring Garden Street. The game plan for these locations would be to capitalize on publicly-owned areas, finding public funds for improvements, and then allowing private investment/development to fill in the “gaps” over time.

THE PLAN’S PRINCIPLES

Ms. Thorp outlined the eight overriding principles of the Plan.

Accommodation of diverse uses – as Ms. Thorp noted, the historical land uses along the Delaware have been industrial and port-related. While the port is still very much active, the facilities needed for port uses have, for the most part, been moved out of the study area. The Plan encourages public access to the Waterfront as well as the private investment and development needed to support this.

Creation of public spaces – the Plan calls for a network of open spaces, with parks spaced approximately ½ mile apart, connected to “key” streets that traverse across I-95 to the neighborhoods to the west and therefore provide access to the Waterfront to local residents, something that does not exist consistently today. Walking/biking trails will be provided along the Waterfront to link the public spaces. Ms. Thorp referred to this as the “public realm” portion of the Plan, and this will serve as a catalyst for private development in the “gaps” between the public spaces.

Sustainability – this is a key element, and “green” measures will be applied throughout.

Creation of a uniquely Philadelphia Waterfront – Ms. Thorp emphasized that previous concepts for the Waterfront often looked to mimic what other cities had done and found successful. Given the unique history and character of the Delaware Riverfront, the Plan dictates that this be an integral element to result in a Philadelphia “experience”.

Waterfront activities – this is a must to provide attractions and reasons for people to want to be on the Waterfront.

Balanced transportation plan – Ms. Thorp explained that this has elements on both the land-side and water-side of the Waterfront. I-95 has long been seen as a barrier and barricade for people to access the Waterfront, when, in fact, a total of 47 streets now cross the I-95 “impediment” to connect neighborhoods to the river. Thus, this is more of a perception issue than a physical one. However, many of the connector streets cross beneath under I-95 in dark and somewhat-unfriendly underpasses.

An early-action item to demonstrate how the underpasses could be made more inviting was recently completed at the Race Street underpass in connection with the Race Street Pier improvements (itself another early-action project). The underpass has been “enlivened” with new lighting, simple artwork and similar measures to make this a better pedestrian experience than it was previously, and will serve as a prototype for how to improve others. Ms. Thorp indicated that several similar locations were in the short-term plan and design is underway on two of these.

Just as the I-95 corridor is often seen as an impediment to waterfront access, the wide and busy Delaware Avenue/Columbus Boulevard can be just as foreboding. Ms. Thorp showed renderings that illustrate possible ways to mitigate the situation – the roadway is needed as the main traffic distributor, but wide sidewalks for pedestrians, enhanced pedestrian crossings across the road, and transit options, such as light rail which will directly link to Center City, SEPTA routes such as the Market-Frankford Line, and PATCO, are being evaluated. On the “wet” side of the shoreline, DRWC has several water taxis that have not yet been in the river, but service is planned to start this spring to bring another mode into the mix.

Promote development of residential neighborhoods – Ms. Thorp explained that this is perhaps the most controversial facet of the Plan. Potential developers are looking for high-rise buildings to make the economics work, but adjacent neighbors believe that height restrictions are necessary to preserve their views of the river. The Plan generally supports the neighbors’ position to keep the compromise between public space and private investment. City Council hearings will be scheduled as zoning will need to be changed and that will create the requirements that the development will need to respect.

Implementation of the plan over time with discreet elements – one example of this approach is the recent project to rehabilitate the Race Street Pier as a public space. Ms. Thorp noted that the identification of the three priority early-action segments also follows this tenet.

THE DIRECTION OF THE PLAN

Ms. Thorp briefly touched on four items that the Waterfront Plan calls out for specific attention. She asked the audience to vote on which of the four they would like to hear about the most, and then addressed them according to the results of the informal vote.

In the Washington Avenue area, the deteriorated piers will be reused for habitats for river wildlife, including possible wetlands “banking” for projects in other locations sponsored by other agencies that may require this. The main focus is residential and public access.

Penns Landing is currently wholly owned by DRWC, thus any changes in this area will be more easily implementable. A long-term desire to cover the depressed segments of I-95 cannot be fully realized, but the Plan calls for an expanded “cap” from Front Street across both I-95 and Columbus Boulevard, sloping down toward the river, between Walnut Street and Dock Street. This will additionally provide a view corridor from the Old City area.

