

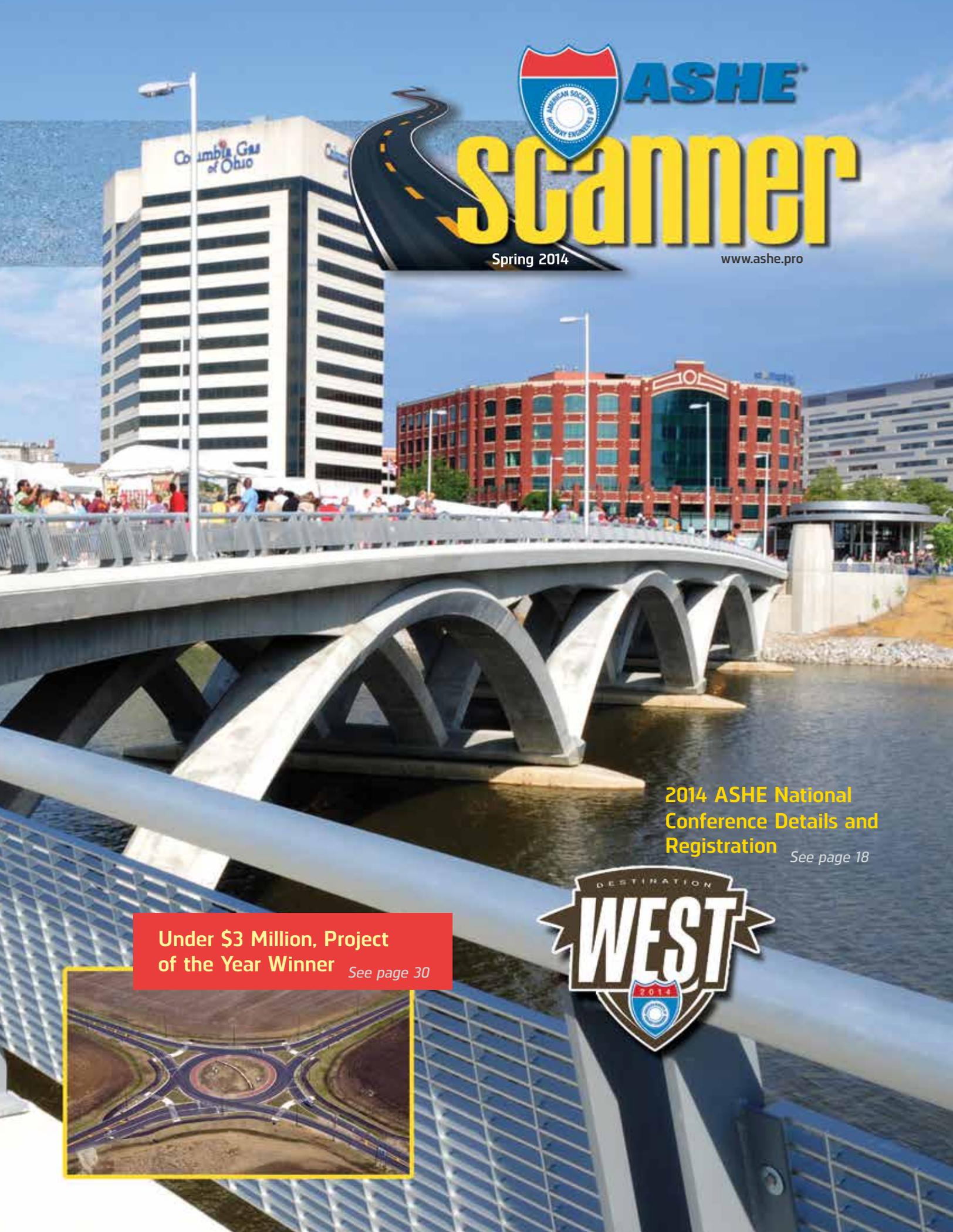


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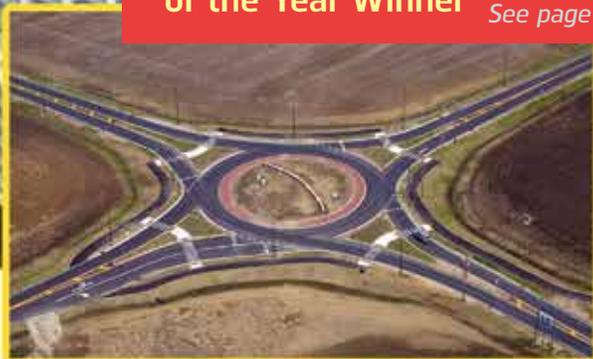
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**2014 ASHE National
Conference Details and
Registration**

See page 18

**Under \$3 Million, Project
of the Year Winner** *See page 30*





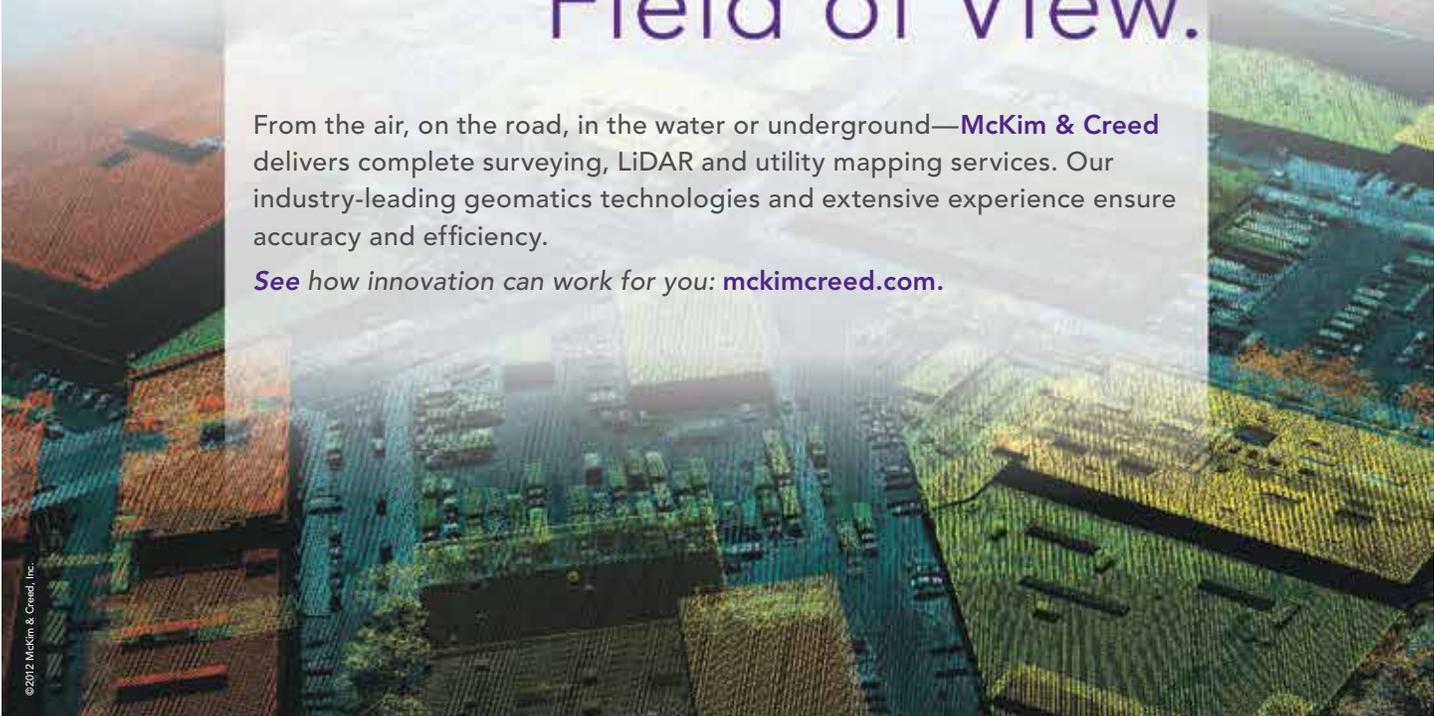
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Thomas S. Morisi

ASHE National President 2013-2014



New Directions

I hope this issue of the *SCANNER* finds everyone well and ready for spring. This, my last President's message, is about change and a bright future for ASHE.

As you can see, the *SCANNER* has a brand new look, starting with this issue. Tammy Farrell, owner of TNT Graphics, is now our new publisher. Tammy has been providing graphic arts services to ASHE for a number of years. This includes our brochures, promotional materials, banners, logos, and much more. Thanks to the efforts of Sandy Ivory, our National Public Relations (PR) Chair, and Tammy, we have successfully branded ASHE as a more highly recognized national organization. This updated look for the *SCANNER* rounds out that branding effort with all current materials. We look forward to working with Tammy in the upcoming years to continually improve this publication.

As we welcome Tammy as the new publisher, we would also like to thank Jennifer Summers for her many years of service as the prior *SCANNER* publisher. Jennifer has always been a true professional, with a personal knowledge of our organization. She has been great to work with for more years than anyone can remember.

As mentioned, Sandy Ivory, our PR Chair, has worked for many years to successfully brand ASHE and has done an outstanding job. In June, Sandy will retire as the Chair of the PR Committee. I would like to extend much thanks to my dear friend Sandy for her many years of dedication to the organization. She has served ASHE at the Section, Region, and National levels in various capacities and was National President in 2002/2003. Since that time, she has served as the PR Chair and has assisted in the production of the *SCANNER*. Sandy is an exceptional individual who has always had the best interest of ASHE at heart. This organization would not be what it is today without her efforts. We look forward to her continued assistance, albeit at a diminished level, and wish her and her husband, Leo, the best in retirement.

