

SECTION MEETING SCHEDULE 2016-17 — WINDING DOWN...

The last two Section meetings of this season are upon us and information on each is provided under separate headings for these announcements. It's hard to believe that the season is nearly coming to a close, which means, after April, the one remaining Section event is the Spring Social.

The **Social** will be held on **Thursday, May 4**, at **Top of the Tower in Center City**. More information will be provided in the April edition of *THE NEWS*. Please hold the evening on this date to join us for our end-of-season festivities, socializing, networking and fun at an interesting and different venue.

DCTMA MUNICIPALITIES CONFERENCE

The **Delaware County Transportation Management Association** will be conducting its **15th Annual Municipalities Conference and Trade Show** on **Thursday, March 30** at the **Drexelbrook Corporate Events Center** in Drexel Hill. This year's theme is "*PennDOT Connects — Creating Multimodal Transportation Networks*", with Secretary of Transportation **Leslie Richards** providing the keynote address.

More than 175 planning officials, Engineers and other transportation experts from throughout the region are expected to attend. Representatives of area consulting firms, agencies and other related businesses will have exhibit booths at the trade show. A panel representing PennDOT, DVRPC, SEPTA and Urban Engineers will present a discussion on the "*PennDOT Connects*" theme as well. DCTMA will present the recipient of its Engineering Scholarship during the event. Two PDH's are available for attendance at the presentations.

The event will begin at 7:30 AM and finish with a buffet lunch at 12:30. For more information, please visit the DCTMA website: www.dctma.org/municipalities-conference/

ASCE VISION

Civil Engineers are global leaders building a better quality of life.

ASCE MISSION

Provide essential value to our members and partners, advance Civil Engineering, and serve the public good.

MARCH DINNER MEETING

American Society of Civil Engineers, Philadelphia Section

THURSDAY, MARCH 9, 2017

Maggiano's Little Italy, 1201 Filbert Street (corner of 12th Street), Center City

Cocktails 5:30 PM, Dinner 6:30 PM, Meeting Presentation Follows (approximately 7:30 PM)

SUBJECT: Delaware River Deepening Project – A Thirty-Year Journey

SPEAKERS: Anthony DePasquale, PE and Peter Gori, PG, US Army Corps of Engineers, Philadelphia District

RESERVATION DEADLINE – FRIDAY, MARCH 3. The cost per attendee is \$40, with a half-price (\$20) cost for government agency employees and students, for reservations received by this deadline.

RESERVATIONS RECEIVED AFTER MARCH 3 – 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. Please note that payment via PayPal will NOT be available at the close at the reservation deadline.

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

SPECIAL FEATURE: Drexel University and Temple University Night – The ASCE Student Chapters, Faculty and Alumni of the Department of Civil, Architectural and Environmental Engineering of Drexel University and the Department of Civil and Environmental Engineering at Temple University will be highlighted at this meeting. All Faculty, Alumni and Students are cordially invited to attend and participate.

Reservations can be made via e-mail at info@asce-philly.org or electronically through our website (www.asce-philly.org) and pay via PayPal. As noted above, the PayPal option will NOT be available as a payment option after the reservation deadline. Payment for reservations by check (made payable to "Philadelphia Section ASCE") will be accepted at the reservation table at the door as an option to electronic payment.

As always, guests will be welcome to attend the presentation without dinner at no charge. This will be subject to room capacity constraints.

ACCESS AND PARKING: Maggiano's is a short walk from SEPTA's Jefferson (nee Market East) Regional Rail station and a half-block from bus routes and the Market-Frankford Line on Market Street. There is a parking garage directly above the restaurant for which validation can be offered for a reduced price of \$8 for up to 6 hours.

Messrs. DePasquale and Gori will describe the extensive history of this Corps of Engineers

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APRIL DINNER MEETING

American Society of Civil Engineers, Philadelphia Section

THURSDAY, APRIL 6, 2017

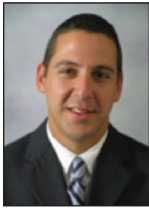
Philadelphia Marriott West, West Conshohocken,

111 Crawford Avenue, West Conshohocken, PA

(accessed from Matsonford Road/Fayette Street, I-76 Exit 332) (PA 23 – Conshohocken)

Cocktails 5:30 PM, Dinner 6:30 PM, Meeting 7:30 PM

Following the pattern established seven 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

It's amazing how quickly the past 2 months have gone. The events and celebrations of **Engineers Week** have concluded, but I would like to extend congratulations on behalf of our Section to this year's **Delaware Valley Engineer of the Year, John Nawn**, and the **Delaware Valley Young Engineer of the Year, Kazi Hassan**, both of whom are Philadelphia, ASCE Section members.