Spring Garden Street is being studied in a separate effort to create a river-to-river “complete street” corridor that will be a part of the East Coast Greenway. At the Delaware River, this will feature a public space and will link to one of the more “booming” neighborhoods to the west, Northern Liberties.

Continued on page 5

FEBRUARY DINNER MEETING

Continued from Page 4

Adjacent to the present Penn Treaty Park, the Plan envisions space for light industrial and commercial uses.

Ms. Thorp concluded her presentation with the fact that the Plan indicates that the economic effort of waterfront improvements will be staggering. The Plan extends out to 2049 with an incremental investment approach over the 40 years of coverage, and approximately \$770 million of public infrastructure funding will be needed to make this happen.

Several questions were asked by those present and ably answered by Ms. Thorp.

Presidents Yoon and Tomalavage presented Ms. Thorp with tokens of appreciation of the Branch and Section.

CONTINUING EDUCATION — EARN 24 PROFESSIONAL DEVELOPMENT HOURS (PDH'S)!!

3-DAY HEC-RAS CONTINUING EDUCATION COURSE (MARCH 5-7)

This 3-day course is devoted to the use of the HEC-RAS program for basic open channel flow analysis. Course topics include water surface profiles, bridge and culvert hydraulics, multiple opening analysis, and bridge scour computations.

Course specifics:

WHEN: March 5 through March 7 (Monday through Wednesday)

WHERE: The College of New Jersey, Ewing, NJ

COST: \$1000 per participant

DISCOUNTS: Members of the New Jersey Association for Floodplain Managers (NJAFM) and ASCE will receive a \$50 discount.

REGISTRATION: If you have questions about course specifics or would like to register for the course please contact **Dr. Michael Horst** at **814-571-5607** or **horst@tcnj.edu**.

ADDITIONAL INFORMATION: This course will satisfy New Jersey State Board of Professional Engineers requirements as a means of earning Professional Development Hours (PDH). Those taking the course will earn 24 PDH's.

Please visit the following website for specific details about the course including: a complete course agenda, information about the instructor, course materials, and directions to The College of New Jersey.

<http://www.tcnj.edu/~horst/coned.htm>

I DON'T FEEL RIGHT UNLESS I HAVE A SPORT TO PLAY OR AT LEAST A WAY TO WORK UP A SWEAT.

— Hank Aaron

ANACE*

IT'S A ZOO ON THOSE ROADWAYS, IN MORE WAYS THAN ONE

Thanks to ITE for this information.

In case you missed the celebration, October 31, 2011 marked a significant milestone for a ubiquitous road marking. On that date, the “zebra” crossing celebrated its 60th anniversary of aiding pedestrians.

Post-World War II Britain faced a number of roadway issues, despite the level of motor vehicle traffic being a small percentage of what it is today. In particular, pedestrian accidents, and fatalities from such, were beginning to rise. Metal studs were the only things marking pedestrian crossings at this time, which were visible to the crossers themselves, but difficult to discern by drivers and only felt under the wheels when it was largely too late to stop.

This set a series of visibility and road marking experiments into motion. First, schemes were developed with scale models, before moving on to test a variety of designs at a thousand different locations in the UK. From these tests, one pattern in particular proved itself effective, this being the black and white stripes stretching across the width of the road.

The “zebra” crossing, as it came to be known (also known as the “continental” crosswalk in our country), was officially introduced in 1951, with a new measure added into law. The alternating stripes increased visibility dramatically. An empty zebra crossing told drivers to slow their speed in the event of crossing pedestrians, and the walkers themselves were now much clearer against the black and white background.

There are a surprising number of different crossings, all of which continued the animal theme:

Pelican crossing – This involves button-operated traffic lights to direct pedestrians and cars alike (little green man appears on the opposite side of the road).

Puffin crossing – Button-operated lights and curb-side sensors for pedestrians (little green man appears in the box on the near side of the road).

Toucan crossing – It allows bicycles to cross the road as well as pedestrians (two-can cross).

Pegasus crossing – This is specially designed for horse riders. A separate button is placed two meters above the ground for mounted riders and has a little green horse and rider instead (named after the mythical winged horse).

