

INSIDE THIS ISSUE

<i>Meet the Board</i>	2
<i>A Message from the President</i>	3
<i>Bayonne Bridge Cultural Resources Mitigation</i>	4
<i>Scholarship Golf Outing</i>	6
<i>Chapter News</i>	8
<i>Project of the Year</i>	10
<i>Summer Social Activities</i>	12
<i>Spotlight on Dewberry</i>	13
<i>Infrastructure Funding</i>	14
<i>Sponsors</i>	15
<i>Upcoming Events</i>	16



ASHE

Southern New Jersey



Fall 2018

MEET THE SNJ OFFICERS

Executive Board

President
Matt Bencoter, PE



mbencoter
@hardesty-hanover.com

Vice President
Mike Frabizzio, PE



mfrabizzio@aidpe.com

Secretary
Heather Jones, PE



hjone@arh-us.com

Treasurer
Joseph Macios, PE



joemacios@hotmail.com

Past President
Lori Wade



lwade@mbakerintl.com

Board of Directors

Membership
Chris Gentz



chris.gentz@wsp.com

Sponsorship/Venues
Amy Sokalski, PE, PTOE, PTP



asokalski@mccormicktaylor.com

Education
Richard Grubb



rgrubb@rgaincorporated.com

Website
Rémy Donahey



remy.donahey@gmail.com

Regional Director
Joseph Danyo, PE



jdanyo@mbakerintl.com

Public Relations
Chris Donahey, PE



cdonahey@gpinet.com

Public Relations
Phil Thompson



Pthompson
@hardestyhanover.com



A Message from Matt Benscoter ASHE SNJ President 2018

Welcome to the start of another great year here at ASHE SNJ. As with the start of every new ASHE SNJ season, there are changes to the ASHE SNJ Executive Board and Board of Directors. I will be succeeding Lori Wade as president for 2018-2019. I hope I can follow up and lead to the standards that she set during her presidency. Lori - Thank you for all your efforts last year and your guidance over the past year. Mike Frabizzio will step into the Vice President position.

Joining the Board of Directors this year will include Chris Gentz of WSP and Phil Thompson of Hardesty & Hanover. Chris will take over the Membership Committee from Richard Grubb. Phil is assuming the role of PDH Coordinator. Chris and Phil are both well respected structural engineers for their respective companies. The Executive Board is looking forward to their ideas and fresh input moving forward.

Richard Grubb has graduated from Membership Chair to lead a newly formed Education Committee to continue his outreach to students. I'd like to thank Richard for his efforts over the years with the Membership Committee. His efforts increased our membership up to 160+ members and added two student chapters. To think it all started with this "Uncle Richard" picture in a mass emailing.



Steve Forney of Michael Baker International and George Zimmer of WSP will take over the Golf Committee. Steve and George volunteered last year to help with the Scholarship Golf Outing. The Golf Outing was one of the most widely attended outings that we had in recent

years and raised close to \$10,000 for the Scholarship Fund. With results like that, there was no need for long confirmation hearings for their appointments.

Along with changes to the board, we are planning two joint dinner meetings with our student chapters at Mercer County Community College (MCCC) and Rowan University. The presentations will be held on their campuses to give our members a chance to meet with students and faculty.

Our first dinner meeting will be a presentation by Snehal Patel, NJDOT Assistant Commissioner, Capital Program Management (CPM) at our joint meeting with ASHE NCNJ held at the Cranbury Inn on September 13th. Snehal was recently appointed by the new NJDOT Commissioner, Diane Gutierrez-Scaccetti. Snehal will present NJDOT's Capital Program for this fiscal year. Prior to his presentation, we are fortunate to have Assemblyman Daniel R. Benson speak with us about the Transportation and Independent Authorities Committee which he currently serves as the Chair.

As you can see, there are changes going on throughout ASHE SNJ and NJDOT. Attending our monthly meetings, will benefit you to keep up with these changes. I hope to see you there.