As we all know, the 2013 ASCE Report Card on America's Infrastructure estimated that \$3.6 trillion investment is needed by 2020 to improve the Nation's infrastructure. President Trump had a campaign promise to pursue a \$1 trillion infrastructure program. The administration has already compiled a list of 50 priority infrastructure projects nationwide totaling approximately \$137 billion. This priority list includes 15 structurally deficient bridges on I-95 in Philadelphia. The attention to this critical issue is promising, but I encourage everyone to continue to use your voices to remind our elected officials of the critical condition of our infrastructure and the continued need for a solution.

On the Section front and as is the case with winter (hopefully), the Section's monthly dinner meetings are quickly coming to an end for the season. March will be our last meeting for the year at **Maggiano's** in Philadelphia, with an exciting presentation about the **Delaware River Dredging**. Our annual **Technical Group Multi-Topic Meeting** with breakout sessions will be held on **Thursday, April, 6** at the **Marriott** in West Conshohocken, which is a new venue for the Section and has convenient access to public transportation. The Section is also hard at work on planning the **Spring Social**, to be held on **Thursday, May 4** at the **Top of the Tower** in **Center City**. Also, the Section, with the efforts of the Delaware Valley YEOY and Section Board Member, **Kazi Hassan**, was successful in bringing the "**Dream Big**" film to Philadelphia for a private screening on **April 11**. Please check our website and keep an eye out for our emails with more information on these events.

Sincerely,
Guy DiMartino, P.E.
President, ASCE Philadelphia Section

MARCH DINNER MEETING

Continued from Page 1

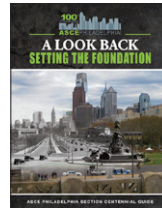
project, intended to deepen the Delaware River's shipping channel from the previous depth of 40 feet to 45 feet. Scientific, environmental and engineering studies performed and project construction details, including geology, blasting and rock removal, will be covered.

The project affects three states (Delaware, New Jersey and Pennsylvania) within the Delaware Estuary over a total of 103 miles of the River's navigable length. It is intended to provide for more efficient transportation of shipped materials to and from the Delaware River ports and to permit larger ocean-going ships to access the River's ports without having to trans-load cargo at the mouth of the Delaware Bay. The over \$300 million effort, broken into several separate construction contracts, has been underway since 2008, with the entire project anticipated to be completed by the end of this year.

Anthony DePasquale has served as the Chief, Operations Division, Philadelphia District, US Army Corps of Engineers since 2009, where he oversees the operation and maintenance of numerous navigation projects, including the Delaware River Channel Deepening and overall dredging programs. He has been with the Corps for the past 31 years and is a graduate of Drexel University.

Peter Gori has served as a Geologist for the Geotechnical Section, Engineering and Construction Branch, US Army Corps of Engineers, Philadelphia District since 2012. He has provided technical support for several of the sections of the Delaware River Channel Deepening of the Delaware River, including the rock removal efforts, within the Marcus Hook Range. He has also provided technical support for numerous coastal emergency repair projects. He is a graduate of Penn State University.

CENTENNIAL BOOK — SECOND CHANCE TO GET YOURS!



To memorialize our Section's 100th Anniversary season and cite the many local landmarks, facilities and efforts that have been brought "to life" by our members over that time, we have created a keepsake commemorative **Centennial Book**.

We are proud to announce that the first "run" of the book has been printed and delivered to those "early adopters" who were part of the initial order. If you missed this and would still like to get a copy of the book, you have another opportunity to do so.

We will have a limited number of copies available for direct sale at upcoming Section dinner meetings, and you can purchase this online as well through our website (**asce-philly.org**). Payment can be made via PayPal or check payable to ASCE Philadelphia Section. Online orders will be processed monthly with anticipated arrival dates in mid-month.

The book price is \$30 for Section members and book sponsors, \$40 for others, which includes shipping.

For additional information or questions, please contact **Jennifer Reigle** at **jreigle@pennoni.com**.

Checks for orders should be mailed to:
Marc Preim, STV Inc., 1818 Market Street, Suite 1410, Philadelphia, PA 19103-3616

Please include a copy of your order form with your check.