As Sandy steps down, we would like to welcome Amanda Schumacher as our new PR Chair. Amanda is the current Section President for East Penn and will end her term in June, just in time to take over the reins from Sandy. In her full-time employment, she is a Marketing and Business Development Manager for T.Y. Lin International. She brings a great deal of experience to the position and is excited to start. She, along with Jennifer Yoder, a new member of the PR Committee, will work on the Marketing and Business Development Plan already in progress, and move us into the future. They hope to unveil that plan at the 2014 Conference in Bismarck.

As I step down as President in June, it is my goal to leave ASHE better now than when I started, and I hope that has been the case. Sam Mody, PE, of the Southern New Jersey Section, will take over as President at the Bismarck Conference. Like the others whom I have mentioned here, Sam is an exceptional individual and great leader. Under his direction, I believe you will see a methodical expansion of the organization. Sam, as the National First Vice President, Bob Hochevar, PE, as the National Second Vice President and I have been working closely over this past year to ensure a buy-in from everyone before any initiative or change is introduced. This results in cohesive, stable leadership for ASHE at the National level.

As I mentioned initially, it is about change and a bright future for ASHE. No organization can succeed without change—change that keeps it up-to-date and relevant. And in order to stay relevant, we, at the National level, conducted a Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

(continued on page 28)

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on the COVER

PROJECT OF THE YEAR WINNER
Over \$3 Million

Overarching Achievement: New Bridge Crowns Ohio's Capital City

See page 26

As I write this article on a very cold, snowy night in January, I realize that when this article is read it will be early spring and a much different look outside. That is how I also envision the SCANNER over the coming year: it is going to change dramatically, starting with this issue as ASHE's new publisher (TNT Graphics) takes over the layout of the magazine. You, the reader, will still provide the content and the advertising; TNT will give it a fresh look.

I want to thank Wanner Associates for their many years of dedicated service to ASHE. When I first started to receive the SCANNER, it was a black and white magazine with one color per issue used

to highlight titles. Then, in 2006, it transitioned to a four-color issue, and everyone thought that was a tremendous jump. In 2007, the National Board took the really big leap and made it full color for photos and advertising.

Now, with our new publisher on board, you will see many exciting changes over the next several issues. Starting with this issue, you see a new design of the front cover and, in coming issues, we will be working with our advertisers to change some of their ads. With this transition, I welcome your thoughts on the NEW look. Please email your comments to me at jlhetrick12@gmail.com. Have a great spring and summer. 🇺🇸

John Hetrick P.E.



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The I-295/I-76/Route 42 Interchange is the most congested interchange in southern New Jersey. Motorists have been experiencing delays at this location for more than 20 years as they commute into Philadelphia and use the route as a north/south alternative to the NJ Turnpike. Today, the Average Daily Traffic (ADT) is approaching 250,000, and accident rates are up to seven times the state average.

The New Jersey Department of Transportation (NJDOT) identified the need to upgrade the interchange in the late 1980s, with further studies through the 1990s determining that a full interchange replacement was the only solution. In 2000, NJDOT selected Dewberry to perform the Feasibility Assessment, Environmental Impact Statement, and Preliminary and Final Design services for the \$900 million project.

The purpose was to provide a new I-295 six-lane mainline connection through the interchange and improve safety by improving ramp alignments and eliminating substandard geometric conditions. Significant community and environmental constraints complicated the project, including floodplains, wetlands, a Catholic church, an elementary school, a cemetery, a historic housing community, two baseball fields encumbered by the state's Green Acres restrictions and numerous residential properties.

The NJDOT management team made a commitment to involve key stakeholders early and often through an Environmental Streamlining Process and community outreach program. The stakeholder groups included a Community Advisory Committee (CAC) consisting of municipal representatives, adjacent property owners and others; an Environmental Agency Coordination

Meeting (ACM) group consisting of representatives from the NJ Department of Environmental Protection (NJDEP), the U.S. Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers (USACE), etc.; and the Design Core Group consisting of NJDOT and Federal Highway Administration (FHWA) experts. Streamlining was used as a method to reach a consensus between all stakeholders in order to move forward. Concurrence for an alternative was sought from the participating groups and agencies at each key milestone.

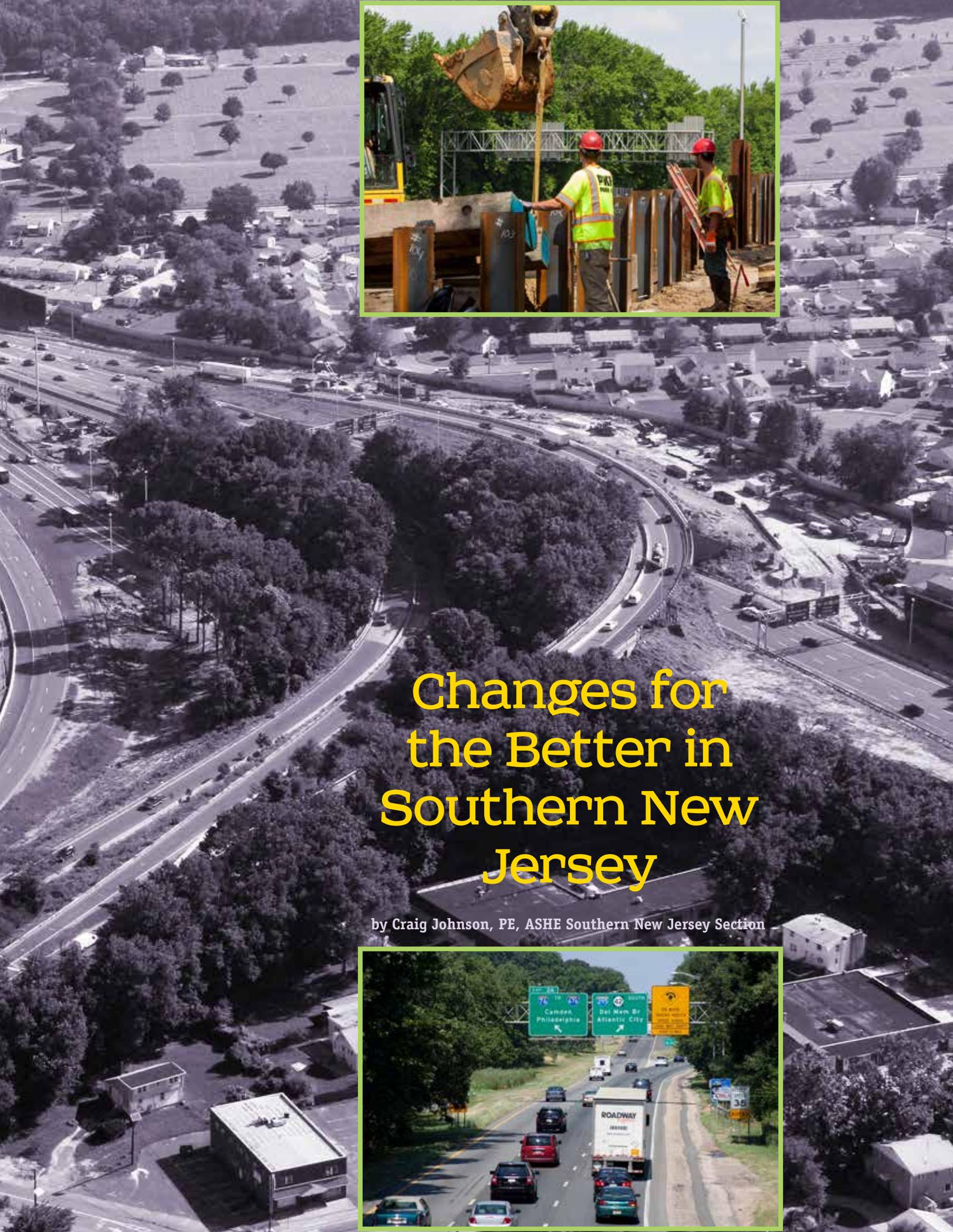
The 26 initially developed alternatives represented varying degrees of impact on the surrounding properties and the environment. Through a series of meetings with each of the three stakeholder groups, these 26 alternatives were shortlisted to five alternatives. Each of the five shortlisted alternatives had a similar horizontal mainline scheme with variations to the vertical geometry and one ramp alignment. The preferred horizontal alignment accomplished as many of the improvements as possible within the existing Right-of-Way (ROW) to minimize impacts. Even with that, 36 parcels totaling 11 acres of ROW were required. Technical Environmental Studies were then performed and compared, and the groups and agencies held a series of meetings to arrive at the Preferred Alternative. In March 2009, a Record of Decision was received from the FHWA.

At this point, the Preliminary Design of the project began. Due to size, NJDOT investigated splitting the project into smaller contracts—and arrived at an Advanced ITS contract and four interchange contracts ranging from \$150 to \$200 million. Construction of the Advanced ITS contract began in the fall of 2011 (Diehl Electric) and consisted of

placing travel time systems, variable message signs and CCTVs on each of the four approaches to the interchange. Construction of Contract 1 began in March 2013 (PKF Mark III), initiating the reconstruction/widening of Route 42/I-76, the local road bridges, numerous retaining walls and some temporary ramps.