Regards,

A handwritten signature in black ink, appearing to read "Matt Benscoter".

Matthew Benscoter

ASHE SNJ President 2018-2019

Spotlight On Richard Grubb and Associates

The Bayonne Bridge and “Big Bridge” Cultural Resources Mitigation

In 2019, the Bayonne Bridge will fully reopen to traffic, marking the completion of the Bayonne Bridge Navigational Clearance Program. The program rebuilt the bridge’s suspended roadway, raising it 64 feet. The heightened roadway allows the world’s largest container ships to pass beneath this historic bridge, maintaining the competitiveness of the Port of New York. The rehabilitation design enabled the Bayonne Bridge’s iconic steel arched span to remain intact, while the roadway and approach spans (5,780 feet in total) were completely rebuilt for modern highway and pedestrian use.

Since 1931, the Bayonne Bridge connecting Staten Island, NY to Bayonne, NJ has played a vital role in the Port Authority’s management of vehicular and shipping traffic through the metropolitan area. The Bayonne Bridge was determined eligible for listing in the National Register of Historic Places. The proposed changes constitute an adverse effect to the historic structure requiring mitigation.

Historical Background

The Bayonne Bridge designed by Engineer Othmar Ammann (George Washington Bridge and Architect Cass Gilbert (U.S. Supreme Court, Woolworth Buildings), was developed to help funnel vehicular traffic from Staten Island to Manhattan via the Holland Tunnel. The Bayonne Bridge was the newly formed Port Authority’s fourth bridge project, opening just three weeks after the George Washington Bridge, and three years after the Goethals Bridge and Outerbridge Crossing. The complexities of the site, including the width of the Kill Van Kull



and the structural capacity necessary to carry a proposed commuter railroad, coupled with Amman’s sense of aesthetics, inspired him to create the iconic arch design. When completed, it was the largest arched bridge in the world and remains the fourth largest. The great steel arch, spanning 1,675 feet and reaching a height of 325 feet, suspended the roadway deck with steel cables. This design allowed the Kill Van Kull, a major shipping channel, to remain open. Indeed, its 151-foot clearance enabled the largest ships to pass beneath, even during construction. The bridge opened in November 1931, four months ahead of schedule. Its \$13,000,000 cost was \$3,000,000 under budget.

Raise the Roadway

In 2016, the landscape of global maritime trade shifted with the expansion of the Panama Canal. Taller container ships with larger cargo loads – called new “Panamax” vessels – are now able to pass through the Panama Canal. The original deck of the Bayonne Bridge was too low to accommodate these huge ships. Without replacement, the Port’s competitiveness would be compromised. The Port Authority came up with a daring alternative, to remove and rebuild the bridge’s suspended roadway 64 feet higher over the Kill Van Kull, and preserve much of the ageing icon. The new roadway height of 215 feet would be high enough to accommodate the new Panamax vessels, plus the channel would remain open during construction. The design required new approach spans at both ends and the enlargement of the support towers. The modifica-



PORT OF NEW YORK AUTHORITY BRIDGE, BAYONNE, N. J.

Bayonne Bridge Cultural Resource Mitigation

tions to the historic appearance of this National Register-eligible structure, necessitated mitigation against the adverse effects through Section 106. The Bayonne Bridge is a major component of one of the nation's most important transportation networks and port facilities. Its value is heightened by the cultural significance of its design and designers. It was important that the mitigation be commensurate with the bridge's significance.

In 2013, a Programmatic Agreement for the Bayonne Bridge Navigational Clearance Program was signed, where the U.S. Coast Guard, as the lead federal agency, is responsible for fulfilling compliance responsibilities for Section 106. The project is administered jointly by the New York and New Jersey State Historic Preservation Offices. The Agreement stipulates recordation, archival documentation, and education materials, among other products.