Tiger crossing – A yellow and black striped crossing that allowed pedestrians and cyclists to cross. A few were tried in the UK but replaced with toucan crossings.

Some crossings in the UK, particularly those near school buildings, are monitored by a lollipop person. These adults, who work during the busy hours when children are going to and from school, have the power to halt traffic when children wish to cross the road. They are often dressed in fluorescent clothing to aid visibility and carry a large round sign on a stick, which gives them their name.

The humble zebra crossing was thrown into the limelight in 1969 when the Beatles featured such an installation on the cover of their “Abbey Road” album. The crossing still reaches across the width of Abbey Road and has become a much visited photo-opportunity site, with people stopping to parody the album cover, even though the road itself is a busy thoroughfare for vehicles. So popular is the crossing that it was given a grade II listed status in December 2010, due to its “cultural and historical importance”.

The simple striped design of the zebra crossing is now used, recognized and understood all over the world, and as the number of motor vehicles continues to increase, it remains an important feature in road safety everywhere.

CRASH-TEST DUMMIES

Research conducted at the University of Virginia released late last year reported that women are more likely to sustain injuries in an auto accident than men because the safety features in many vehicles were designed primarily for a man's body type. Investigators found from accident data comparing similar crash types that women experienced 47% more serious injury than men.

Previous studies have analyzed the differences in driving styles between men and women, but the researchers believe another explanation that factors into this is the design of the safety features themselves. Head restraints were found to be positioned such that they did not take into account the difference in necks (women's tend to be smaller and weaker). Given their shorter stature, women also face a higher rate of injury to their lower extremities.

Roads & Bridges Magazine, the source of this information, postulated that this may be related to the safety engineers who spend many hours working in labs with crash-test dummies and this may have a relation to their somewhat “fuzzy understanding of the female form”.

**ANACE – Almost Nothing About or Concerning Engineering*

MARCH DINNER MEETING

Continued from Page 1

Gary L. Graham, P.E., is the Assistant Chief Engineer for Design for the Pennsylvania Turnpike Commission. He is responsible for all highway design activities within the Commission's 545-mile toll system and oversees a staff of 58 engineering personnel. He manages the Highway Program portion of the Commission's Capital Plan and its yearly budget of approximately \$500 million. He has over 25 years experience in the transportation industry.

Richard N. Cochrane, P.E. serves as the construction manager for the Turnpike's Northeast Extension total reconstruction and widening project. He had a 36-year career at Pennsylvania Department of Transportation prior to joining McTish. He is active in the American Society of Highway Engineers (ASHE), having served on the National Board and is a past president of the Northeast Penn Section, where he is now on the Board of Directors. He also serves as the regional secretary for ASHE's Northeastern Region.

ENGINEERS WEEK A SUCCESS!

We hope you participated in **Engineers Week** this year. If not, you'll have to wait until next February, as it is over – it was celebrated locally from **Friday, February 17** through **Saturday, February 25**.

The **Delaware Valley Engineers Week Committee (DVEWC)** events were popular and successful. The Proclamation and Awards Luncheon, conducted at the DoubleTree Hotel on February 17, drew over 230 attendees. The Young Engineers Social, at Yards Brewing Company on February 21, and the Celebration of Engineering Reception on February 23, high atop Center City at the Pyramid Club, were similarly well attended.

As previously reported, our Section was well represented among Engineers Week awards and citations. Section members took the “top two” honors – the **Delaware Valley Engineer of the Year, Tim Haahs**, and the **Delaware Valley Young Engineer of the Year, Cathy Farrell** – as well as this year's inductee into the **Delaware Valley Engineering Hall of Fame, Carl Baumert**. We congratulate Tim, Cathy and Carl on their esteemed recognition.

As we know, the completion of this year's events only kicks off the planning for next year's. DVEWC, a committee of the Engineers' Club of Philadelphia, is always in need of volunteers to assist in many of the activities surrounding Engineers Week. DVEWC has a need for your talents and skills in several diverse areas. If you are interested in volunteering or would like information on volunteer opportunities, please visit our website at www.dvewc.org.

