



INSIDE THIS ISSUE

<i>Message from the President</i>	3
<i>NJ Project of the Year</i>	4
<i>Section News and Meetings</i>	8
<i>Delaware River & Scudder Falls Bridge Bicycle Tour</i>	10
<i>Sponsors</i>	11
<i>Upcoming Events</i>	12

Fall 2020/Winter 2021

THE 2020-2021 OFFICERS

Executive Board

President Amy Sokalski, PE, PTOE, PTP
Vice President Joseph Macios, PE
Secretary Heather Sabetta, PE
Treasurer George Zimmer, PE
Past President Mike Frabizzio, PE



asokalski@mccormick
taylor.com



joemacios@hotmail.com



hsabe@arh-us.com



george.zimmer@wsp
.com



mfrabizzio@aidpe
.com

Board of Directors

Membership
Alex Kluka



Alexander.Kluka@wsp.com

Sponsorship/Venues
Chris Gentz



chris.gentz@wsp.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

PDH Coordinator
Phil Thompson



pthompson
@hardestyhanover.com



A Message from Amy Sokalski ASHE SNJ President

As the 2020-2021 year begins, I'm excited to succeed Mike Frabizzio as the ASHE SNJ president. On behalf of the Board and the entire section, I want to thank Mike for all of his hard work and dedication last year. Even though we had to cancel some of our events in the spring, we still had a successful year and provided some great programs for our membership, which I hope that all of you enjoyed. The COVID-19 pandemic has dramatically changed all of our lives over the past 9 months. Suspending our in-person meetings, while disappointing, doesn't seem all that significant when put into context and compared to what's been happening in the world, US, and even the South Jersey region. The good news is that ASHE SNJ has partnered with ASHE NCNJ to purchase REMO virtual networking software, which we are planning to utilize for our upcoming monthly meetings. If you haven't tried it, I highly encourage everyone to attend both the networking and presentation portions of the meeting. The software is very user-friendly and allows face-to-face discussions with small groups, similar to in-person meetings.

Once again for the upcoming year, we have a dedicated Executive Board who is committed to the further advancement of our section. Joe Macios, who has served as Treasurer for many years, has stepped up into the role of VP and has been preparing the dinner meeting program for the year. Heather Sabetta (Secretary), Alex Kluka (Membership), and Joe Danyo (Regional Director) will continue to serve in the same roles this year. Chris Donahey (Public Relations) will continue to prepare these fantastic newsletters, and Richard Grubb (Education) will continue on his quest to create an ASHE Student Chapter at every college in NJ! We also have several other board members who assist with numerous responsibilities behind the scenes including Remy Donahey (Website and REMO coordinator), Carrie Strehle (Scholarship), Chris Gentz (Sponsorships), Phil Thompson (PDH Coordinator), Brent Bitsko (Social Media and Photography), and Katie Daly (Social Events). One of our previous Past Presidents, Matt Bencoter, has agreed to take on the daunting task of Auditing. Past President Mike Frabizzio will lead our Project of the Year efforts this year. Last but not least, Past Presidents Carrie Strehle and Lori Wade are leading the efforts for ASHE SNJ's 35th Anniversary Celebration. While our 35th Anniversary is technically this year, we will likely move that celebration to either Spring/Summer of 2022 to so we can hold a fun and safe event.

Since the spring of 2020, ASHE SNJ has hosted or co-hosted several events even in these difficult

times. In May, we held a joint webinar with NCNJ on the Goethals Bridge. Matt Bencoter led the Project of the Year competition, which culminated in a June webinar where the two winning projects were presented: White Horse Circle Intersection Improvements by Urban Engineers (Under \$5M) and Washington Street Redesign Project by T&M Associates (Over \$5M). Thanks again to everyone that submitted for last year's awards!

In July, our section held our Annual Scholarship Golf Outing at the Little Mill Country Club. The course was challenging, and the venue did a great job hosting a socially-distanced event. A big shout-out to George Zimmer and Steve Forney, who organized this successful fundraiser for our scholarship fund, and to all the event volunteers. We're looking forward to having next year's event at the same location: Save the Date: Monday, July 12.