"Big Bridge" Project Stipulations

As the nation's infrastructure ages, and large, historic bridges need replacement or reconstruction, similar historic mitigation should be accounted for

in the early planning process. Large, historic bridges, regardless of appearance, are often listed on or eligible for listing on the National Register of Historic Places. Agencies should be prepared to comply with stipulations aimed at mitigating adverse effects. Major changes to an existing bridge or the replacement of a "big" bridge may require an inordinate amount of mitigation. These bridges are often extremely significant pieces of engineering, highly visible, or iconic landscape features, and part of a wider historic narrative of a region.

The Port Authority retained the cultural resources consulting firm of Richard Grubb Associates, Inc. (RGA) of Cranbury, New Jersey, to manage the project compliance requirements for the Bayonne Bridge. RGA is one of the largest cultural resource management firms in the Northeast and Mid-Atlantic with the capabilities to provide most of this required work in-house. RGA worked closely with the Port Authority project team to produce materials designed to stand the test of time, much like the Bayonne Bridge. RGA is a sponsor of and active participant with ASHE SNJ.



2018 Scholarship Golf Outing



Every year, one of ASHE SNJ's most anticipated events is the Golf Outing to raise scholarship money for young engineers who reside in the South Jersey area. This year, we were pleased to award three (3) \$2,500 scholarships. The recipients were Gabrielle Wickizer (Rowan University), Samantha Price (Rowan University), and Madison Pullen (Mercer County Community College). For the third consecutive year, the tournament was held at Ramblewood Country Club with an impressive turnout of 81 golfers and 22 hole sponsors. With the support and donations from this year's golfers and sponsors, we were able to raise \$9,500 toward our annual scholarship fund.

A fun round of 18 holes on the beautiful course was followed by lunch, a 50/50, and a raffle prizes that included Phillies tickets, Flyers tickets, golf clubs, and more! After another toasty year on the course, we would like to thank everyone who came out to support such a meaningful cause. We would also like to congratulate this year's winners from Taylor Wiseman and Taylor: Thomas Costello, Doug Freudenrich, Kevin Rafferty, and Joe Wittman. Be sure to keep a look out for the invite to next year's tournament. With a turnout like we had this year, time will be limited to make your reservation!

The annual ASHE SNJ golf outing helps to fund the scholarships that are given out each year to students of southern New Jersey. Your support and generous donations have allowed ASHE SNJ to give out \$190,500 in scholarships to date! This year, we awarded \$7,500 in scholarships.

2018 Scholarship Golf Outing



1st Place

Thomas Costello, Doug Freudenrich,
Kevin Rafferty, and Joe Wittman,
Taylor, Wiseman & Taylor

2nd Place

Justin Worek & Robert Johnston,
Michael Baker International
Alexander Kluka and George Zimmer, *WSP*

Closest to the Pin

Kevin Rafferty, *Taylor, Wiseman & Taylor*

Longest Drive (Men)

William Day, *Arora & Associates, P.C.*

Longest Drive (Women)

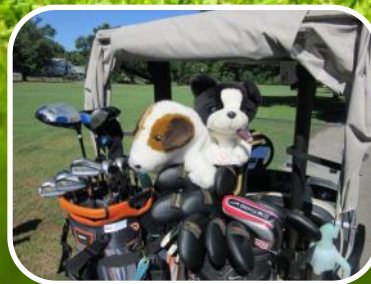
Lindsey Klein,
Imperial Traffic & Data Collection, LLC

Pot of Gold Winner

Jim Hadden, *Jim Hadden Consulting, LLC*

Putting Contest Winner

Colleen Richwall, *Taylor, Wiseman & Taylor*



Chapter News

ASHE SNJ supports New Jersey Middle School Students in NJ Future City Competition

Natural disasters — such as earthquakes, tornadoes, or hurricanes — can pose serious threats to cities. While these events rarely last longer than a day or two, the damage can severely disrupt people's daily lives, especially for exposed and vulnerable populations, and dramatically worsen the rebuilding process. Today's engineers, architects, and city leaders face the critical task of creating resilient cities. A resilient city is one that can adapt to these challenges and more. It has connected systems and infrastructure in place that limit damage and help the city recover quickly. Physical systems such as infrastructure and housing are built to withstand high winds or earthquakes, information systems such as zoning data and maps are designed to support relief efforts, and institutions such as city management or emergency response are developed to ensure the quickest possible recovery. A resilient city ensures its residents are safe and healthy, their communities are stable and cared for, and the economy of the city is strong and durable.