Some of the challenges associated with the design and construction include complex construction staging and maintenance of traffic, numerous retaining walls of many different types to minimize impacts, soft soil conditions and the proposed I-295 mainline bridge. Due to the significant elevation difference between the existing and proposed roadways, more than 20 temporary sections of roadways and ramps are required to maintain traffic. NJDOT has stipulated that all lanes be maintained on the mainline and ramps during peak periods (from 5:00 a.m. to 11:00 p.m.).

Mechanically Stabilized Earth (MSE) walls will be used to retain proposed roadway embankments with fill heights approaching 30 feet at some locations. Specialty walls used in cut sections include drilled soldier pile and lagging walls to minimize vibration to homes less than 10 feet away, and a 40-foot-high, cast-in-place concrete retaining wall utilizing a temporary braced excavation system to avoid impact to adjacent grave sites. The proposed bridge that will provide the direct connection of I-295 through the interchange will be a five-span steel girder structure with a total length of approximately 1,100 feet. The horizontally curved alignment of the bridge over Route 42/I-76 and Browning Road restricts potential pier locations, resulting in long span lengths. Due to the extreme height of the pier columns and to expedite construction, precast post-tensioned piers will be used. 🇺🇸



Changes for the Better in Southern New Jersey

by Craig Johnson, PE, ASHE Southern New Jersey Section



Easing the Flow through Memphis and Shelby County

by Ian Engstrom, Resident Engineer, Smith Seckman Reid,
ASHE Middle Tennessee Section, Western Tennessee



Phase II of substantial improvements are about to begin on the I-40/I-240 interchange in east Memphis that will address the expected traffic increase in this area for decades to come. The Average Daily Traffic (ADT) on I-40 has grown from 49,000 vehicles in 1985 to about 200,000 vehicles a day in 2013. By 2035, projections show the interchange could be handling well over 350,000 vehicles.

The interchange is formed by I-40 on the north and east legs, I-240 on the south, and Sam Cooper Boulevard on the west. The existing interchange is unique in its current configuration as I-40 is reduced to one lane in each direction. Adding to this problem are the low-speed exit ramp movements, which are not conducive for good interstate flow. Phase II improvements to the I-40/I-240 interchange will improve the flow of traffic.

The project will encompass Sam Cooper Boulevard to the White Station overpass, I-40 from Sycamore View to Covington Pike, including the complete replacement of the bridge over the Wolf River, and I-240 to the north side of the Walnut Grove interchange. The existing low-speed ramps that carry the eastbound and westbound I-40 movements will be replaced by higher-speed fly-over structures with two lanes each. Interstate 40, I-240 and Sam Cooper Boulevard will be widened with an additional lane in each direction within the limits of the project. This construction will improve traffic capacity and efficiency. The final interchange configuration will include four levels, the first of its kind in west Tennessee. Once completed, the fourth-level structure will rise a towering 75 feet above Sam Cooper Boulevard.

This is a critical interchange for this region, prompting state Transportation Commissioner John Schroer to issue a directive to get the job done quickly. To manage the construction of this project, TDOT hired Smith, Seckman, Reid Inc. (SSR), a full-service engineering company with a long history of providing construction oversight on projects in this region. Jackson, TN-based Dement Construction Company, LLC, submitted the lowest bid and was awarded the contract to construct the job in three-and-a-half-years. The award of \$109.3 million is the largest single contract ever let by TDOT.

Although substantial improvements and upgrades are ahead for the interchange, the team is mindful that any kind of interstate construction will be disruptive to traffic flow. They have worked hard to minimize the impacts by shortening construction zones within sections of the project and proposing an aggressive construction schedule that will pay an incentive to the contractor for finishing early. The shortened construction zones should limit the length of barrier-lined interstate highway to about one mile through any part of the interchange at any one time. Phase II is scheduled to be finished by the summer of 2017. However, with an incentive for an early completion it could be completed by the end of 2016. There no doubt will be delays, including traffic congestion during peak hours and temporary lane closures during off-peak hours. Phasing this construction to minimize the impact to motorists has been challenging; however, there are plans to significantly reduce the impact to Memphis area travelers. When the interchange is completed in a little over three years, motorists will be able to navigate a reconfigured interchange with much-needed safety upgrades, improved infrastructure and efficiency.

Until construction is completed, drivers are advised to be alert and follow the posted directions in work zones. Smartphone users can download TDOT's SmartWay Mobile App to assist in navigating Tennessee highways and the construction in this area with up-to-the-minute, customized traffic information. Users have access to TDOT's cameras and important messages on overhead dynamic message signs. Download it free from the Apple App Store or the Android Play Store. These apps are great tools to use for checking travel conditions before motorists leave for their destination.

The team formed by the partnership of TDOT, Dement Construction and SSR is confident that the job will be a success in providing Memphis and its surrounding region with the excellent transportation system that the people of Tennessee have come to expect. 🇺🇸

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NETWORKING FOR INTROVERTS:

a unique route
to programming
and partnering

by Jennifer Yoder, *CPSM Director of Business Development*,
England-Thims & Miller
ASHE Central Florida Section

Have you heard the joke about the difference between an introverted engineer and an extroverted engineer? They say an introverted engineer is someone who looks at his/her shoes when talking to you, and an extroverted engineer is someone who looks at your shoes when talking to you. Tip: If you work with or for an extroverted engineer, wear great shoes (this is how to justify your shoe addiction)! Levity and humor were abundant in a recent Central Florida ASHE program focused on helping introverts.

Networking is an essential component of any career, from job search to career advancement, and from business development to social development. Recognizing the importance of networking, along with a need for programs focused on business development skills, the Central Florida Section of ASHE partnered with the Society for Marketing Professional Services (SMPS) www.smps.org to put on a Networking for Introverts Workshop. The event, held the morning of November 7, 2013, at a public agency training office, drew attendees from both the private and public sector.

It is important to understand that you don't have to be an extrovert to be a good networker! In fact, introverts have several distinct advantages for networking, as they tend to be good listeners, focus on quality conversations and think before they speak. For some, however, networking can cause some introverts to have such reactions as resistance, anxiety, exhaustion and a feeling of being overwhelmed. Jennifer Yoder, CPSM, along with Barbara Stiles, CPSM, led this hands-on workshop that helped attendees explore ways in which their networking process could be adapted to fit the unique skills and style of the introvert.

This two-hour workshop helped attendees discuss and demystify introversion and understand themselves better, while identifying and creating a solution strategy for their networking barriers through a Networking Strategy Workbook. This workbook was given to all attendees to use at the workshop and

take with them so they could continue to build their networking skills. Attendees also participated in exercises, including role about issues such as reputation vs. title, proper handshake etiquette, working a room, developing a personal elevator speech and more.

"This lively presentation provided examples, scenarios and panel discussion of some great engineering soft skills."
– Paul Markel, RS&H

Attendees participated alongside several government agency leaders, including the Florida Department of Transportation (FDOT) District 5 Secretary and Director of Operations. These leaders also participated in a panel as "recovering" introverts sharing tips, approaches and strategies to help attendees make their networking experiences more productive and less stressful.

"Networking for introverts was an amazing class with lots of tips for those who need to network and expand their limits. Being an extrovert, I was (1) glad to assist, and (2) I learned that some people may appear to be extroverted but may still have a strong introvert side as well."
– Noranne Downs, FDOT
District 5 Secretary

The primary keys to improving networking skills are to develop a networking strategy, lay out a pre-event networking plan and PRACTICE.





PRACTICE. PRACTICE. The following evening, ASHE partnered with Networking for No Reason, a group that puts on networking events in multiple markets, based on fun and seemingly silly themes, such as National Peanut Butter Lovers Month, for the pure intention of getting people around a great group of good-humored folks to network for no good reason! This gave attendees an opportunity to put their newly learned skills to use in a more relaxed and open environment.

"I appreciated the rapid pace and perceived abridged version of the workshop and effective use of time. The comfortable use of humor and minimal use of 'power point' was awesome. The level of enthusiasm demonstrated by the presenters was contagious."

– John Ward, Lane Construction

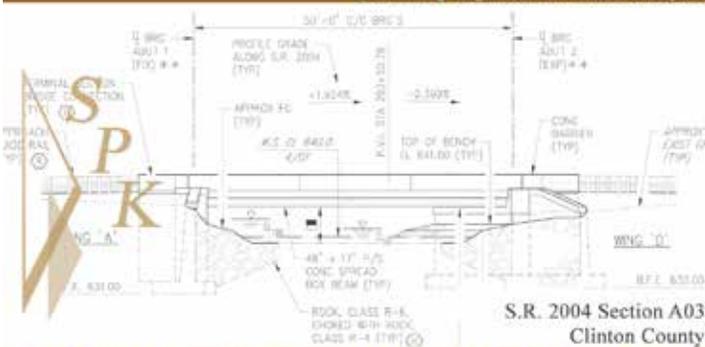
The successful program has elicited a response from the public sector agencies: some have requested

that ASHE deliver this workshop to their agency employees in 2014, enhancing the relationship between the organization and the public sector. Recognizing the importance of this type of programming, the Central Florida Section of ASHE has made it part of their strategic plan to partner with more professional and industry organizations as well as public agencies and offer a broader range of programming. The Business Development Skills Series is now a part of the ASHE Central Florida programming as one of their annual signature events, along with their popular annual E-Week Transportation Summit, partnering with SMPS as well as several other organizations.