Fall 2020 has been busy so far! Our section has held 3 monthly meetings as well as a social event. In September, ASHE SNJ and NCNJ co-hosted a virtual meeting on the NJDOT and NJTA Capital Programs with speakers Snehal Patel, Assistant Commissioner of Capital Program Management at NJDOT and Robert Fischer, Chief Engineer of the NJTA. We had a great turnout of more than 100 attendees with excellent presentations by both speakers. I think we can nickname October 2020 as "Scudder Falls Bridge Month", as we held a bike tour that started at the bridge and traveled along the D&R Canal towpath to Washington Crossing. Thank you to Chris Donahey who organized the bike trip as well as the snacks and food. We had such a great response that we're planning to hold another biking event in the spring at an undisclosed location, so keep your eyes out for that. At the end of October, we held a field trip at the Scudder Falls Bridge that was led by Kevin Skeels from the Delaware River Joint Toll Bridge Commission and Joe Danyo and Justin Worek from Michael Baker International. We won't be hosting our annual Social Event and Toy Drive in December, so our next meeting will be the Ethics presentation in January.

Finally, on behalf of the ASHE SNJ section, I would like to thank all of our annual sponsors for their support for this upcoming year. We know that the pandemic has taken a toll on everyone, and we are grateful for your continued support.

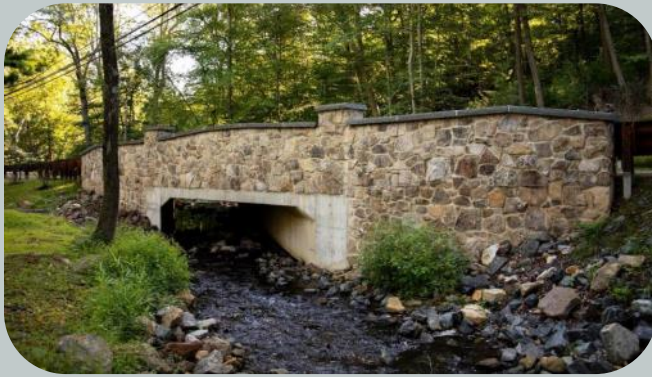
Although this year is shaping up to be much different than years past, I hope everyone will continue to attend our virtual monthly meetings until we can all meet again in person. Until then, please stay safe and healthy!

NJ PROJECT OF THE YEAR

UNDER \$5 MILLION

Rehabilitation of Somerset County Bridge G1403, Lloyd Road over Indian Grove Brook in the Borough of Bernardsville

French & Parrello Associates (FPA) was retained by Somerset County to design the replacement for County Bridge G1403



This project should be honored because of its technical accomplishments and context sensitive architectural design. The design of a precast concrete frame superstructure with such an extreme skew of 57-degrees demanded intricate detailing and design. The hydraulic and hydrologic impacts due to the presence of a lake and spillway immediately upstream of the structure were overcome. Great attention was given to maintaining the historic nature and architectural elements of the existing structure as well as the specification of careful demolition practices in order to salvage the original structure's stonework and marble identification plaque. The use of an open cut for the relocation of the gas main was unique due to the shallow depth of bedrock at the project's location.



Paramus Road (CR 62) Bridge over Route 4 Bridge Deck Replacement, JMT

JMT provided final design plans and construction services for the Paramus Road (CR 62) Bridge over Route 4 Bridge deck replacement project. Paramus Road, in the Borough of Paramus, Bergen County, NJ, is a county highway that carries more than 20,000 vehicles per day and serves as a vital link in the transportation network of both the Borough and the County. In lieu of performing staged construction over multiple years, JMT designed the deck replacement using prefabricated reinforced concrete deck panels, allowing the contractor to complete the bridge deck construction in 16 days. As a result, the bridge was closed, and a full detour of traffic was in place for 16 days. The contractor worked two 12-hour shifts per day, minimizing the duration of the road closure. JMT's services



included design of deck replacement, accelerated bridge construction (ABC), design of rehabilitation of substructure design of traffic mitigation plan, design of interim traffic signal timings, construction services, and on-site "round the clock" engineering services during the road closure.



NJ PROJECT OF THE YEAR

OVER \$5 MILLION

Route 676 Bridges Over North Branch of Newton Creek, Dewberry

Dewberry designed a \$6.8 million project for the New Jersey Department of Transportation (NJDOT) utilizing accelerated bridge construction (ABC) techniques for the replacement of two (2) bridge superstructures. The project is located in a heavily traveled section of Interstate 676, between the Walt Whitman and Benjamin Franklin Bridges that connects Camden, NJ to Philadelphia, PA. These circa 1954 bridges were 80-foot-long single-span, steel multi-girder structures supported on common reinforced concrete abutments that carry an estimated 81,000 vehicles per day over the North Branch of Newton Creek. Due to the high traffic volume, NJDOT required that all lanes of traffic be open during rush hour and specified that a minimum number of lanes be maintained throughout non-peak hours. To balance the overall project cost and schedule, meet the client's expectations and project objectives, and minimize disruptions to the traveling public and surrounding communities, our design for this multi-disciplined, project selectively utilized a combination of ABC and conventional design details. The superstructure, bearings, and approach slabs were replaced during four weekend closures, constructing half of each bridge during each weekend. We provided engineering services for final design; project management; topographic survey; preparing and reviewing soil erosion and sediment control report and plans; and preparing and completing horizontal and vertical geometry, final roadway plans, lighting design, final structures documents, construction cost estimates, specifications and construction schedule.