More than 40,000 middle school students from 1350 schools in 37 regions nationally have been tasked with imagining and designing their own version of a resilient city that can withstand and quickly recover from a natural disaster for DiscoverE's 2018-19 Future City Competition. This year's topic, Powering Our Future, challenges students like never before to figure out these much-needed

solutions. The New Jersey Region alone has over 50 schools that will be participating in the Regional competition at Rutgers University on January 19, 2018.

ASHE SNJ is a proud sponsor of the Future City Competition. Our sponsorship includes an award for the best Highway. Each year, a representative from our Executive Board volunteers as a judge for the Future Cities Philadelphia competition. To be a mentor and help educate the next generation of engineers, reach out to Future Cities Coordinator Jean Hansen, at mentor@futurecitynj.org. Volunteers are also needed for judging and competition day coordination.

ASHE SNJ congratulates the winners of the 2018 scholarships!

Samantha Price is a Rowan University student with a 3.7 GPA. She is an active member of SWE and ASCE student chapters. She is a recipient of several honors including the Rowan Scholars Award and the Dean's List.

Madison Pullen is a Mercer County Community College student with a 3.5 GPA. She has received recognition from the American Honors Program and the Phi Theta Kappa Honors Society

Gabrielle Wickizer is a Rowan University Student with a 3.99 GPA. She is an active member of the ASHE and ASCE student chapters. She is a recipient of several honors including the ACECNJ Engineering Excellence Award Excellence Award.

2019 Scholarship Applications

Get the word out! The Southern New Jersey Section of the American Society of Highway Engineers Southern New Jersey Scholarship, is available to

Chapter News

civil engineering students residing in southern New Jersey. The scholarship amount and number of scholarships is determined each year, based on the funds available and the number of qualified applicants. The Scholarship application will be released in January. Keep a eye on the ASHE SNJ website for more details.

Education Committee

ASHE SNJ established the new Education Committee this year to better support ASHE student chapters at Rowan University and Mercer County Community College. This is a rebuilding year for us at Rowan, as many of previous student leaders graduated (the good ones do that), and we are working to develop the new core group of leaders. Last year we helped to establish the first ASHE student chapter to be chartered at a community college at Mercer County Community College. A primary role of the Committee is to make sure the two student chapters are healthy and well supported despite the ever-changing student population.



The ASHE SNJ Education Committee was formed in 2018 and consists of **Richard Grubb**, Chair, and members **John Eric Henson** and **Godfrey Joyner**. The Education Committee is actively encouraging other academic institutions within the ASHE SNJ region to form student chapters. The Committee would like to encourage other ASHE Sections to develop student chapters in their region. Richard Grubb will be moderating a technical session on student chapters at the ASHE National Conference in Nashville next year.

Anyone interested in joining the Education Committee or if you have a project that you would like to share at a chapter meeting, please reach out to **Rich** at 609-915-8197 or rgrubb@rgaincorporated.com. We welcome new members to this exciting new committee!

Public Relations Committee

The Public Relations Committee is expanding and will be improving our member outreach. We have revitalized the Chapter LinkedIn site, are posting events and are sending out invitations to join. **Joe Wittman** will lead our efforts to refurbish the ASHE SNJ LinkedIn site. Joe is a structural engineer with Taylor, Wiseman & Taylor in Mt. Laurel, NJ. Joe graduated from Villanova University in 2014 and is now preparing to take the PE exam.