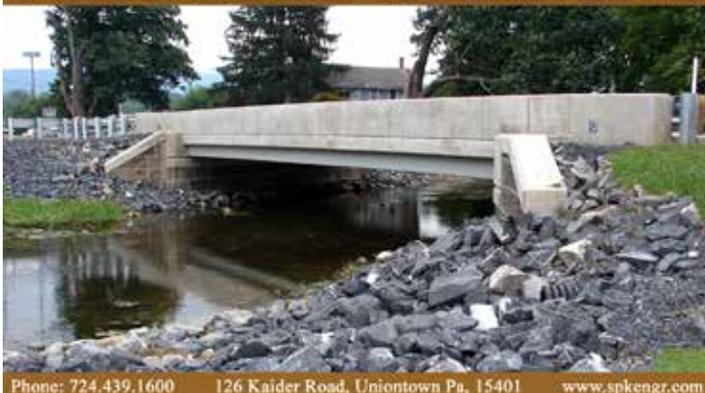
If you would like more information on how to put on your own Networking for Introverts Workshop, contact Jen Yoder, CPSM at yoderj@etminc.com. If you would like to find out how to host your own Networking for No Reason event, contact rachel@emraes.com. ♥

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New Miller Bridge Pleases Drivers and Pedestrians

by Bronson J. Funke, P.E. and Daniel P. Ficker, P.E., ASHE Triko Valley Section, Western Ohio



Palmer Engineering, with its team of subconsultants, worked with the City of Dayton, Ohio, to prepare the required alternative analyses for the replacement of the deficient through truss Miller Bridge carrying Bridge Street over Wolf Creek, about two miles west of downtown Dayton. Various bridge type alternates on alternative alignments were studied, including replacement at the existing Bridge Street location. The intent of a new alignment alternate was to extend Philadelphia Avenue to the south, over Wolf Creek. The city expressed a desire to connect this major north/south arterial in West Dayton with James H. McGee Boulevard, an arterial that connects to the U.S. Route 35 freeway. The existing truss bridge location on Bridge Street crossing Wolf Creek did not accomplish the connectivity goal. A CSX rail line, managed by the City, crosses just north of the north end of the structure and carries rail traffic to a redeveloped brownfield site.

Originally constructed in 1926, the existing truss bridge carried both vehicular and pedestrian traffic. The decision was made to replace the structure, based on its existing condition. The existing bridge had to be closed during the course of project development in 2007, due to its condition, which heightened the need for a replacement structure.

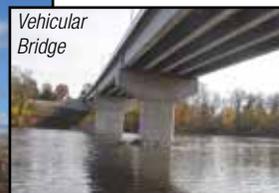


Once the new alignment was chosen, the bridge superstructure was designed as a two-span arrangement of 80 feet, and 118 feet, 3 inches, using seven AASHTO Modified 72-inch prestressed concrete I-beams. The pier and abutments are founded on steel H piles and cast in place concrete pile caps. The top of pier pile cap was placed approximately 8 feet below normal water elevation to mitigate anticipated scour. The bridge deck is composite concrete with 40 feet roadway width, two 10 feet sidewalks, and decorative railings. Conduits in the sidewalk deck provide lighting and future use by communications utilities.

Recent bridge replacement projects along Wolf Creek experienced significant cost overruns in the driving of steel H-Piling. Soil characteristics at the proposed bridge site were found to be similar to the problem sites. Through analysis and discussions with the City of Dayton and the consultant team, a pile installation design and monitoring plan

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was developed to control costs associated with the piling. This plan, along with construction engineering, resulted in minimal changes to the piling during construction, saving costs that would have otherwise been generated by piling change orders.

During the early stages of construction, an existing 48-inch interceptor sewer was found to interfere with the proposed pier foundation. The design of the bridge was quickly modified and re-analyzed. It was decided to keep the same span lengths but flip the span arrangement. This decision moved the pier from atop the existing sanitary sewer and allowed most of the developed details in the bid documents to be retained, saving re-design costs.

The project included construction of a new intersection with James H. McGee Boulevard and extended Philadelphia Drive with modifications to the median for left-turn lanes and a new traffic signal. A new intersection was created with Riverview Avenue and relocated Philadelphia Drive that included a new traffic signal. The City of Dayton engineering department designed the traffic signals.

The extended Philadelphia Drive was constructed with a new grade crossing of the railroad spur line. A low-maintenance, rubberized crossing material was selected, as well as high-visibility railroad crossing gates.

Aesthetics played an important part in the project. During public involvement activities, several railing types and lighting options were reviewed and voted on by the area neighborhood priority board. The new bridge has a cohesive look, since the decorative lighting on the bridge and the aesthetic railing complement one another. In addition, pedestrian overlooks were provided at all four corners of the bridge approach that included plaques commemorating the truss bridge that was replaced.

The new structure improves pedestrian access and safety by providing wide sidewalks and amenities. The new bridge was constructed on a much-improved alignment over the old bridge location. Motorists will have improved sight distance at the intersections and improved safety at the rail crossing.

The \$3.45 million dollar project was completed in less than one year in 2010. The new bridge and roadway approaches were open to traffic January 11, 2011. 🇺🇸

PROJECT CREDITS:

Owner: City of Dayton, OH

Engineer: Palmer Engineering Company, Blue Ash, OH

Traffic Signal Design: City of Dayton, OH

Lighting Design: Eggemen Engineering and Consulting, New Carlisle, OH

Geotechnical Engineering: Bowser Morner, Dayton, OH

Contractor: Eagle Bridge, Sidney, OH

AsTheWorldTurns

ASHE Members on the Move!



GAI Consultants Adds Experienced Engineering Manager ASHE Pittsburgh Section

Steven Lowden Joins National Engineering Firm

Pittsburgh, Pa. – Engineering and environmental consulting firm GAI Consultants, Inc. (GAI) welcomes Engineering Manager Steven D. Lowden, P.E. to the company's Power Generation Group within its Energy Business Unit. Steve brings more than 23 years of experience specializing in geotechnical engineering and project management for a variety of clients, including the Pennsylvania Department of Transportation, the Pennsylvania Turnpike Commission, the Department of the Navy and the U.S. Army Corps of Engineers.

"We are pleased to have Steve join the project management team in our Geotechnical Engineering Group," said Senior Director Gary Brendel, PE. "Steve's extensive

geotechnical knowledge and experience with diverse clientele will allow us to meet the ever-changing demands of our clients."

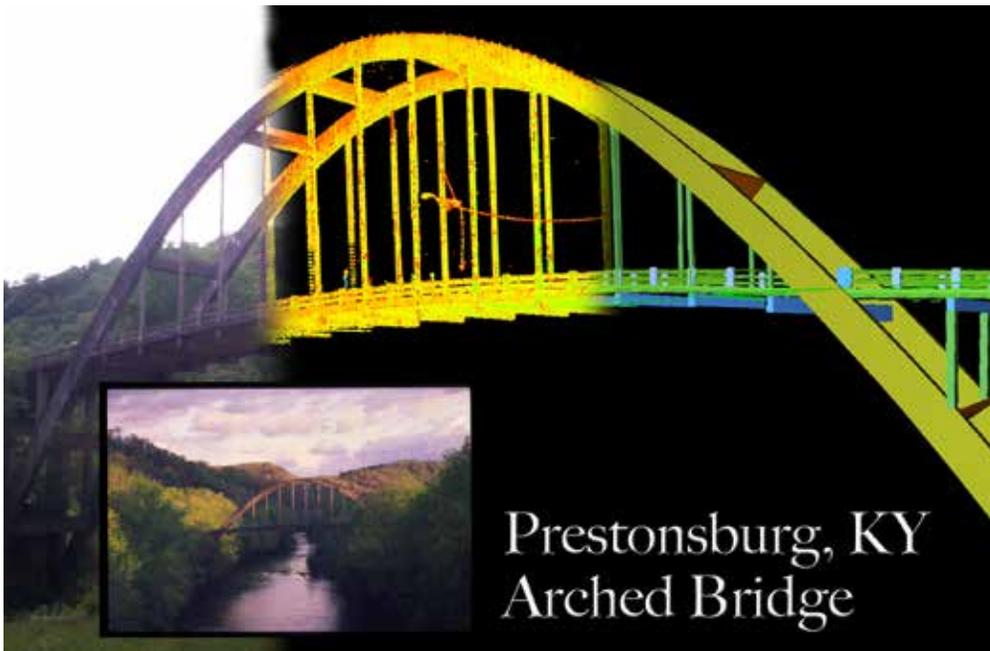
In addition to Steve's experience with the design and management of a multitude project types for a variety clients, he has been involved with the development and implementation of regional and national business development plans and corporate strategic plans.

Steve holds a Bachelor of Science degree in civil engineering from Penn State and is an active member of the American Society of Civil Engineers (ASCE), Geo-Institute (Vice-Chairman), Deep Foundations Institute and American Society of Highway Engineers (ASHE). Steve serves GAI's energy clients from the firm's corporate office in Pittsburgh, Pennsylvania.

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News From Across ASHE-Miles

ASHE Georgia Section Holiday Gathering Hauls in More Toys for Tots

In December, the ASHE Georgia Section held its annual holiday party, a popular social event that is free for members and guests. Not only is the event a chance for ASHE Georgia members to celebrate the holiday season, but it also provides members with an opportunity to contribute to Toys for Tots. This past year, ASHE Georgia members contributed more than 100 toys. The Section had the honor of hosting Tom Morisi, National President, and Sam Mody, First Vice President, at the holiday party. ASHE Georgia Board members enjoyed getting to know Tom and Sam, and look forward to working with them in the future.



