



Fall 2017 Newsletter

UPCOMING EVENTS

Wednesday, November 15

NJDOT Pavement Preservation Technical Session and Fundraiser for Puerto Rico

Hamilton Manor
30 Route 156
Hamilton Township, NJ 08620

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A Message from Lori Wade, ASHE SNJ President 2017

Happy Fall, everyone! On behalf of the board, I welcome both our veteran and new members to the ASHE SNJ Section. You, our members, are the heart of the organization and, with your active participation, we make a difference in the transportation and highway industry. As engineers, environmental specialists, planners, architects, and contractors, we support each other by sharing our projects, tools, technical expertise, and, most importantly, our lessons learned. With your contributions, our first activities of the season were a success. We are excited to present our program line-up for the rest of the season.

We kicked off the Fall 2017 season with the September ASHE SNJ-NCNJ joint meeting at the Cranbury Inn, highlighting the NJDOT Local Aid and NJ Metropolitan Planning Authorities 2018 and Beyond Capital Programs. The October event was a field trip to the NJTA Great Egg Harbor Bridge Project. At our November and December meetings, we will focus on our philanthropic goals by supporting two great causes. The November meeting will feature the NJDOT Pavement Preservation Program, and all proceeds from meeting sponsors will go directly to Puerto Rico Hurricane Relief. We will also hold a 50/50 raffle to raise funds for "United for Puerto Rico". During the December SBE Networking Event at Hamilton Manor, we will collect toys, gift cards, books, and monetary donations for the holiday drive. We are extremely proud of the aid and support that our organization contributes to important causes.

In 2017, we had two great social events: a winter party at the Philadelphia RiverRink and a summer social night at the Cooper River Distillery. In the upcoming season, we will build on these successes by hosting social events that allow us to relax, network, and advance our charitable objectives. We will combine the earnings from social events with the proceeds of the yearly golf outing to fund scholarship awards to outstanding civil engineering students.

We are making great strides in expanding our outreach to colleges and universities in Southern New Jersey. After a year of hard work and dedication, the Rowan University Student Chapter was officially chartered with the University on October 31st. We also supported the efforts of ASHE National and ASHE Northeast Region to expand our college recruitment by participating in the first ASHE Regional Student Conference hosted at the University of Delaware.

I am proud of the many accomplishments of ASHE SNJ over the last several years. With your support, we can continue this trend through the coming year. The success of our chapter is due to the contributions of our outstanding members. Thank you for your continued support! We hope that you bring a friend or colleague to the next event!

MEET THE BOARD

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FIELD TRIP

GSP Southbound Bridges Over Great Egg Harbor and Drag Channel



On Wednesday October 11, Robert Supino of Hardesty and Hanover and Daniel Lord of WSP guided a field trip to the Garden State Parkway southbound bridges over Great Egg Harbor and the drag channel. These structurally and functionally deficient bridges constructed in 1954 are being replaced by Route 52 Constructors for the NJ Turnpike Authority at a cost of \$140.3 million. The 3,834-foot long, 21-span structure over the Great Egg Harbor includes bulb-T prestressed girders as long as 179 feet in the approach spans and 250 feet variable depth spliced girders over the navigation channel. The waterline pile caps of the piers are supported on prestressed concrete piles, with pile lengths exceeding 130 feet in the main channel. The 770-foot long, ten-span continuous structure over the drag channel follows a curved alignment

supported on pile bent trestles, with 150-foot pile lengths (+/-). The northbound structures constructed in 1973 will be rehabilitated after the southbound bridges are replaced.

The project includes pedestrian/bicycle and fishing access. Permitting restrictions such as limited time frames for in-water work and underwater noise monitoring /mitigation required close coordination between the design team, environmental regulators, the NJTA, and contractors.



Traffic Signal Timing Optimization Projects Making a Difference in the South Jersey & Philadelphia Area

In 2013, the Delaware Valley Regional Planning Commission, working with the Pennsylvania Department of Transportation Engineering District 6-0, awarded a \$1.2M contract to Taylor Wiseman & Taylor with the sole purpose of improving signal timing on key suburban Philadelphia corridors. The success of that project resulted in the DVRPC Office of Transportation Management advertising a second project in January 2017 to improve signal timing in Camden, Gloucester, Mercer, and Burlington Counties. That project was awarded earlier this year to Taylor Wiseman & Taylor, with Albeck-Gerken Inc., McMahon Associates, and Imperial Traffic & Data Collection playing key roles.