E-WEEK BANNERS ON DISPLAY ONCE AGAIN

For the second consecutive year, banners proclaiming the celebration of Engineers Week made their appearances on the street light poles on Broad Street near the DoubleTree Hotel (the site of the Awards and Proclamation Luncheon on February 17) in early February.

You may recall that the ASCE, Phila. Section helped develop the design of the original banners, which were first placed for 2006 Engineers Week. After these banners wore out (they usually last for five years), the Section, in conjunction with the Engineers' Club's Engineers Week banner program, sponsored a banner. Our Section is one of 12 societies participating in this effort. Each banner features the name of one of these societies to recognize its participation.

It is anticipated that these banners will also have a functional life of five years, so we'll be seeing these placed in advance of Engineers Week for the foreseeable future.

Thanks to Past Section President and Engineers Club Board Member **Chris Menna** for his leadership of this successful undertaking.

YOUNGER MEMBER FORUM NEWS

James Graham, Forum Editor

Jeremy Chrzan, Forum President 2011–12

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ANNUAL WINTER SOCIAL

The YMF has had a great start to the new year, and our annual Winter Social on January 30 continued this trend, setting a new record of 199 young Engineers in attendance and basically “packing the house” at McGillin's Olde Ale House in Center City, taking over the venue's entire first floor. Everyone enjoyed hanging out with coworkers, catching up with colleagues, and meeting other young engineers and students. The student members took advantage of the opportunity to meet Engineers from around the area, learn about local companies, and discuss career goals and opportunities.

The YMF continued our tradition of holding a charity raffle with prizes donated from local companies. Despite the troubled economy, the sponsors stepped up and collectively donated more prizes than ever. A total of 40 raffle prizes were available for the taking, resulting in record-breaking raffle ticket sales, and allowing the YMF to donate \$250 to the **Future City Competition** and \$1,577 to **Philabundance**.

Thanks to the following generous sponsors for making this event a success: AECOM, AGES, Inc., Ammann & Whitney, Bergmann Associates, Brudis & Associates, Chilton Engineering, Fizzano Bros., Geotechnical Consultants and Services, Gilmore & Associates, Hardesty & Hanover, Hatch Mott MacDonald, Hunt Engineering Company, Jacobs Engineering, KMJ Consulting, Langan Engineering, LRSLA Studios, Malarkey Consulting, McMahon Associates, Michael Baker Jr., Inc., Pennoni Associates, Inc., RK&K, STV, Timothy Haahs, Traffic Planning & Design, Turner Construction, Urban Engineers, and URS.

Many thanks to YMF Vice President **Kazi Hassan** and the entire YMF Board for planning this event.

ERYMC CONFERENCE

On January 20-21, **Jeremy Chrzan, Kazi Hassan, Jon Miller, Jennifer Reigle, and Alex Sopin** went as delegates to the 2012 Eastern Regional Younger Member Council (ERYMC) conference in Nashville, TN. The delegates focused on team building, ways to improve communication between YMF and Student members, and details on many ASCE National initiatives. They also discussed event ideas and past successes, and made plans to create a Region 2 social gathering. The YMF delegates talked with ASCE Presidents, past and present, and had opportunities to ask question of our current ASCE presidential candidates. The YMF also accepted our 2011 ASCE CYM Group Website Award!

UPCOMING EVENTS

The YMF board meets monthly to develop new events and several are currently in the works. Check back frequently for updates. To keep up-to-date on all our upcoming events, sign up to join our mailing list by emailing our secretary at secretary@ymfphilly.org.

NEWSPAPERS IN EDUCATION

The ASCE, Phila. Section is one of 15 technical societies in our region which will be participating in the “Newspapers in Education” program being administered by the Engineers' Club of Philadelphia (ECP). This effort, part of the Philadelphia Inquirer's outreach and educational program, provides a 12-16 page newspaper supplement created for students to bring real-world information into the classroom. Several different professions and topics have been featured as part of this program, and ECP saw this as an opportunity to get the “message” across for Engineering.

Since many students are typically not exposed to engineering or related topics in the classroom, the supplement allows us to give students some insight into the interesting things that the various facets and disciplines of the Engineering field have to offer. ECP and the Inquirer have decided that the target audience for this supplement will be those in grades 6 through 12, and it is hoped that 40,000 students in the Inquirer's eight-county coverage area will receive it. This contact with students will allow us to get our message to teachers and parents as well.