L to R: Nikki Reutlinger, ASHE National Director; Karyn Matthews, Director; Brian O'Connor, First Vice President; Tim Matthews, ASHE National New Section Chair; Scott Jordan, Southeast Region President; Mindy Sanders, Secretary; Sam Mody, National First Vice President; Tom Morisi, National President; Rick Strickland, Co-Treasurer; Richard Meehan, Treasurer; Ron Osterloh, Past President; Shawn Fleet, Director

ASHE Middle Tennessee Section Helps Salvation Army Play Santa

The Middle Tennessee Section of ASHE held its annual event for the Salvation Army Angel Tree on December 14, 2013. More than 30 people represented ASHE, lending a helping hand to the Salvation Army to organize gifts so that others less fortunate had something to look forward to on Christmas morning. This is the third consecutive year that the Middle Tennessee Section has participated, and each year more people have joined in to help. The Section is already looking forward to next year's event, seeking ways to increase our participation and community involvement efforts.



Sharon Schultz (left) and Leanna Whitwell from the Middle Tennessee Section helped assemble toys and other gifts for distribution during the holiday season by the Salvation Army.

ASHE Northeast Florida Section Collaboration for a Good Cause

by Jennifer Yoder, CPSM Director of Business Development, England-Thims & Miller



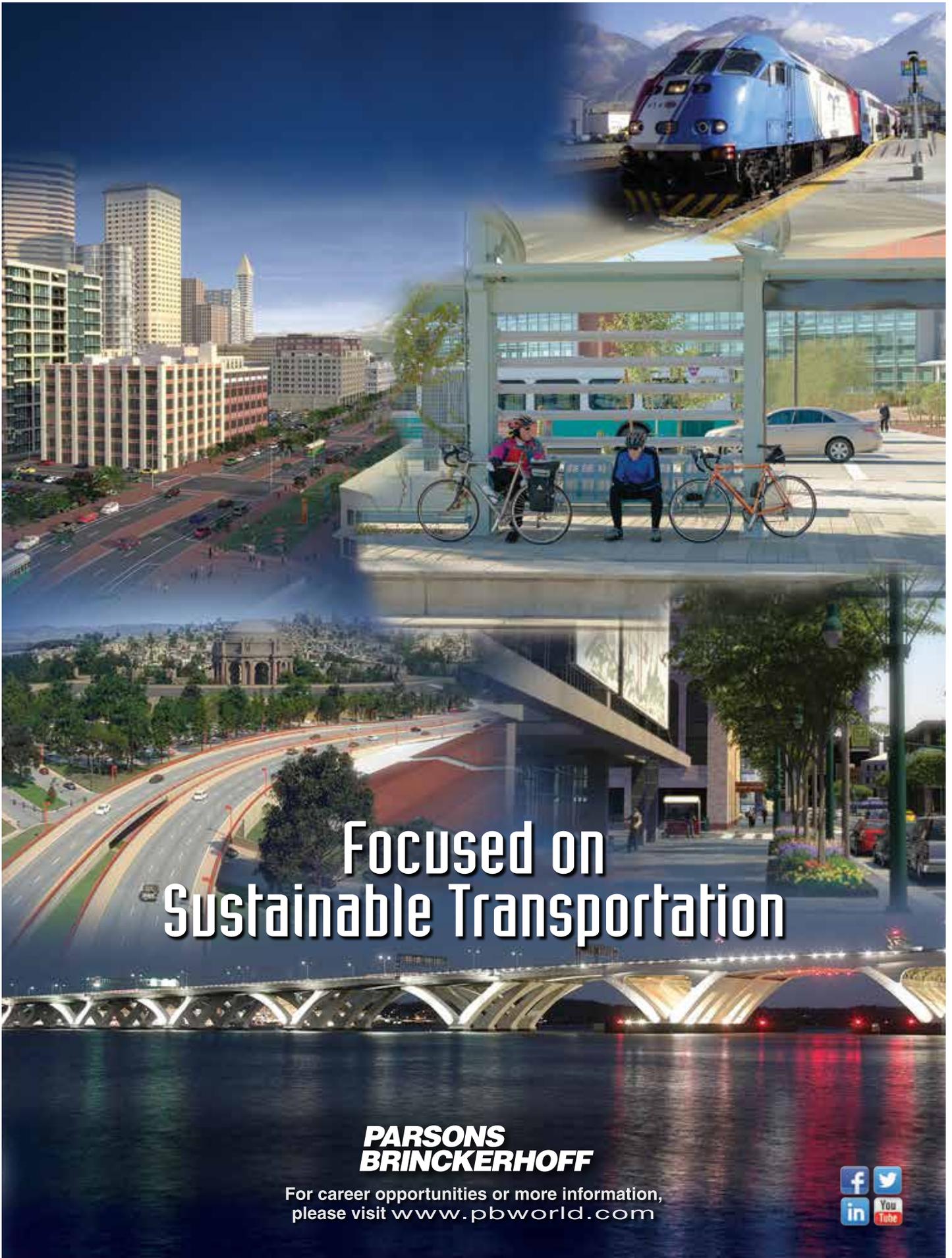
Each December, many organizations compete to attract the same attendees to their holiday functions, often during the same two-week time frame. As a result, the Northeast Florida Section of ASHE decided to bring the building industry together to celebrate the season while giving back to the community.

These six professional organizations, two public agencies, two non-profit and two for-profit organizations collaborated to hold the First Annual Northeast Florida Building Industry Holiday Fundraising Gala, drawing more than 200 attendees.

The Gatsby Gala, held in Jacksonville on December 12, had a 1920s theme. Attendees enjoyed a casino, art gallery, photo stations with vintage props, cigar station and a DJ playing '20s-style music along with contemporary songs. There were hors d'oeuvres, desserts and a cash bar featuring 1920s-style drinks.

The fundraiser raised \$9,500 for the North Florida Juvenile Diabetes Research Foundation—and all 2013 event partners have signed on to participate in the 2014 gala. Many other professional organizations have also asked to take part. Join us for our 2014 gala December 11 in Jacksonville and rock your ugly Christmas sweater!





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The American Society of Highway Engineers (ASHE) will hold its 2014 National Conference in Bismarck, ND from June 12-15, 2014. The conference provides the opportunity for companies to network and build strong professional relationships.

The planning committee is focused on providing ASHE members, their families and professionals with an enjoyable and memorable experience throughout the conference. Enjoy outdoor activities, history, culture and several planned events and outings to make your conference even more enjoyable.

Enjoy a full day in Theodore Roosevelt National Park, an untouched area of beauty resting in the Badlands of North Dakota where you can enjoy wildlife in natural habitats and spend time away from the city. Medora is home to a world-class musical set to the backdrop of the majestic Badlands along with Bully Pulpit, a golf course attracting golfers from around the world and offers one of the greatest scenic views in the state.

A trip to North Dakota wouldn't be complete without hopping aboard the Riverboat Excursion on the Missouri River. Enjoy the scenery and appetizers provided by the Lewis and Clark Riverboat, all while relaxing and soaking up the sun.

Travel back in time to the Lewis and Clark Interpretive Center and Fort Mandan, located north of Bismarck along the Missouri River. Fort Mandan, the winter home of the Lewis and Clark Expedition from 1804-1805, includes fully-furnished quarters that portray what life was like for the brave adventurers on their way to map and explore the newly acquired Louisiana Purchase.

In addition to scheduled activities and outings, families are encouraged to explore the city of Bismarck and visit:

- Dakota Zoo
- Raging Rivers Water Park
- Sertoma Superslide Amusement Park
- Downtown Bismarck
- North Dakota Heritage Center
- Former Governor's Mansion

For more information or to view conference details, visit

WWW.2014.ASHE.PRO





2014 ASHE
National Conference
Ramkota Hotel
Bismarck, ND
June 12-15, 2014

REGISTRATION FORM

Register online or get more information at WWW.2014.ASHE.PRO

LAST NAME		FIRST NAME		COMPANY	
STREET ADDRESS		CITY		STATE	
PHONE		CELL PHONE		EMAIL ADDRESS	
YES NO		ASHE MEMBER		ASHE SECTION	
SPOUSE/GUEST		LAST NAME		FIRST NAME	
NAME AS YOU WOULD LIKE IT TO APPEAR ON THE BADGE		COMMENTS OF SPECIAL NEEDS (ACCESS/DIETARY)			
SPOUSE/CHILDREN NAME AS YOU WOULD LIKE IT TO APPEAR ON BADGE		COMMENTS OF SPECIAL NEEDS (ACCESS/DIETARY)			
SHIRT SIZE(S) – Adult(s) (yours/spouse/guest) and Child sizes (guest/guest/etc...)					