Brent Bitsko is the new Chapter Photographer and will help us make our publications sharper. Brent is a Project Engineer in construction management at JMT, in Lawrenceville, NJ. Brent graduated from Rutgers, lives in Belmar NJ, and is a "ringer" on several volleyball teams.

New Jersey Project of the Year

The New Jersey Project of the Year was awarded at the April Joint ASHE SNJ & NC-NJ meeting. The NJ Project of the Year awards are presented annually in recognition of consulting engineering firms, contractors and transportation agencies for their efforts to provide quality highway and bridge facilities in New Jersey. The two winning projects, over \$5M total construction cost and under \$5M are shown on the next pages. Remember, it is never too early to start planning for 2019.

2018 Project of the Year - Over \$5 Million

Delaware River Turnpike Bridge Emergency Repair

Owner: New Jersey & Pennsylvania Turnpike Authorities

Designer: HNTB Corporation
Contractor: Cornell & Company



The Delaware River Turnpike Bridge, which carries an estimated 40,000 vehicles a day across the Delaware River, connects the New Jersey Turnpike and the Pennsylvania Turnpike (I-276). During a daily inspection on January 20, 2017, a painting contractor working on the bridge discovered a significant fracture in an upper chord deck truss member (a fracture critical member) and buckling in an adjacent member. The bridge was closed immediately! The emergency shutdown of such a heavily used structure necessitated an immediate response from the New Jersey Turnpike Authority (NJTA),



Pennsylvania Turnpike Commission (PTC) and their consultant team consisting of HNTB, STV Incorporated, Michael Baker International, Modjeski & Masters, Greenman-Pedersen, Inc. (GPI), WSP (formerly

WSP/PB) and Urban Engineers.

HNTB and STV worked throughout the initial night following the critical finding to determine the extent of the damage to the bridge. HNTB worked to create a structural model to predict the load redistribution within the compromised structure that was caused by the fracture. A temporary stabilization splice was designed and installed at the fracture location along with an eight-tower support system. Temporary splice installation began the night of January 20, 2017 and was completed in three days. Once the truss was stabilized, the project team focused on the permanent repair and determined the procedure to be a two-phase repair effort: 1) vertical jacking to return the truss to its

original geometry and 2) post-tensioning to restore pre-fracture dead load distribution. Concurrently, Michael Baker and Modjeski & Masters spearheaded a comprehensive non-destructive evaluation and a material testing program, while GPI conducted a comprehensive hands-on bridge inspection program.

NJTA and PTC selected MoreTrench to install the micropile foundation system for the eight support towers. On January 25, 2017, MoreTrench began production drilling for the first micropile. Installation of all 48 micropiles, including the pile caps, final proof load testing, and grouting was completed by February 5, 2017.

Another vital element of the emergency construction effort was the mobilization and erection of the eight steel towers (approximately 80-feet-high) and jacking saddles to support the planned vertical jacking operation. Structural analysis determined that truss strengthening was required at four locations to prevent the overstress of existing truss members during jacking. Cornell & Company began installing the towers on January 30, 2017 and finished erection on February 7, 2017. By February 23, 2017, all jacks, jacking saddles and truss strengthening elements had been installed. The following day, the temporary splice was removed and the bridge was jacked to its original position. The damaged top chord of the truss was then replaced with a new member on February 28, 2017. On March 3, 2017, this new member was post-tensioned to achieve the pre-fracture load distribution and the permanent repair splice was completed two days later. After load testing of the bridge using eight fully loaded dump trucks, the bridge was reopened to traffic the night of March 9, 2017, one month ahead of the originally anticipated schedule.



2018 Project of the Year - Under \$5 Million

GSP Cheesequake Culvert Rehabilitation

Owner: New Jersey Turnpike Authority

Designer: McCormick Taylor, Inc.

Contractor: Rencor, Inc.