ASCE, PHILADELPHIA SECTION OFFICERS AND BOARD OF DIRECTION — 2016-17 SEASON

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** In accordance with our Constitution and Bylaws, only the immediate Past President will serve on the Board, and only for a one-year term. We show the most recent three Past Presidents as has become our tradition.*

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COPY DEADLINE FOR

April 2017 ISSUE

March 10, 2017

YOUNGER MEMBER FORUM NEWS

Nicole Eno, Forum Editor

Kevin Brown, Forum President 2016-17

Urban Engineers, Inc.

530 Walnut Street

Philadelphia, PA 19106

kbrown@urbanengineers.com

MULTI-REGION LEADERSHIP CONFERENCE JANUARY 20-21, NEWARK, NJ



The YMF brought home the Peers Group Award from the Multi-Region Leadership Conference that took place in Newark, NJ on January 20 and 21. Presidents from all Eastern Region Younger Member groups had the opportunity to vote in order to choose the younger member group that is the most successful in a variety of categories. Our Section's YMF is proud to have been chosen as a role model among peers!

YMF WINTER SOCIAL JANUARY 30

This year's Winter Social, which was held at the "usual" spot, McGillin's in Center City, was a great success. Attendees totaled 229 professionals, our highest number to date! We would like to thank those who attended for their contribution to a great cause. Our fundraising raffle collected \$2,050, which will be donated to local non-profit organizations. Additionally, our charity fund reached \$950, which will contribute to our CANstruction efforts this year to benefit Philabundance. The total fundraising amount was \$3,000!

YMF can't thank you enough for the company sponsors which contributed raffle prizes. Altogether, we had 35 winners who received gift cards, tickets, and other prizes. Also, YMF would like to thank our members for their help with making this event run smoothly. The time that everyone put in to raise sponsorships, preparations, sign in and raffle tables, and cleanup is greatly appreciated. Can't wait for the event next year!

WIDENER UNIVERSITY PANEL DISCUSSION FEBRUARY 20



The YMF organized a panel discussion at Widener University, bringing in professionals from the YMF Board as well as Widener alumni

to talk to current students. Widener alumni **Joe Brach** and **David Sledziewski**, along with YMF board members **Eammon Farley** and **Nha Truong** and YMF President and Widener Practitioner Advisor **Kevin Brown** spoke to students about what they look for in an entry-level Engineer, the importance of professional licensure, the strategy behind whether and when to obtain a masters degree, the importance of networking, and how ASCE has helped them. Thank you to our volunteers for inspiring current students!

ADOPT-A-HIGHWAY

APRIL 9

FIRESIDE BAR & GRILLE, AMBLER

Join the YMF and ASHE Delaware Valley Younger Member Committee for 2017's first Adopt-a-Highway event! We will be cleaning up our two-mile section of **Bethlehem Pike** in Ambler. The group will meet afterward at Fireside Bar and Grill for refreshments. Sign up at <http://tinyurl.com/AAHApril2017>.

CRITICAL ISSUES SEMINAR

Keep an eye out for more information about the YMF's annual **Critical Issues Seminar**, a technical presentation where we invite professionals to discuss a currently pressing issue in the field of Civil Engineering.

Thanks to Meredith Lis for filling in for Niki Eno this month.

N-ASCE*

"GREATEST SHOW ON EARTH" RIDES INTO HISTORY

As you may have heard, the world-famous Ringling Bros. and Barnum & Bailey circus will end its more than 140-year run this spring, the victim of changing tastes in entertainment. In May the shows will return from various venues to their winter quarters in Venice, FL, for the last time, leaving many performers and staff facing an uncertain future.

P.T. Barnum's original company, as well as the rival Ringling Bros. show, started out in Wisconsin, in 1875 and 1884 respectively. In 1919, the companies merged to form Ringling Bros. and Barnum & Bailey Combined Shows. The firm was purchased by an entertainment group in the late 1960's. Many other circus companies have come and gone in the intervening years.