Check One	Post Marked on or before 5/6/2014	Post Marked after 5/6/2014	Total
ASHE MEMBER	\$165	\$215	
NON-ASHE MEMBER	\$225	\$275	
ASHE MEMBER 1 DAY REGISTRATION	\$100	\$100	
NON-ASHE MEMBER 1 DAY REGISTRATION	\$125	\$125	
GUEST/CHILD 10 & OVER	\$25	\$25	
GUEST/CHILD 13 & under - # attending and age(s)	# Age:		N/C
EXHIBIT (Purchase of an exhibit space includes two full registrations)			N/C
SPONSOR (Qualify for full registration)			N/C
SPEAKER (Qualify for free one day registration)			N/C
There is no charge for children under 10	CONFERENCE REGISTRATION SUBTOTAL		\$
	*GOLF REGISTRATION SUBTOTAL		\$
	**ACTIVITIES REGISTRATION SUBTOTAL		\$
	GRAND TOTAL		\$

* Transfer golf registration total from Golf Registration Form
 ** Transfer Activities registration from Attendance and Activities Form
 Registrants are responsible for their own hotel accommodations.
 Make Checks payable to: "ASHE 2014"
 Cancellation Policy: No refunds will be issued after May 6, 2014.

Mail completed form to: Ardin Striefel
 NDDOT - Local Government Division
 608 East Boulevard Avenue
 Bismarck, ND 58505-0700
 aстриefe@nd.gov



ATTENDANCE AND ACTIVITIES REGISTRATION

Yellow Background: # attending(if any)/cost necessary

Green Background: PDH/CEC eligible

Activities are open to all registrants unless otherwise specified. One-day registrants may attend any activities that specific day unless otherwise specified.

Time	Event	Cost	# Attending	Total
TUESDAY JUNE 10, 2014				
5:00 pm – 7:00 pm	Registration Desk & Hospitality Open			
WEDNESDAY JUNE 11, 2014				
8:00 am – 9:00 am	Hospitality Room/Breakfast Open			
8:00 am – 10:00 am	Registration Desk & Hospitality Open			
9:15 am – 2:00 am	Medora Trip	\$185.00		
11:30 am – 12:30 pm	Lunch	(included in trip cost)		
12:30 pm – 6:00 pm	Bully Pulpit Golf – 18 holes (teams assigned onsite)	\$85		
	Explore Historic Medora (included in cost), Trail Rides – ages 6 and up (\$30 each) Theodore Roosevelt National Park (included in cost)	\$30 each for Trail Rides only		
	6:15 pm	Pitchfork Fondue	(included in trip cost)	
8:30 pm	Medora Musical	(included in trip cost)		
11:30 pm – 2:00 am	Travel to Bismarck	Included		
5:00 pm – 7:00 pm	Registration Desk & Hospitality Open			
THURSDAY JUNE 12, 2014				
6:00 am – 8:00 am	Hospitality Room/Breakfast Open			
7:00 am – 2:00 pm	Golf Tournament at Hawktree	\$80	Use Golf Reg. Form	
8:00 am – 9:00 pm	Registration Desk Open			
2:00 pm – 5:00 pm	Missouri Riverboat Excursion	\$35		
6:00 pm – 9:00 pm	Ice Breaker/Welcome Party	Included		
6:00 pm – 8:00 pm	Children's Program (ages 13 and under)	Included		
9:00 pm – 12:00 am	Hospitality Room Open			
FRIDAY JUNE 13, 2014				
7:00 am – 8:00 am	Breakfast in Exhibit Area	Included		
7:00 am – 4:00 pm	Exhibits Open	Included		
7:00 am – 6:00 pm	Registration Desk Open			
8:00 am – 9:30 am	Opening of Conference/Keynote Address	Included		
9:30 am – 10:00 am	Break	Included		
9:30 am – 4:00 pm	Shuttles to local attractions	Included		
10:00 am – 11:00 am	Technical Session 1A – Access Management	Included		
	Technical Session 1B – Accelerated Bridge Construction (ABC)	Included		
	Technical Session 1C – Hoover Dam Bypass Case Study	Included		

ATTENDANCE AND ACTIVITIES REGISTRATION

Yellow Background: # attending(if any)/cost necessary

Green Background: PDH/CEC eligible

Activities are open to all registrants unless otherwise specified. One-day registrants may attend any activities that specific day unless otherwise specified.

FRIDAY JUNE 13, 2014

Time	Event	Cost	# Attending	Total
11:00 am – 12:00 pm	Technical Session 2A – LiDar & Pvmnt Data Collection	Included		
	Technical Session 2B – NDDOT Multi-Modal plan	Included		
	Technical Session 2C – MN I-35 Bridge Collapse Case Study	Included		
10:00 am – 12:00 pm	Section & Regional Presidents/Treasurers/ Secretaries Forum by National Board Members	Included		
10:00 am – 12:00 pm	CEU Training Offered by National	Included		
12:00 pm – 2:00 pm	Luncheon for all attendees/guests honoring National Past Presidents/Robert E Pearson Award (*free for Nat'l Past Presidents & their families)	\$35*		
2:00 pm	National Past Presidents' Meeting	Included	National Past Presidents only	
2:00 pm – 3:30 pm	Technical Session 3A – Bluetooth use in the Highway Industry	Included		
	Technical Session 3B – Roadway Performance & new NOIAA maps	Included		
	Technical Session 3C – Asset Management	Included		
2:00 pm – 4:00 pm	Heritage Center Tour	Included		
3:30 pm – 4:00 pm	Break	Included		
4:00 pm – 5:00 pm	Technical Session 4A – SDDOT Decennial Interstate Study	Included		
	Technical Session 4B – Divergent Diamond Interchanges	Included		
	Technical Session 4C – Claims Avoidance	Included		
5:00 pm – 5:45 pm	Multiple shuttles to Buckstop Junction	Included		
6:00 pm – 9:00 pm	Host Section Reception & Dinner at Buckstop Junction	\$60 Adults \$20 for ages 17 and under.		
9:00 pm – 12:00 am	Hospitality Room Open			

SATURDAY JUNE 14, 2014

7:00 am – 8:00 am	Breakfast	Included		
7:00 am – 10:00 am	Registration Desk Open			
10:00 am – 3:00 pm	Trip to Fort Mandan w/bag lunch	\$25.00		
9:30 am – 12:00 pm	Memorial Bridge & Bismarck Water Intake Technical Tour	\$15		
1:30 pm – 4:00 pm	Cretex Pre-Cast Factory Technical Tour	\$15		
5:00 pm – 6:00 pm	President's Reception/Cocktail Party	Included		
6:00 pm – 8:00 pm	Annual Banquet (business attire)	\$60 Adults \$20 for ages 17 and under.		
9:00 pm – 11:30 pm	Entertainment – Joe Friday Band	Included		

SUNDAY JUNE 15, 2014

7:00 am – 8:00 am	Continental Breakfast	Included	Hotel Registrants Only	
8:30 am – 10:30 am	Conference Debriefing	Included	Invitation Only	
8:30 am – 12:00 pm	National Board of Directors Meeting	Included	Invitation Only	
12:00 noon	Check Out Time – No Scheduled Activities			
			Total	

For more information or to view conference details, visit

WWW.2014.ASHE.PRO





HAWKTREE GOLF CLUB

3400 Burnt Creek Loop
 Bismarck, ND 58503
 www.hawktree.com

Thursday, June 12, 2014

Registration Begins 7:00 a.m. – Shotgun starts 8:00 a.m.

GOLF OUTING

Register online or get more information at WWW.2014.ASHE.PRO

GOLFERS

TEAM CAPTAIN	First Name:	Last Name:
	Email:	Company:
GOLFER NAME	First Name:	Last Name:
	Email:	Company:
GOLFER NAME	First Name:	Last Name:
	Email:	Company:
GOLFER NAME	First Name:	Last Name:
	Email:	Company:

DRESS CODE: Collared shirts and soft spikes are required.

NOTE: Priority will be given up to May 16, 2014 to golf outing foursomes that have at least two conference registrants, or individual golf outing registrants who are also conference registrants. After May 16, 2014, any remaining openings will be made available to interested foursomes and individuals not registered for the National Conference based on the chronological order payment is received.

INCLUDES Lunch after the tournament in the clubhouse.
 Skill and door prizes will be awarded at the event.
 Transportation will be provided.

Number of golf registrations _____ x \$80 = \$ _____
 Golf Hole Sponsor (logo displayed on sign at tee) _____ x \$150 = \$ _____

Golf Subtotal \$ _____

Transfer subtotal to the conference registration form.

Club rentals are available through Hawktree Golf Club
 Call: (701) 355-0995 for pricing and availability
 For questions contact Dale Schwindt – Golf Committee Chair at dschwindt@cretex.com
 Cancellation Policy: No refunds will be issued after May 6, 2014

For more information or to view conference details, visit

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| <input type="checkbox"/> Hospitality Suite Sponsor - \$1,000 | <input type="checkbox"/> Hole Sponsorship - \$150 |
| <input type="checkbox"/> President's Reception Sponsor - \$1,000 | |

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| <input type="checkbox"/> Half Page - \$300 |
| <input type="checkbox"/> Quarter Page - \$150 |

All advertisements must be received no later than May 14, 2014.