The New Jersey Turnpike Authority retained McCormick Taylor to complete final design for the repair of a corrugated metal plate arch culvert at risk of collapse at milepost 123.8 on the New Jersey Garden State Parkway (GSP). This major storm drainage culvert conveys flow under both the north and southbound inner and outer roadways of the GSP and the Cheesequake Service Area in Sayreville Borough, NJ.

Used by residents and out-of-state commuters traveling along the northeast corridor, the GSP is one of the most heavily traveled roadways in the state. The collapse and failure of the corrugated metal plate arch culvert at MP 123.8 would have affected tens of thousands of drivers daily. Furthermore, a collapse would block flow of Crossway Creek tributary in Sayreville Borough, resulting in flooding of upstream neighborhoods.

The culvert begins as corrugated metal pipe (CMP) and transitions into a concrete box section. Nearly 800-foot-long and 8 feet, 6 inches high by 11 feet, 10 inches wide, the CMP portion of the culvert exhibited signs of advanced and extensive deterioration, and was collapsing with heave of the invert, section loss in the lower



half of the pipe, and a sagging crown with vertical displacement. Deterioration and deformation of the culvert was so advanced that depressions were forming on the road surface above.

McCormick Taylor had studied and designed a solution for a similar problem at twin CMP culverts at MP 118.5 of the GSP several years earlier. For MP 123.8, McCormick Taylor performed geotechnical investigations and developed an innovative solution borrowed from the tunneling industry, which included the use of steel ribs and steel reinforced shotcrete. A laser survey was utilized to accurately portray and measure the irregular alignment and interior shape of the culvert due to the deterioration and movement.

Steel ribs were specially fabricated to match the interior arch culvert dimensions and were used to rebuild a new culvert



inside the existing one. Epoxy-coated reinforcing steel was placed in between the steel ribs to transfer loads to the ribs. Fiber-reinforced shotcrete and cast-in-place concrete were then applied within the culvert to create a new interior surface. The rehabilitated cross section provides the structural stability to support the 30 feet of roadway embankment, while maintaining the hydraulic capacity required to convey stormwater flows.



McCormick Taylor developed an innovative design solution to repair this major storm drainage culvert and extend its life by 50 to 100 years. The culvert will continue to provide drainage of the creek, while ensuring safe operation in this heavily traveled area.

Summer Social Activities



On a lovely August afternoon ASHE SNJ held their 1st wine tasting social event at DiMatteo Vineyards in Hammonton, NJ, to support the 2018-2019 scholarship fund. The event included a tour of the winery as well as a tasting of 10 wines produced by the vineyard. Although the location was a little off the beaten path, approximately 20 members and their significant others ventured to the lovely vineyard where they were offered generous samples of various white, red and fruit wines throughout the evening. The Vidal Blanc seemed to emerge as the clear favorite of the group.

A big thank you to Promatech, Inc., Menu Sponsor for the wine tasting! Keep your eye out for more social events to be held during the year to support the scholarship fund.

Spotlight On Dewberry

Innovating an Integrated Coastal and Stormwater Model and Flood Risk Solution

During Superstorm Sandy in October 2012, the Red Hook community of Brooklyn, New York, felt the impacts when severe storm-surge flooding hit the low-lying areas in a disproportionate way. The neighborhood experienced unprecedented flooding, and the economic and environmental losses were felt throughout the community. Many businesses and residents were left without basic services—like water and electricity—for weeks and sometimes months.

A Multilayered Resilience Plan

Located along the New York Bay, the Red Hook community is vulnerable to the negative effects of future storm surge and sea level rise events. As part of New York City's multilayered \$20 billion resilience plan, the Red Hook Integrated Flood Protection System Feasibility Study was a federally funded coastal protection initiative aimed at reducing flood risks due to coastal storms and sea level rise in the community. Dewberry worked with the New York City Economic Development Corporation (NYCEDC) and the Mayor's Office of Recovery and Resiliency (ORR) to conduct a study that evaluates existing and future flood risks,