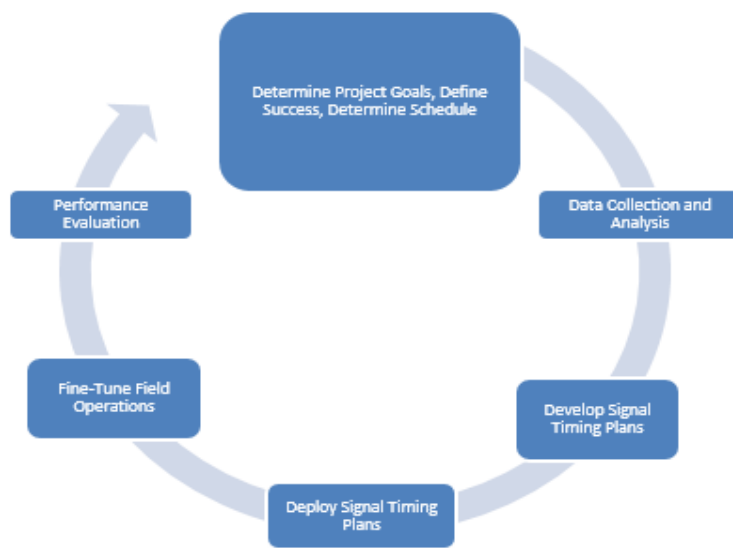


TWT Staff Member Dan Miller adjusts times on Lower State Road

The TWT-PennDOT project team has included Albeck & Associates of Omaha, NE, Albeck-Gerken Inc. of Virginia Beach, VA, and Drive Engineering of Blue Bell, PA. Project champions include Laurie Matkowski and Paul Carafides at DVRPC, and Ashwin Patel, David Adams, and Paul Lutz at PennDOT District 6-0. Bill Hitchens of Taylor Wiseman & Taylor is serving as project manager on both agreements.

A similar project has been advertised in the South Jersey Transportation Planning Organization (MPO covering Atlantic, Cape May, Cumberland, and Salem Counties) area, but has not yet been awarded.

A unique element of the project approach on both the PennDOT and South Jersey projects is that the consultant team is responsible for the implementation of the timing plans at each intersection. Implementation is typically done during off-peak hours and has been accomplished via computer interface at the controller assembly, direct keyboard entry, or central control software such as Econolite CENTRACS®,



Traffic Signal Timing Methodology

TAYLOR WISEMAN & TAYLOR (TWT) SPOTLIGHT

Naztec Streetwise®, and Eagle TACTICS®. Following entry of new timings, every programmed time period is observed (without exception) in the field. Offsets and phase splits are adjusted to optimize operation based on field conditions.

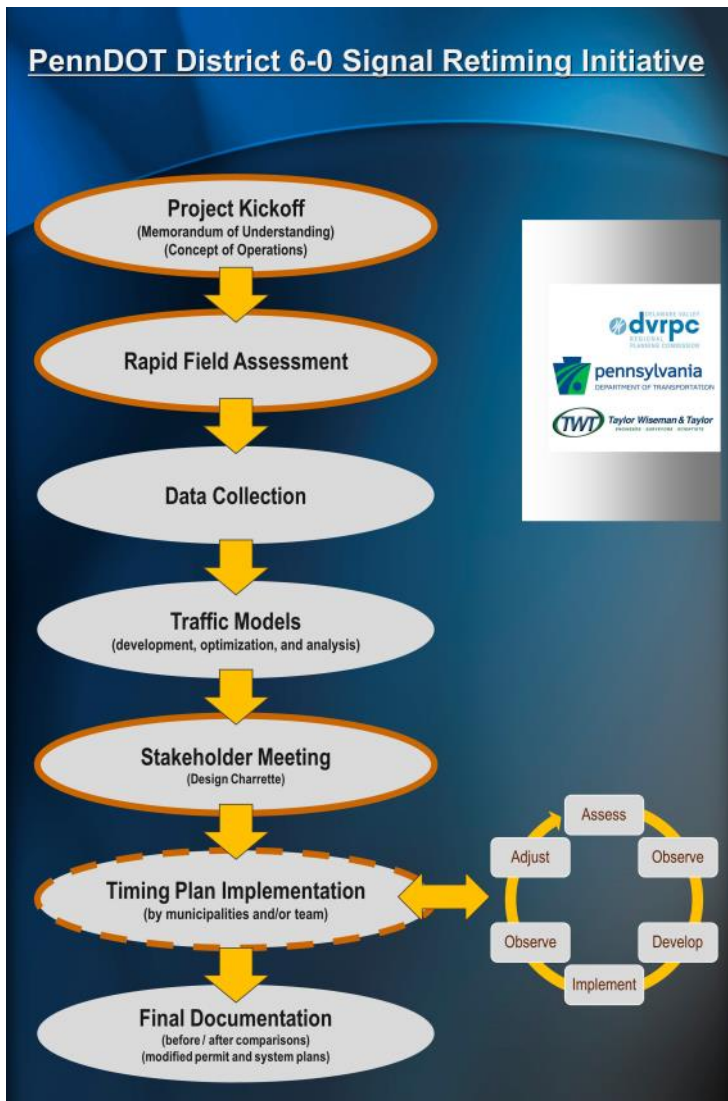
The project has found that investment in additional data collection (week-long automatic traffic recorder counts, as well as Saturday turning movement counts) has provided consistent opportunities for optimized timing programs beyond a typical AM peak, mid-day peak, PM peak, and free operation. On one suburban Philadelphia corridor, the TWT team developed three coordinated programs for Saturday operation, easily justified by the data collected.