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Email: _____

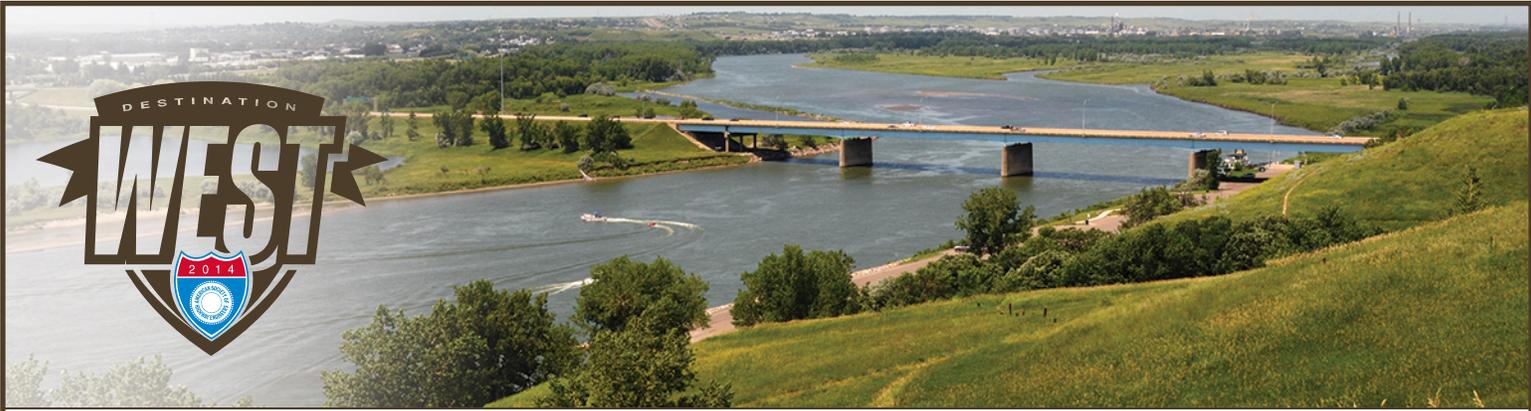
Company website: _____

Contact Name: _____

For more information or to view conference details, visit

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Please provide the name and email of attendees who will use the two complimentary registrations:

Name: _____ Email: _____

Name: _____ Email: _____

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Please contact Dale Schwindt at dschwindt@cretex.com or at 701 471 6261 by April 1, 2014 to register your complimentary golf foursome.

PAYMENT METHOD:

Enclosed is my check payable to ASHE 2014

Authorized Signature: _____

Print Name: _____

Title: _____

Signature Date: _____

Email: _____

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2014 ASHE National Conference

Attn: Laura White - KLJ

PO Box 1157

Bismarck, ND 58502-1157

Ph: 701 355 8774

laura.white@kljeng.com

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Overarching Achievement: New Bridge Crowns Ohio's Capital City

by John Shanks, PE, Burgess & Niple, Inc. *ASHE Central Ohio Section Member*

As the City of Columbus, Ohio, ushered in its bicentennial in 2012, the landmark Rich Street Bridge crowned downtown when it opened that same year. This iconic structure completes the transformation of Columbus' riverfront area, which has been under development for more than three decades.

Community Connection

The 563-foot modern rib arch structure was designed by Burgess & Niple (B&N). Built on a new alignment to replace the deteriorating Town Street Bridge, the Rich Street Bridge improves connectivity downtown and will help bolster economic development.

The new span complements the City's historic district while blending with the family of arch bridges along the Scioto River. The Rich Street Bridge features:

- A modern precast open rib arch design.
- Five spans and three lanes.

- A slender, open design that provides more transparent views and reduces flooding impacts.
- Architectural lighting above and below the bridge deck.
- Pedestrian-friendly amenities, such as wide sidewalks and plazas.
- Utilities integrated in the bridge railing and sidewalk for use during festivals and community events.

Smart, Strong and Stunning

B&N engineers made refinements during the design process that shortened construction by seven months and reduced estimated project costs by \$10 million. Design innovation and benefits include:

- **Time and cost savings** –The varied sizes of bridge arches were designed to be fabricated from one common adjustable form, which saved both time and money. Bridge apex and drop-in segments were also fabricated, using multi-use adjustable forms.

Using lightweight precast concrete arch ribs instead of cast-in-place folded plate arches (as originally planned) decreased the construction time.

Costs were further reduced by eliminating the need to construct temporary formwork in the river channel during bridge construction and trimming the width of the bridge deck.

- **Maintenance-friendly** –With the pre-stressed, post-tensioned, fully continuous five-span frame design, there aren't any intermediate joints in the bridge, which helps prevent corrosion.

The use of precast elements resulted in a more durable structure, which reduces maintenance costs. Elements precast in a controlled environment have improved concrete quality, with higher strength, and superior architectural appearance.

- **Reduced flooding impacts** –The rib arches have a slender and open design that improves river flow during flooding events and reduces flooding impacts.

PROJECT OF THE YEAR WINNER Over \$3 Million in construction costs



• **Deadline-driven** –The bridge location was realigned and landed within park boundaries after initial environmental documentation was approved. B&N quickly addressed numerous environmental impacts and collaborated with federal, state and local agencies. Environmental documentation and bridge design were developed simultaneously to meet project deadlines.

An Evolution in Concrete Bridge Design

The Rich Street Bridge advances the evolution of concrete bridge design. The use of lightweight precast beam, arch rib and arch apex segments stitched together with a combination of pre-stressing and field post-tensioning created the fully continuous frame, eliminating intermediate expansion joints and spandrel columns.

A Downtown Destination

The landmark Rich Street Bridge opened to more than 400,000 pedestrians strolling the Columbus Arts Festival in June 2012 and eyeing the sky for fireworks during the city's July 4th Red, White & Boom celebration.

During his comments at the bridge-opening ceremony, Columbus Mayor Michael B. Coleman called the Rich Street Bridge a history-making structure that is connected to the economic development of the community.

"It's a beautiful bridge," noted Mayor Coleman. "And our goal is to make the city better in every way... this bridge will certainly be a part of making our city the best city in the nation to live, to work and to raise a family."

B&N provided bridge engineering and design, lighting design, roadway and utility design, environmental services and on-call construction services. Project partners included Leonhardt, Andrä und Partner (structural engineering), Bridgescape LLC (architectural design), Prime Engineering and Architecture (substructure design), and Kinzelman Kline Gossman (landscape design). 🇺🇸



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New Directions

(continued from page 3)

in January 2014. The Executive Board enlisted input from a number of individuals throughout the organization who have had an instrumental role in moving their Section or Region forward. The analysis was conducted by Robert Muir, PE, Ph.D., a longtime ASHE member and contributor. It was an intense one-day workshop conducted in Pittsburgh (yes, Pittsburgh in January). The analysis served to both confirm known areas of concern and to determine what ASHE is doing right. All in attendance agreed this was a valuable tool to reflect on ASHE as a whole and decide what changes are needed to make us a viable organization for years to come. We will take the results of this SWOT Analysis, work any recommendations into our Strategic Plan and adopt a list of Action Items with deadlines to meet the needs identified during the analysis. As of this writing, the Action Items were not yet developed. Please look for an article on the SWOT analysis and its results in a future issue of the SCANNER.

As usual, this issue of the SCANNER has a complete itinerary for the 2014 Conference and a registration form. The Conference Committee in the Central Dacotah Section has worked hard to plan a conference that will prove beneficial to our members. Please consider attending the conference and making it a family destination or vacation. If you have never been to North Dakota, you don't know what you are missing. I had the privilege several years ago to tour the conference site and the surrounding area. It is amazing and will provide a positive experience for all who attend. This will be part of my family vacation this year, and I hope you will make it part of yours.

Finally, it was an honor to serve as your National President during a busy and challenging year, and I hope the organization has benefited under my leadership. I know that I, as an individual, have grown and have met many new people throughout the country, resulting in friendships that I hope will last a lifetime. The members and leadership of our organization are bright, talented individuals, and it has been an honor serving with all of you. Thank you very much for your support, and I wish the best for ASHE in the future. 🇺🇸



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PROJECT OF THE YEAR WINNER
Under \$3 Million in construction costs

Innovation, in a Roundabout Way

Cosgray Rd./Shier-Rings Rd.
Roundabout Project Honored by
ASHE Central Ohio Section

The City of Dublin, Ohio, and American Structurepoint were presented with the 2012 Project of the Year by the American Society of Highway Engineers (ASHE) Central Ohio Section for the design of the Cosgray Road/Shier-Rings Road Roundabout Project. The award criteria was based on the project's benefits to the public, complexity and innovation.

Safety was the driving force behind the roundabout project for the City of Dublin's Division of Engineering. The existing conventional intersection of Cosgray Road and Shier-Rings Road had a history of high-severity

injury crashes at more than double the rate of comparable intersections in the city. This was due to substandard lane widths, poor horizontal alignments and speed limits of more than 45 mph. The intersection is a primary access point to Darree Fields Park, a popular city park, which hosts events regularly and results in irregular periods of peak traffic volumes.

In addition to safety concerns, the project area had been experiencing severe drainage issues with extensive ponding during rainfall events. Improved drainage for the roadway, as well as the surrounding farmlands,

was one of the goals of this project.

To address these issues, the City of Dublin contracted with American Structurepoint to provide preliminary engineering and final design services for improvements to the Cosgray Road and Shier-Rings Road intersection. The project included a traffic analysis to study the feasibility of constructing a roundabout or traffic signalization, and other roadway improvements.

Final design consisted of a single-lane roundabout to replace



the existing conventional intersection. The roundabout offers continuous flow traffic to events with fluctuating attendance at the Darree Fields Park, and provides safety features through traffic calming and lowered accident potential. It also corrects a substandard horizontal deflection on Cosgray Road at the intersection and substandard lane widths. The continuous flow of roundabout traffic resulted in lowered vehicle emissions, as well as reduced travel times for drivers. In addition, roundabouts require less electrical power and have lower hardware and maintenance costs than traditional traffic signals. Also, the flow of traffic in the event of a power failure will still be fully operational.