Garden State Parkway Interchange 38, KSE

KS Engineers, P.C. (KSE) provided Supervision of Construction Services, including Resident Engineering and Inspection services for the Widening and Rehabilitation of Atlantic City Expressway Bridge 20WB over the Garden State Parkway (Interchange 38).



The project consisted of new spread footings on micropiles for new pier columns and extended abutments to widen the structure by seven feet. New prestressed concrete beams were erected for the widening, the existing bridge deck was demolished, and a new deck, median barrier, and parapet were cast with High Performance Concrete. The new bridge deck was constructed on the existing substructure constructed on spread footings, with the extended abutments and new pier columns constructed on micropiles, making the bridge design unique, and distinct from previous New Jersey Turnpike Authority (NJTA) projects. The bridge widening and deck replacement were completed with staged construction on the Atlantic City Expressway and the Garden State Parkway. The foundations were constructed in tightly constrained spaces, with the abutment foundations raised above the Garden State Parkway by approximately five feet. KSE coordinated daily with both the NJTA and the SJTA to provide an on-time, within budget, and excellent final product. KSE provided construction management and inspection services, including daily reporting, shop drawing and submittal review and coordination, RFI review and coordination, traffic control planning and review, material testing and plant inspection, surveying services, change management, and document control.

NJ PROJECT OF THE YEAR

OVER \$5 MILLION

Sea Isle Boulevard, McCormick Taylor

McCormick Taylor completed the final design of this multiyear roadway reconstruction. The roadway was elevated on fill by approximately four to five feet to be above the 100-year flood elevation while maintaining the existing toe-of-slope and right-of-way.



Three existing tidal equalizer pipes crossing beneath the roadway were replaced at their same locations with larger pipes to improve tidal flushing and also accommodate wildlife passage. A small connector roadway between Old Sea Isle Boulevard and Sea Isle Boulevard underwent minor reconstruction to improve access to the Sunks Creek Bulkhead Public Access Area and an offsite marina. The estuarine wetland complex adjacent to Sea Isle Boulevard is considered critical habitat for a large population of Northern Diamondback Terrapins. In response to concerns of the US Fish and Wildlife Service, approximately four miles of turtle exclusion fence was installed along all proposed guiderail upon the roadway's top-of-slope, which effectively eliminates high terrapin mortality caused by motor vehicle encounters on the roadway. The tidal equalizer pipe replacements also provide enhanced opportunities for terrapins to cross Sea Isle Boulevard without entering the roadway. A protected turtle nesting area was also provided as part of the Sunks Creek Bulkhead recreational site improvements



Route 1&9 / Haynes Avenue Operational Improvements Project, Baker

U.S. Route 1&9 is an important 31-mile route connecting Woodbridge Township, New Jersey, with New York City. The freeway passes into Newark, connects to Haynes Avenue and provides access to Newark Liberty International Airport (EWR), one of the largest airports in the United States and a local and national economic hub. However, the thoroughfare faced number of design challenges, which included an existing multileg intersection, multiple access points within a limited roadway segment and congestion as a result of the existing highway features and the resulting cost to the consumer.



To solve these challenges, the team implemented several improvements, including the construction of a roundabout at the Route 1&9 SB local ramps and Haynes Avenue and Bessemer Street intersection. When the project began in 2009, roundabouts were not widely used in New Jersey, but they have the potential for numerous positive impacts. In addition, the project included widening Route 1&9. Existing sidewalks on Route 1&9 SB local were maintained and crosswalks and ADA curb ramps was provided at the proposed roundabout and Haynes Avenue and Bessemer Street intersection. The operational, mobility and safety improvements successfully provide a significant benefit to ongoing freight operations and, in turn, allow a booming economy to continue to thrive. The project is significant enough that it was included in both the NJ Capital Program, the NJDOT STIP and the regional plan, the NJTPA Regional Transportation Plan for Northern New Jersey (Plan 2040).