develops conceptual design alternatives, and ultimately produces a preferred alternative for an integrated flood protection system (IFPS) in Red Hook. Based on feedback from agency stakeholders and the community, the team developed a preferred conceptual solution composed of a passive coastal flood protection system, eliminating the need for deployable solutions—technologies that may require human intervention—and resulting in maximized system reliability. This method integrates permanently within the existing infrastructure of the community, allowing flexibility to adapt to future design standards. Dewberry developed a first-of-its-kind, integrated coastal and stormwater model to evaluate the combined effects of rainfall and coastal storm surge with and without the proposed IFPS. The model results revealed flood risk reduction benefits to the community in this combined storm scenario.

An Award-Winning Project

This project is expected to reduce community losses and minimize recovery time from coastal storm surge events. Following the completion of the study, the project was awarded the 2018 Platinum Award for Studies in Research and Consulting Engineering Services by the New York chapter of the American Council of Engineering Companies.



Alongside NYCEDC and ORR, Dewberry performed a flood risk reduction study, which resulted in a preferred conceptual solution to reduce flood risks and increase resilience in the Red Hook community of Brooklyn, New York.

Infrastructure Funding

It's high time for a discussion on infrastructure



In August, we mark 11 years since the Interstate 35 bridge in Minneapolis collapsed into the Mississippi River, killing 13 people and injuring 145 more. For anyone not living there, or otherwise not personally affected by that tragedy, the anniversary will likely pass without a single thought as to its significance.

It's difficult, after all, to get excited about the topic of infrastructure. In the realm of politics and public policy, it's the hot button issues that tend to get the most attention. Infrastructure is not one of those. Tragedies, however, have a way of obligating conversation, moving us toward actions we might not otherwise pursue absent the benefit of urgency. That was the case 11 years ago. But, not so much since then.

It's high time that we make room for infrastructure on our nation's busy policy agenda, as that vast network provides a critical foundation for virtually every other industry that supports and improves our quality of life. And for three compelling reasons, it needs both our attention and our action now.

The clock is ticking.

Lots of us take infrastructure — particularly our roads and bridges — for granted. We tend to think that everything is alright, until something goes all wrong. Until, say, a disaster like the one in Minneapolis seizes our attention — or, more recently, a disaster like the one in Genoa, Italy, where a major highway bridge collapsed and killed dozens of people.

Events like those serve as reminders that roads and bridges — despite their apparent solid nature and appearance — have limits to their strength, stability, and resilience. Much of what we're working with is several decades old, so we're working on borrowed time.

Infrastructure is about more than roads and bridges.

The electric power grid. Airport runways. Sea ports, docks, and canals. Municipal water mains and wastewater treatment systems. Pipelines. Each of these is a form of infrastructure. Each is operating at strained capacity and in need

of upgrades and/or repair. Our road and bridge network is essentially competing with all of them for overdue attention.

A draft proposal for addressing the nation's infrastructure dilemma was introduced by House Transportation and Infrastructure Committee Chairman Bill Shuster (R-Pa.) recently, focusing largely on ensuring the solvency of the Highway Trust Fund. That approach could go a long way in boosting the condition of our roads and bridges, but other infrastructure assets — all with legitimate and urgent needs — would still be waiting in line for scarce funding. Ah, yes; the money.

This is going to be expensive; there's no way around that.

The federal motor fuels tax is a primary source of funding for roads and bridges. The tax on gasoline is 18.4 cents per gallon, no matter what that gallon of gas may cost. The tax amount hasn't changed since 1993, and it's not indexed to inflation. Consequently, its value has eroded so much that it pays for only about half of what it once did. And, gas consumption — and the corresponding tax generated — will decline as cars become more fuel-efficient and hybrid and electric vehicles become more common. The wear on roads and bridges, however, will continue unabated.