The project has improved timing on over 25 arterials in the Philadelphia area, with an average reduction in delay during peak commuter hours in the range of 20-40%. Using Texas Transportation Institute (TTI) methodology, the team has demonstrated cost-benefit ratios in the range of 100:1. A video summary of TWT's first project in Pennsylvania is on YouTube at http://www.youtube.com/watch?v=guYR1rZ_nPQ.

In both the Pennsylvania and New Jersey projects, the Taylor Wiseman & Taylor consultant team has worked closely with all project stakeholders, working hand-in-hand with signal vendors Signal Control Products,

Signal Service, Inc., Traffic Products Inc., and General Highway Products, as well as municipal and county partners.

For additional information on these signal timing initiatives, contact Paul Carafides at DVRPC (pcarafides@dvrpc.org), or Bill Hitchens at Taylor Wiseman & Taylor (hitchens@taylorwiseman.com).



2017 SCHOLARSHIP WINNERS



Kayleigh and Johnathan attended the 2017 Golf Outing for the formal presentation of their scholarships from President Lori Wade.

Kayleigh McDevitt was selected to receive a \$2000 scholarship. She is a senior at Rowan University studying civil engineering with a 3.1 GPA. Kayleigh is a charter member of the ASHE Rowan Section and is currently serving as Vice President. In addition, Kayleigh is active with the ASCE Rowan Section.

William Davis was selected to receive a \$2000 scholarship. William is a junior at Drexel University studying civil engineering with a 3.96 GPA. He has been active on the varsity soccer and lacrosse teams as well as a band leader for Youth Worship.

Johnathan Grande was selected to receive a \$2000 scholarship. He is a senior at Rowan University studying civil engineering with a 3.2 GPA. Johnathan is the President of the ASHE Rowan Section and is an original charter member.

Kevin Rafferty was selected to receive a one-time \$1000 scholarship. Kevin is currently enrolled at Villanova University for MBA graduate studies. He was involved with the 2017 ASHE SNJ golf committee. The one-time scholarship was open to an ASHE SNJ member attending graduate school or the child of a current ASHE SNJ member pursuing any undergraduate degree.

2018 SCHOLARSHIP APPLICATIONS

Application Deadline: TBA

The Southern New Jersey Section of the American Society of Highway Engineers has established the Southern New Jersey Scholarship, open to 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.

Guidelines for Eligibility

- Applications are typically due in late winter or early spring.
- Winners are typically announced in late spring or early summer.
- Eligible applicants must be civil engineering students successfully into their sophomore, junior, or senior year of undergraduate study.
- The student must be a US citizen and a resident of one of the following ten (10) counties in New Jersey: Atlantic, Burlington, Cumberland, Camden, Cape May, Gloucester, Mercer, Monmouth, Ocean, or Salem.
- Eligible students must have a grade point average at or above 2.5 out of 4.
- No scholarship will be awarded to any student who is presently receiving 70% or more tuition help from scholarships or financial aid.
- Need, as well as scholastics, will be considered for this award.
- The scholarship will be awarded to an individual one time only; however, students who are not awarded the scholarship may re-apply each year they are eligible.