One of the unique features of the circus in general is that it moves by rail. Ringling/Barnum & Bailey's famous circus trains, which include some 120 passenger cars and special-duty flat cars, will also apparently be disappearing into oblivion. Starting in 1970 there were two separate shows, with their own dedicated "Red" and "Blue" trains. Locally, these have been conducted at various sites, including Convention Hall, the Spectrum, and most recently the Wells Fargo Center. The fabled "Big Top," a huge canvas tent with tiered seats, was used for many years in various locations, generally set up on empty lots. After a disastrous fire during a 1944 performance in Hartford, CT, in which 167 people died, the tents were folded in favor of indoor arenas. (The

tents were also transported from place to place on the trains and set up and taken down for each venue by crews that travelled with the show.)

Last month, on its final journey, the Blue Unit carrying the show dubbed "Out of This World" arrived in Philadelphia after its show in Raleigh, NC. This Unit consists of 56 cars, of which 34 are coaches or sleepers for the performers and staff, the "pie car" (diner) and flatcars carrying the ancillary trucks and equipment. In March, this Unit will be in Trenton, with a final "call" in Uniondale, NY in May. The Red Unit, known this year as "Circus Xtreme," will make its farewell appearance in May in Providence, RI. This company travels in a 54-car train, and like the Blue Unit, carries 250 to 300 performers and other workers responsible for setting up and dismantling the vast array of equipment needed for the show.

Despite valiant efforts in recent times to make the circus more appealing to "children of all ages" (as the ringmasters used to say), the apparent death blow came last year when the beloved performing elephants were retired. They were great crowd favorites, and ticket sales sharply declined after their departure. Animal rights activists had for years waged a campaign against the use of the huge beasts, while circus management always contended that they were treated humanely. It was finally agreed to retire the 13 remaining animals to Ringling's Center for Elephant Conservation in Florida.

Railfans and many others will miss not only the circus itself but the long silvery trains that carried the shows far and wide. Sitting in the stands, eating popcorn and watching the awesome feats of circus performers—and their highly-trained animal partners—will be a fond memory for millions of witnesses to the "Greatest Show on Earth."

Thanks to the **Philadelphia Chapter of the National Railway Historical Society** and author **Frank Tatnall** for permission to reprint this article, which appears in the February edition of its newsletter, *Cinders*.

**N-ASCE – not always something concerning engineering...*

DREAM BIG!

Dream Big is a HUGE film. Literally. From the Great Wall of China and the world's tallest buildings to underwater robots, solar cars and smart, sustainable cities, **Dream Big** celebrates the human ingenuity behind engineering marvels big and small. With its inspiring stories of human grit and aspiration, and extraordinary visuals for the world's largest screens, **Dream Big** reveals the compassion and creativity that drive Engineers to create better lives for people and a more sustainable future for us all.

For additional information, please visit www.dreambigfilm.com.

Also, our Section will be sponsoring a screening of the film at the IMAX Theater on **Tuesday, April 11** in the evening at the **Franklin Institute**. More information will be provided on this shortly on our website and in the April issue of *THE NEWS*.

COMPOST FOR USE IN TOPSOIL MANUFACTURING

For improved vegetation, storm water management and erosion control

Once upon a time, compost was primarily used for plant establishment. **Ron Alexander** of R. Alexander Associates has provided the following article, the second of a four-part series, on other ways to use compost — for erosion control, storm water management, and green infrastructure.

Compost is a commercially available source of stabilized organic matter that can greatly improve the physical structure of soil. It can also help to improve depleted soils and subsoils both nutritionally and biologically. Further, the composting process, essentially “pasteurizes” the product, so the product is free of viable weed seeds and plant pathogens. Various textures of soil and subsoil, as well as sand, mine spoil and even contaminated urban soils, have been re-manufactured into landscape grade soils using compost. Further, these soils possess an improved hydrology that can absorb large volumes of storm water and resist erosion (while binding heavy metals and degrading low levels petroleum hydrocarbons). With these improvements, the landscape soil dramatically improves plant and turf survival and promotes rapid rooting and growth, which in turn, better absorbs storm water and resists erosion. University of Washington research proved that compost amended soils can reduce storm water runoff up to 50%; this is one of the reasons why LEED points can be obtained by using compost to improve site hydrology.

Compost Benefits to Soil

- Improves soil structure and porosity
- Increases moisture infiltration and permeability
- Reduces soil bulk density (in silt and clay soils)
- Improves the moisture holding capacity of soils
- Improves the cation exchange capacity (CEC) of soils
- Supplies stabilized organic matter

Based on research funded by the Washington Department of Ecology in 2008 (by A. Bary and R. Alexander), the benefits outlined above were proven on local composts and on local soils.