Raising the tax is an option, though certainly not a popular one. Even so, the recent proposal in Congress would do just that for 10 years before eliminating the tax in favor of a mileage-based fee. But whether funding comes in the form of taxes or user fees, one thing is certain — current funding levels and mechanisms aren't getting the job done. This is not a question of whether we will have to pay for a renewal of our road and bridge system. It's more a question of when, and how, and how much.

Granted, this subject is, to many of us, boring. Just try to imagine another topic that's at the same time interesting to almost no one while being so consequential to just about everyone. But our transportation infrastructure is central to our ability to get to where we live, learn, work, play, and pray. It helps us get to the grocery store, and it helps online orders get to us. It is also in need of upgrade, repair, and expansion.

Roads and bridges, and how we pay for them. Not exactly the stuff of stimulating conversation, but it's a conversation we need to jump-start and sustain to inform big decisions that lead to meaningful actions. Preferably, before another tragedy compels us.

Gregory Winfree, J.D. is the agency director of the Texas A&M Transportation Institute and a former U.S. assistant secretary of Transportation.

Zachary Grasley, Ph.D., P.E. is a professor at Texas A&M University's College of Engineering and director of the Center for Infrastructure Renewal.

This article was originally published in The Hill on August 20, 2018 and is reprinted with permission from Texas A&M Transportation Institute, the copyright owner.

Thank You to Our Sponsors

PLATINUM LEVEL

GPI

Naik
GROUP



Richard Grubb & Associates, Inc.
Cultural Resource Consultants

McCORMICK
TAYLOR

TWT Taylor Wiseman & Taylor
ENGINEERS | SURVEYORS | SCIENTISTS

 **Dewberry**[®]

Michael Baker
INTERNATIONAL



ARORA and ASSOCIATES, P.C.
Consulting Engineers

GOLD LEVEL

URBAN ENGINEERS

HARDESTY & HANOVER

SILVER LEVEL

REMINGTON AND
VERNICK

IMPERIAL TDC

PROMATECH

STANTEC

PENNONI

LOOKING AHEAD

County Route 530 South
Pemberton Road Improve-
ment Project Field Trip

October 2018

Construction Management
Technical Session

November 2018

SBE & Technology
Open House

December 2018

Ethics

January 2019

Project/Topic TBD

February & March 2019

Project of the Year

April 2019

Project Field Trip

May 2019

Upcoming Events

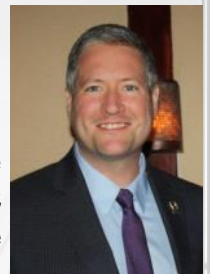
September Meeting Update on NJDOT Capital Program

5:00pm - September 13, 2018

The Cranbury Inn, 21 S. Main Street, Cranbury, NJ

Speakers:

Daniel R. Benson—New Jersey Assemblyman;
Chair of Transportation & Independent Authorities
Committee



Assemblyman Dan Benson currently serves as the Chair of the Transportation and Independent Authority Committee and as a member of the Health and Senior Services and Budget Committees. He represents towns in Mercer and Middlesex Counties including Cranbury, East Windsor, Hamilton, Hightstown, Jamesburg, Monroe, Plainsboro, Robbinsville, and Spotswood. Assemblyman Benson has a Bachelor of Science in physics and government from Georgetown University and a Master of Public Policy in science and technology policy from Rutgers University. Professionally, the Assemblyman is an energy and telecommunications policy consultant and resides in Hamilton with his wife Hande and their son Nicholas.

Snehal Patel, P.E. PMP—NJDOT Assistant
Commissioner, Capital Program Management &
State Transport Engineer



Mr. Patel is Assistant Commissioner, Capital Program Management (CPM) and a key member of the New Jersey Department of Transportation's senior leadership team. He is charged with managing and delivering an annual Capital Program of \$500 plus millions in state and federal projects as well as overseeing a work force of up to 1,330 employees in six Divisions within the CPM. He is responsible for enhancing the framework of project delivery; driving innovation through technology, policies and procedures; and developing talent through mentorship, training and informal succession planning.