**Only one scholarship from a New Jersey section of ASHE
(either the South Jersey or North/Central Jersey)
will be given per recipient.**

PROJECTS OF THE YEAR

Under \$5 Million Construction Value

Emergency Bridge Repairs - Route 3 over the Hackensack River, Secaucus Twp., Hudson County
Roadway Improvements to Springdale Road, Cherry Hill Township, Camden County

Route 33/34 EB over Southern Division Railroad, Howell and Wall Townships, Monmouth County

Over \$5 Million Construction Value

Route 54 Route 322 over Cape May Point Branch, Borough of Folsom, Atlantic County

Route 31 Section 8P, Boroughs of Glen Gardener and Hampton, Hunterdon County

Route 18 structure over Route 1, City of New Brunswick, Middlesex County

Route 48 Layton Lake Dam, Carneys Point Township, Salem County

Route 35 Reconstruction, Mileposts 0-4, Berkeley Township to Toms River, Ocean County

Realignment of South Broadway, City of Camden, Camden County

Garden State Parkway Interchange 0, Lower Township, Cape May County

New Route 72 Manahawkin Bay Bridge, Stafford Township, Ocean County



DINNER MEETING

NJDOT Rt 46 Over Hackensack River Bridge Rehabilitation

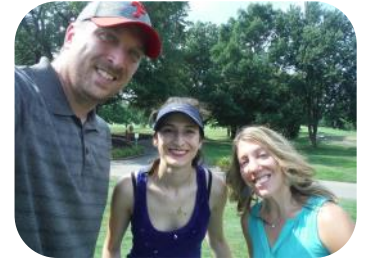
The project involved a recently completed rehabilitation of the NJDOT bridge located in Little Ferry and Ridgefield Park, Bergen County, New Jersey. The bridge is 1,550 feet long with 16 concrete encased approach spans and a double leaf steel bascule span. There are 2 eastbound and 2 westbound lanes with no shoulder and 8 foot sidewalks on both sides. The deck slab was removed and replaced half the bridge at a time while maintaining 2 lanes (1 eastbound and 1 westbound) and one sidewalk for pedestrians. Unique features in the bridge rehab include cast-in-place exodermic bridge deck system used for the deck slab replacement, architectural concrete balustrade replacement to mimic the existing, bascule span steel repairs, concrete encasement removal and construction access, rocker bearing repairs including anchor and girder bolt replacement, seismic retrofits including cable restrainers and concrete shear blocks, and the installation of a NY 2-rail along the sidewalk curb line to protect motorists and pedestrians. Stewart Willis, PE, of AECOM presented the project. Mr. Willis is an accomplished Senior Structural Engineer with 28 years of experience in bridge design. He has been with AECOM for the past 14 years and is the Department Manager for both Piscataway and Clifton offices. He is experienced in the final design of new bridges as well as the widening, rehabilitation, seismic retrofit, and deck replacement of existing bridges. Bridge types that Mr. Willis has experience with include straight and curved steel plate girders, trusses, floorbeams, stringers, prestressed concrete beams, open spandrel arches, precast slabs, and exodermic decks. He has worked extensively with New Jersey clients, including NJDOT, NJTA, SJTA, Port Authority of NY & NJ, and Middlesex and Somerset Counties. In addition to New Jersey, Mr. Willis' bridge design experience also covers New York, Connecticut, Massachusetts, Maine, Oklahoma, Georgia, and Florida. He is a licensed Professional Engineer in New Jersey and New York with his BSCE from the University of Florida and MSCE from the University of Central Florida. He is published in the International Journal of Computers and Structures and has presented at the International Bridge Conference.

Future City Student Award Winners Presentations



Future City Philadelphia is always looking for SPONSORS and VOLUNTEERS of all kinds. Please visit their webpage to find out more ... <http://www.futurecityphilly.org/fcvolops.html>

2017 SCHOLARSHIP GOLF OUTING



The golf outing is the ASHE SNJ premiere fund raising event for the Scholarship fund. Over \$183,000 have been awarded to worthy students.