Look for the advertisements for the supplement, which will appear in the Sunday Inquirer on February 19 (to coincide with the start of Engineers Week) and on a weekly basis in a daily edition until early April. The supplement is scheduled to be distributed to schools on April 10. It will additionally be available electronically and information on this will be provided when it is available.

SECTION SCHOLARSHIPS AWARDED

The ASCE, Phila. Section is pleased to announce that Section Scholarships will be awarded at the March Section Meeting. A less-than-impressive number of applications was received, but the judges somehow managed to come through, however, and selected the following for Student Scholarship awards:

Nathan Barry, Drexel University

Charles Evans, Widener University

Each student will receive \$1500. They have been invited to be the guests of the Section at our March meeting, where they will be recognized accordingly.

Thanks to the Scholarship Committee for handling this somewhat difficult task. The Committee is chaired by **Jeff Bade**, with assistance from members **Cathy Farrell, Kristen Bowman Kavanagh, Bill Thomsen, Ann Tomalavage, Chris Wright** and **Bob Wright**.

Also, on another scholarship “front”, the Delaware Valley Engineers Week/ASCE Undergraduate Scholarship was awarded to **Douglas Wentzel** of Drexel University at the Engineers Week Awards and Proclamation Luncheon on February 17.

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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Michael E. Radbill
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530 Walnut Street, 14th Floor
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215-922-8080
meradbill@urbanengineers.com

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edonofrio@esdesignllc.com

STRUCTURAL ENGINEERING INSTITUTE (SEI)

Dr. Mohiuddin Ali Khan
JMT Inc.
1200 Lenox Drive, Suite 101
Trenton, NJ, 08648
609-512-3415
mohidin@temple.edu

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- Bjarne Stroustrup, Danish computer scientist

CONSTRUCTION, TRANSPORTATION and ENGINEERING MANAGEMENT TECHNICAL GROUPS and ENGINEERS' CLUB OF PHILADELPHIA JOINT MEETING

Luncheon Meeting
WEDNESDAY, APRIL 18

SUBJECT: Before & Below I-95: Archeological and Historical Discoveries from the Philadelphia Waterfront

SPEAKER: Douglas B. Mooney, M.A., Senior Archaeologist, URS Corporation

TIME: Wednesday, April 18, 2012, 12:00 NOON-1:30 PM

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

COST: \$15

Mr. Mooney will share exciting archeological and historical findings from PENNDOT's I-95 Girard Avenue Interchange Project. You will experience the Philadelphia riverwards' history with treasures from the past through engaging stories, video, photos and actual artifacts from the digs. Learn about **Gunner's Run** – the intact canal under Aramingo Avenue and Indian Settlements from 4000 BC that lie just beneath your feet.

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.

Lunch will be served starting at 12:00 noon.

For reservations, please contact the Engineers' Club of Philadelphia at **reservations@engrclub.org** or **(215) 985-5703** no later than **Wednesday, April 12.**

100TH YEAR COMMEMORATIVE LOGO – COMPETITION VOTING

The 2012-13 ASCE Season will be the Philadelphia Section's 100th Year! The Section received a total of ten logo submissions for our commemorate logo competition. One of these logos will be selected by the members and the Section Board and will be prominently displayed at all ASCE Philadelphia events and on all our correspondence during the 100th year celebration.

This is your opportunity to view the submissions and vote for your favorite one. Please complete your 100th Year Logo Ballot below by providing the requested information, selecting the button ABOVE your logo choice, and clicking "Cast My Vote" at the bottom of the ballot. The results of the voting will be provided to the board for final approval and the winning member or company will receive two (2) complimentary tickets to all ASCE Philadelphia Section hosted events during our 100th Anniversary season (2012-13).

Voting will be on the honor system, so please keep in mind the Engineering ethics oath you may have signed somewhere along the line and be guided accordingly. Voting closes on March 5.



1700 Market Street, Suite 1600
Philadelphia, PA 19103
T 215.735.0832 F 215.735.0883

Keith S. Yamatani, PE
Sr Geotechnical/Civil Engineer
610-430-7866
kyamatani@kleinfelder.com

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Dr. Kurt Sjoblom
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