The complex drainage design required on the project has opened up the area to the potential of future development for the city and the local community. The roundabout had to be built at an elevation that would allow the drainage to be collected above the existing water main by storm sewers and roadside ditches appropriately sized to handle the amount of stormwater runoff. The flat terrain of the entire project area now effectively drains to a 2,000-foot roadside ditch and empties into a natural stream, making the surrounding farmlands ready for future development.

The innovative roundabout design includes the capability of expanding the roundabout to two lanes in the future. Aesthetic and sustainable features on the project, in addition to the sustainable advantages of the roundabout itself, include LED lighting, BMP stormwater drainage, and design of an eight-foot path for cyclists and pedestrians to access the park. Nearby residents can also use the path provided between the Ballantrae neighborhood and Darree Fields Park, instead of driving to the park. The center island of the roundabout is also adorned by a 93-foot stone wall and landscaping features.

The \$1.1-million project was completed in November 2012. ❤️



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Drivers, Nature Lovers Welcome

by Kevin Kehres, PE, ARCADIS U.S., Inc., ASHE Cuyahoga Valley Section, Northeastern Ohio

A \$2.5 million project provides more safety and efficiency for drivers and park enthusiasts in Stark County, Ohio. The 0.37 mile-long improvement replaces a structurally deficient two-span steel truss bridge spanning the Tuscarawas River. It brings roadway geometrics up to current standards and provides a safe crossing for park trail users. The Stark County Engineer selected ARCADIS U.S., Inc., as the designer of record. Construction was completed by Wolf Creek Engineering & Contracting, Inc.

Riverland Avenue is a rural-local facility, designated as a scenic byway. The project is also located within a section of the existing Ohio & Erie Canal National Heritage Corridor. The nearly 100-mile-long towpath trail, connecting Cleveland to New Philadelphia, crosses Riverland Avenue at-grade just north of the bridge location. The trail is used annually by thousands of hikers, horseback riders and bicyclists.

The legal speed of Riverland Avenue is 55 mph; however, the design speed of the existing facility met only 30 mph in the vicinity of the bridge, due to sharp horizontal curves on the approaches. The existing bridge, built in 1913 and rehabilitated in 1957, had a general appraisal rating of three, as severe corrosion and section loss were prevalent at the joists, floor beams, stringers, bearings and railings. The existing center sandstone substructure pier unit was also in poor condition, with a scour hole on the leading edge.

A preliminary engineering study was conducted to determine the preferred bridge type and roadway alignment. This phase also included an evaluation of six roadway alignment alternatives, a structure type study and the completion of environmental studies and documentation. The final design included:

- A new continuous, three-span, galvanized steel beam with composite reinforced concrete deck structure

(30-foot, 4-inch toe/toe parapet, 200-foot long) was selected to replace the two-span welded Warren pony truss bridge (19-foot, 6-inch f/f rail, 184 feet long). The new structure was designed using LRFD and HL-93 loading, and is supported on concrete stub abutments on H-piles and wall type piers on drilled shafts. The hydraulic design provided for an appropriate bridge opening that passed the 100-year storm flow without raising the 100-year flood elevation, so as not to adversely affect the property owners along the south bank of the river. The structure has only one pier within the ordinary high water, consistent with the existing structure's single pier within the ordinary high water. Additionally, the galvanizing of the structural steel offers low maintenance requirements for this rural location.

- Nearly 2,000 feet of roadway realignment to provide a 55 mph design speed.
- 175 feet of the towpath trail reconstruction to create a new at-grade crossing with the relocated Riverland Avenue alignment. The new bridge incorporates a 10-foot vertical clearance in the northerly span to permit a future grade separation between the towpath trail and Riverland Avenue.

Aesthetics

Aesthetics were an important aspect of this project because of the park setting and the visibility of the bridge from the adjacent towpath trail. Disturbances of the riparian habitat, canal property and young successional forested areas were minimized to maintain harmony with the historic project area. Recessed panels were provided on the bridge parapets to provide a softening and appealing visual effect. Similarly, other aesthetic treatments included rustication grooves on the pier walls and painting of the galvanized fascia beams.

Project Challenges

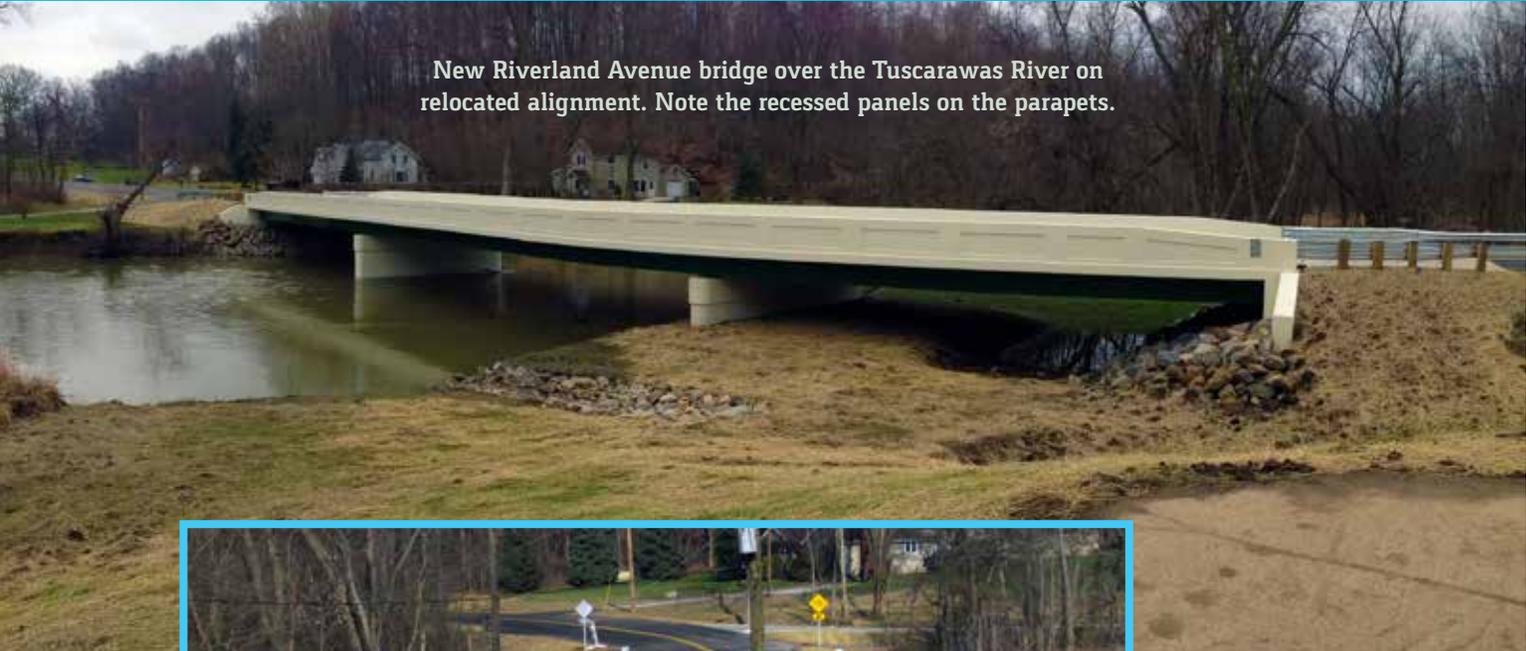
- **Bridge Foundation Design on Floodplain Soils** -The pier foundations

incorporated drilled shafts because of the proximity to bedrock (approximately 10 to 12 feet below the bottom of footer elevation). A temporary river causeway was required for construction of the pier within the ordinary high water. H-piles were specified for the abutment foundations.

- **Poor Roadway Geometrics** -1.5 acres of additional permanent right of way was acquired to realign and straighten the roadway by the use of more gentle horizontal curves (six degree maximum curves with spirals). The poor sight distance and geometrics of the existing project site were significantly improved to meet current design criteria and the 55 mph legal speed of the roadway.
- **Soil Conditions** -The project soils were poor, due to the flood plain deposits and presence of wetlands. Embankment construction required undercuts of unsuitable materials for depths up to five feet and replacement with geotextile fabric and granular fill material to avoid excessive roadway settlement.
- **Environmental Clearance** -The project location posed numerous environmental challenges, such as wetlands, cultural resources and four(f) implications with the canal property and towpath trail.
- **USACE Permitting** -a Section 404 Permit was required, due to the use of temporary and permanent fill in the Tuscarawas River and jurisdictional wetlands. Mitigation of 0.24 acres of disturbed Category Two jurisdictional wetlands was accomplished with the purchase of wetland bank credits.
- **Towpath Trail Crossing** -a new at-grade trail crossing was built while maintaining access to the trail.

The new roadway and bridge crossing significantly increases safety and efficiency for the Riverland Avenue traveling public and park trail users; it also meets current design standards, minimizes future maintenance requirements. 🇺🇸

New Bridge in Stark County, Ohio



New Riverland Avenue bridge over the Tuscarawas River on relocated alignment. Note the recessed panels on the parapets.



Relocated Riverland Avenue Bridge: New bridge has improved approach roadway geometrics.



Two span-welded Warren pony truss bridge on sandstone abutments and pier over the Tuscarawas River. The bridge was constructed in 1913.



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