ENGINEERING HEROES ON THE SILVER SCREEN



The next time you are searching for a movie that stars a courageous civil engineer, try (legally) downloading the 1996 film *The Ghost and the Darkness*. In the movie, Val Kilmer plays British engineer John Patterson sent to east Africa to bring the Tsavo River bridge project back “on-track”. Unfortunately, two lions are feasting on his foreman and crew, blowing his schedule. To discourage the carnage, the workers build bonfires and thick thorn fences. Yet the attacks continue, as the lions sneak over, under, or through the defenses, mostly at night. Finally, the workers walk off. Needless to say, the two bloodthirsty NIMBYs were not covered as an existing site condition in the contract documents. John’s supervisor, Sir

Robert Beaumont, is not sympathetic and demands results. As a natural problem solver, Mr. Patterson enlists the help of famed large-game hunter and community involvement specialist Charles Remington, played by Michael Douglas. Things do not go as planned. Patterson and Remington set traps using the goats and laborers as bait. Even in 1898 this might not have been in compliance with OSHA. Watch to find out whether local opposition will kill the bridge project. This lethal game of cat-and-mouse will keep you on the edge of your seat.

Perhaps the best part about this movie is that it is mostly true. Spoiler alert ... the Lions of Tsavo are now stuffed and in a museum in Chicago.



SPONSORSHIPS ARE NOW AVAILABLE

Platinum Annual Sponsorship - \$1,000

- Web-posting of Classified ads on southernnj.ashe.pro/
- Company Logo & Featured Sponsor on main page of southernnj.ashe.pro/ and on Sponsorships page
- Opportunity to display a project photograph with recognition of sponsor firm on southernnj.ashe.pro/
- Full page feature article on your firm (topic of your choice) in the ASHE SNJ Newsletter (article provided by the sponsor firm)
- Special Recognition at ASHE SNJ Regular and Special Events on presentation screen
- \$100 discount on Monthly Dinner Sponsorships

Gold Annual Sponsorship - \$750

- Web-posting of Classified ads on southernnj.ashe.pro/
- Company Logo and link on southernnj.ashe.pro/ Sponsorships page
- Opportunity to display a project photograph with recognition of sponsor firm on southernnj.ashe.pro/
- Recognition display at each ASHE SNJ Event
- \$50 discount on Monthly Dinner Sponsorships
- One Annual ASHE SNJ Membership

Silver Annual Sponsorship - \$500

- Web-posting of Classified ads on southernnj.ashe.pro/
- Company name and link on southernnj.ashe.pro/ Sponsorships page
- Opportunity to display a project photograph with recognition of sponsor firm on southernnj.ashe.pro/
- Recognition display at each ASHE SNJ Event

Monthly Dinner Sponsorship - \$250

- 5 minute presentation to all attendees to promote your firm or product
- Recognition display on slideshow and each dinner table
- Opportunity to display and distribute materials/pamphlets about your firm or product before, during, and after the meeting
- A seat at the head table with guest speakers for the evening (includes cost of one registration and dinner)
- Company logo in announcement and reminder emails. (Please provide company logo in JPG, TIFF, or GIF format, no larger than 330 px wide x 115 px tall @ 180 DPI.)

THANK YOU TO OUR SPONSORS

PLATINUM LEVEL



GOLD LEVEL



SILVER LEVEL

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STANTEC

PENNONI

UPCOMING EVENTS

NOVEMBER 15, 2017

NJDOT Pavement Preservation Technical Session and Fundraiser for Puerto Rico

This meeting will feature a technical presentation of the NJDOT optimized approach to pavement preservation, with an introduction by Dana Hecht.

ASHE SNJ is supporting the relief efforts for Puerto Rico. 100% of meeting sponsorship donations will go to "United for Puerto Rico" an initiative brought forth by Beatriz Rosselló, the First Lady of Puerto Rico. United for Puerto Rico is collaborating with the private sector to provide aid and support to those affected by Hurricanes Irma and María.

Join us and help Puerto Rico recover! Please consider sponsoring this event for this worthy cause at a special reduced dinner sponsorship fee of \$150 (includes one FREE registration)!

For more information about United for Puerto Rico:

<http://www.unidosporpuertorico.com>



Wikipedia.org

OTHER DATES TO REMEMBER

DECEMBER 13, 2017

SBE Networking
Event and Holiday
Happy Hour

JANUARY 18, 2018

Ethics Presentation

FEBRUARY 07, 2017

Safety Technical
Session
MASITE/ASCE SJ
Joint Meeting