Physical Data				
% Compost Added (by volume)	Organic Matter (%)	Sat'd Hydraulic Conductivity (in/hr) (Permeability)	Moisture at Field Capacity (weight %)	Bulk Density (g/cm ³)
0	2.0	4.3	21.5	1.20
10	2.0	4.3	26.8	1.28
20	2.4	5.4	37.0	1.09
30	4.4	7.5	50.9	0.99

Chemical Data			
% Compost Added (by volume)	pH	Electrical Conductivity (mmhos/cm ²)	Cation Exchange Capacity (meq/100g)
0	6.4	0.16	6.9
10	6.9	0.47	8.1
20	7.3	0.68	8.6
30	7.5	0.91	8.7

Interestingly, the topsoil manufacturing with compost technique often creates soils that possess a 4 to 5% organic matter content, with excellent water holding capacity and permeability, at half the cost of soil removal and replacement (with 6” soil). Further,

this technique allows you to avoid purchasing offsite soil unless the project site requires extra soil volume or is too difficult to cultivate. It must also be stated that this technique usually creates a soil with better characteristics than the topsoil that may be purchased in a given region. Remember, the topsoil industry is totally unregulated. So when purchasing native or manufactured topsoil, require soil testing data with delivery (and before). Keep in mind that certain composters stockpile soil to produce manufactured soils that they can simply transport onto project sites.

TOPSOIL MANUFACTURING METHODS

“Pile and Turn” Method

1. Use a front-end loader to blend compost and most soils at a ratio of: 2 to 3 parts subsoil/low quality soil to 1 part compost. Always inspect and test the soil for pH, salts and any plant-toxic components. These soil chemical characteristics are more important than physical contaminants (rocks or other debris) which can be screened out.
2. Give yourself room to work around the entire pile, assuring thorough blending of the compost and the subsoil (and potentially, other ingredients).
3. The best way to blend is by creating a bed of soil, then placing the compost evenly on top. The materials should then be lifted and dumped forward until the mixture looks uniform.
4. Stockpile, as you would any soil product, for future use.

“On Site Incorporation” Method

1. Break up existing subsoil with a disc, cat-mounted ripper, or rototiller – to a 12” depth is best.
2. Apply a 2-3” layer of compost evenly over the surface using a manure spreader, grading blade, loader bucket, or other implement.
3. Thoroughly mix the compost into 8” of the subsoil, resulting in a 7-8” layer of compost “manufactured” topsoil.
4. This newly “manufactured” topsoil can now be planted.

Always understand the quality of the soil and compost you are working with. For compost, the easiest way to do this is by specifying and using only US Composting Council Seal of Testing Assurance program certified compost. These compost products are tested regularly, using specialize laboratories, and they analyze for a variety of parameters; including pH, electrical conductivity, stability, maturity and much more. For additional information on the STA Program, or to find a list of participants, go to www.compostingcouncil.org (click on “programs”, then “sta”).

Mr. Alexander has over 30 years of experience working with compost and other organic recycled products on large-scale construction projects. He began his career in Philadelphia, and is now the President of R. Alexander Associates, Inc., a consulting company specializing in product development for organic recycled products. He provides technical assistance to **Laurel Valley Soils**, a large composter in Avondale (<http://laurelvalleysoils.com/>). Contact **Ron Alexander** at alexassoc@earthlink.net or 919-367-8350 if you are interested in additional information on compost use or a related Lunch & Learn.

BEANNACHTAÍ NA FÉILE PÁDRAIG!*

It doesn't seem like it should be that time already again, but the “great day for the Irish”, as the song goes, will be here shortly. And, just as expected, your Editor has put his mainly-Irish heritage to the test (and very possibly at great risk...!) and has cranked out another “**Lightly Amusing Message from Eire**” (also know as LAME) for your enjoyment for St. Pat's Day.

Given the lack of response to contests for this and our **Lightly Amusing Yuletide Message (LAYM)** for the Christmas season, the staff of *THE NEWS* made an executive decision to no longer conduct such efforts. The consequence of this action is that this allows (or forces) us to hand the creative pen to your Editor to come up with something. And that he did – see below – after some intense contemplation, deep thinking and maybe one drink too many (but that's part of the creative process – at least that's what we say at *THE NEWS*...).

You may want to keep that Gaelic-English dictionary handy (for the italicized words). *Tá fáilte romhat!*

Uilleann pipes piping
Everyone in green
Irish potatoes, well...
Not what they seem

Raising pints in honor
Slainte, dear old sod
Irish eyes smiling
And we give a nod

Bainne in your *caife*
Brings the morning smile
Some *uisce beatha* added
So-called Irish style

All the lads and lassies
Shamrocks abound
Rattle your *shellelagh*
Be heard the world 'round

Inaccurate stereotypes
Fall to the side
Failte, Emerald Isle'rs
Demonstrate your pride

All good wishes
As you make your way
The Philly Section wishes
The best for Saint Pat's Day

Complaints and outrages can be registered at our website (keep in mind your Editor can get away with this – note the mainly-Irish heritage reference above).

And...

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

**Here's to me, and here's to you,
And here's to love and laughter –
I'll be true as long as you,
And not one moment after.**

– Unknown

TECHNICAL GROUPS/CHAIRS

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

CONSTRUCTION

Dennis MacBride
dmacbride@septa.org

DELAWARE VALLEY GEO-INSTITUTE (DVGI) www.dvgi.org

Jay A. McKelvey III
jaym@earthengineering.com

ENGINEERING MANAGEMENT

Chair currently vacant

ENVIRONMENTAL AND WATER RESOURCES

Eric Lindhult
eric.lindhult@gmail.com

STRUCTURAL ENGINEERING INSTITUTE (SEI) www.sei-philly.org

Josh Amsler
joshua.amsler@aecom.com

TRANSPORTATION AND URBAN DEVELOPMENT

William T. Thomsen
wthomsen@urbanEngineers.com

Please check the noted websites as well as the main Section site (www.asce-philly.org) for up-to-date information on Technical Group meetings and events. These will be included in our regular e-mail blasts as well.

I ON INFRASTRUCTURE

Another in our overview of infrastructure issues elsewhere...

Interstate 5 is the West Coast's version of I-95 – a highway that follows a 1380+ mile course from the Mexican border at Tijuana to the Canadian border on the outskirts of Vancouver. The corridor includes twin bridges across the Columbia River where the highway leaves Portland and enters Vancouver, Washington (yes, the US has a Vancouver too). The older, northbound structure turned 100 years old on Valentine's Day. It, along with its younger (1958) twin, is a vertical lift structure with fairly frequent openings that can back traffic up for miles. Even without the openings, the bridges provide three traffic lanes in each direction and are often congested merely from the volume of traffic. The bridges are in dire need of replacement (the older structure has a sufficiency rating of 18.5).

The State DOT's of Oregon and Washington developed a program to replace the structures with a bridge with higher navigational clearance, more traffic lanes, pedestrian/bicycle accommodation, and provision for future addition of light rail transit (a light rail line in Portland ends about a mile south of the bridge and has been planned to extend to Vancouver to help relieve traffic). Tight interchanges with short ramps and inadequate acceleration/deceleration lengths on either side of the river would be reworked as part of this project. The concepts for this \$3 billion effort, called the Columbia River Crossing, were first considered in the late 1990's and planning

got underway in 2001. By the end of the decade, alternatives were trotted out for public review.

The project is not without controversy. The increase in navigational clearance for ships, and the associated avoidance of the traffic-snarling bridge openings, means more impact on the approaches on either side. The particularly sharp curves on the Vancouver side would require some takes of private businesses in the downtown area to allow for realignment of the highway. The increased height would have visual impacts as well as some effect on air traffic into and out of nearby Portland International Airport. There are also environmental concerns with the Columbia River and migrating salmon and other fish that must be accommodated.

After considerable debate, the plans for the Crossing were shelved in 2013 after nearly \$200 million was spent on planning and preliminary design. Despite the age and condition of the existing structures, there seems to be no immediate plan to pursue the replacement. Surprisingly, the concerns of the stakeholders are more focused on their particular agendas and not on the need to replace the existing bridges, and no one seems to mind much that the project isn't advancing.

The sources of funding needed for the effort are unclear. Neither state has fully budgeted for the project. A toll was proposed as a solution. Since there are no tolls on this bridge or nearby river crossings at present, almost no one feels this is an option, one of the few things about this project on which there is agreement among the various stakeholders. In the meantime, budgets for both DOT's have been directed at other roadways and structures, thus adding more burden to already-overcommitted scarce funding.

Even though Portland's transit agency, TriMet, built its light rail Yellow Line with the intent of reaching downtown Vancouver at some point, residents on the Washington side are opposed to the extension of this line into their state. The fears of it bringing crime and undesirables seem to be fueling this, even though C-Tran, the Vancouver-area transit operator, has several bus routes that cross the existing bridge and sit in its traffic regularly. The light rail extension would serve these same riders in a dedicated right-of-way free of traffic, thus providing a speedier trip. So the Yellow Line ends about a mile south of the bridge, waiting for the extension that may or may not happen.

Last month, reality once again set in, as the Vancouver City Council supported an effort to declare the Crossing a project of statewide significance. The Council gave its support to the resolution, which the Southwest Washington Regional Transportation Council is considering. If approved, the resolution does little except add to the voices calling on legislators to act swiftly to ease congestion along the I-5 corridor.

Washington lawmakers have been meeting behind closed doors for months to try to strike an agreement on how to progress with the project. They are expected to introduce legislation that also would call for prioritizing the I-5 corridor and designate it as having statewide significance. If

the legislation were to pass this session, it could help expedite the permitting process and construction.

Of course, not everyone agrees.

The Regional Transportation Council is concerned that there is language in the current transportation package that makes it impossible for the Washington State Department of Transportation to work on any I-5 project. The package says the state cannot use any additional federal transportation funds for the Crossing project until July. Some believe that language precludes the State DOT from working with its counterpart across the river.

Rehabilitation of the bridges will not be cheap, if that option is pursued, since painting alone will be approximately \$70 million and the trunnions on the northbound bridge are in need of replacement, to the tune of \$15 million. Seismic retrofits would be needed (neither bridge has this capability) and this could range to \$250 million if it could be done at all, since the older bridge's foundations do not rest on bedrock. (The original bridge designers thought the supporting soil would consolidate under the load over time – they also thought the bridge would last a long time...)

Some lawmakers are interested in considering a "third bridge" option which would explore the design and construction of a totally new river crossing, before turning attention to the I-5 Bridge, to identify other corridors that could help ease congestion. Ironically, this would require new studies and cost more money, even though the current project is not fully funded.

Thanks to the *Columbian* (Vancouver, WA) for this.

THANKS TO OUR SPONSORS

We thank those firms who have made the financial commitment to Section Sponsorship for this season. The business cards of these 14 firms are included in the sponsor section of *THE NEWS*. Sponsor logos are also displayed in a special Sponsors section of our website. Through a click on the particular sponsor's logo, we provide direct links to its own website so prospective employees can review all available and up-to-date positions being offered by that firm.

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

I-rish you have a very nice place to live, I-rish God's greatest gifts he'll give. I-rish you health, and wealth, and more, I-rish your smilin' face were at my door!

– Irish Blessing

SCIENCE FAIRS COMING UP — JUDGES NEEDED

As we have for many years, our Section will be offering Special Awards at the **Delaware Valley Science Fairs**. The Fairs will be conducted on **Wednesday, April 5** at the **Greater Philadelphia Expo Center** in Oaks. Four Special Awards for individual student projects that have a Civil Engineering theme will be awarded, with two prizes for Grades 6 through 8 and two for Grades 9 through 12.

Volunteer 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. It is always a very interesting and enlightening experience.

If you are interested in being a Special Awards judge please contact **Chris Rood** at chris.rood@aecom.com. You will also need to register for this and this can be done through the Fairs' website www.dvsf.org.

For more information on the Fairs please visit the above website.

We hope you can join us for a rewarding and interesting day.

MEMBERS IN THE NEWS

Charles Mumford has been named **ASCE's 2017 Eastern Region Outstanding Younger Member in Community Activities**. This award was presented to Charlie at the ASCE National Multi-Region Leadership Conference in Newark, NJ in January.

Charlie was selected for this honor among all ASCE younger members on the entire east coast for his dedication and hard work engaging the community and volunteering his time. Since May 2015, he has served on our Section's Younger Member Forum (YMF) Board as the K-12 Co-Chair, where he directed efforts in reaching out to a record-setting 1300 students across our region in the 2015-16 school year alone and is on a similar pace with school visits in the current season. He is a Graduate Bridge Engineer with Pennoni Associates in the Transportation Division of its Newark (DE) office.

We congratulate Charlie on this honor and thank him for his extensive efforts to "get the word out" to students on Engineering careers.

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Continual cheerfulness is a sign of wisdom.
— Irish Proverb

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