NJ PROJECT OF THE YEAR

OVER \$5 MILLION

Route 78 Ramps over Routes 1 & 9 Bridge Deck Replacements, TyLin International

This \$28 Million NJDOT project involved deck replacement and rehabilitation of three bridges within Interchange 58 of Route 78 in the City of Newark, including reconstruction and safety improvements on the approach roadways on three separate interchange ramps. The project replaced the existing bridge decks with precast concrete full-depth deck panels while also addressing other structural deficiencies to remove the structures from the Bridge Management System priority list. In addition to the deck replacements, improvements included substructure repairs, seismic retrofit, 1,600 linear feet of retaining wall upgrades with new 4'-2" high heavy truck parapets, over 2,000 linear feet of roadway reconstruction using precast concrete panels, new highway and under-bridge lighting, and a new bridge mounted sign structure. This project is a great example of a public agency and engineering consultant working together to use new technology to significantly enhance the durability and lifespan of an existing bridge while keeping impacts to the traveling public to a minimum during construction. The project met the



project mandate with virtually zero impacts to commerce at the nearby Port Newark and did not have a single late Monday morning lane opening. Substantial project completion was achieved 2 months ahead of schedule.

NJDOT Maintenance Bridge Fender Replacement Contract 2017-1, WSP



The New Jersey Department of Transportation's (NJDOT) Design fender replacements of existing deteriorated timber fenders on four major structures located throughout Cape May County, New Jersey (NJ). The four bridge structures are NJ-109 over Cape May Canal, NJ-162 over Cape May Canal, NJ-147 over Grassy Sound and NJ-147 over Beach Creek. NJDOT determined that the existing timber fenders were in a severely deteriorated state, requiring immediate action to replace with a resilient fender system constructed economically on a tight schedule. WSP's state of the art design approach was the first of its kind in New Jersey and included the removal of deteriorated timber fenders and replacement with a new environmentally friendly fender design made of recycled composite material. WSP's construction staging ensured the waterway channels remained open to marine traffic during the fender replacement. WSP developed project specific pile driving criteria to ensure that the pile has sufficient drivability through the dense subsurface soils while preventing damage. A vibratory hammer along with side-grip handling situated on barges were selected for the pile driving operations.



Section News & Meetings

September Joint Meeting with NC-NJ Focusing on Transportation Funding

The September meeting was the first to utilize the new REMO virtual event platform to host the event. The event kicked-off with a social hour where participants had the opportunity to meet and mingle within a virtual space.

The networking session was followed by the technical presentation, which provided a general overview of the current state of affairs as well as a glimpse of the future of the NJDOT & the NJTA Capital Programs.

Snehal Patel, Assistant Commissioner, Capital Program Management and State Transportation Engineer for NJDOT provided an overview of the NJDOT, the challenges and successes. For instance, Mr. Patel noted the success of the NJDOT Staff Augmentation agreements where the consultant community provides a range of tasks and staffing assignments to help NJDOT keep their program moving.

Rob Fisher, Chief Engineer for the NJTA provided a summary of the Authorities upcoming program. The NJTA program will provide significant economic stimulus in response to the economic impact of COVID-19 and will sustain tens of thousands of jobs in the coming months and years. The program will also help to maintain and strengthen the transportation network that provides a substantial competitive edge for New Jersey in a highly competitive regional, national and global economy.

October Scudder Falls Bridge Meeting & Field Trip

The Delaware River Joint Toll Bridge Commission (DRJTBC) Scudder Falls Bridge meeting and field trip, originally scheduled for March, was rescheduled due to COVID-19 and



held on a warm afternoon in October. The event was “tweaked” a little, held entirely outdoors with masks and social distancing to allow a safe and informative event. The afternoon site tour was led by Kevin Skeels, Deputy Chief Engineer for the DRJTBC assisted by Jason Shaulis Resident Engineer for Hill International and Joe Danyo of Baker Engineers. Project progress is impressive, with



one span completed and open to traffic while construction of the other span is well underway. Kevin explained that project design and construction was driven by the extensive environmental sensitivities within the site including migrating endangered fish species



Section News & Meetings

and a peregrine falcon which nested in the old bridge. Preconstruction activities included netting around the existing bridge, to ensure that the raptor did not return to the old structure before it could be demolished and the construction of new “digs” which consists of a tower supported shelter, on an island about 1000 feet north of the bridge, sited to provide the falcon good views of the bridge. Mr. Skeels noted that the bird has not yet move into the new place.

In-water sensitivities drive the bridge demolition and construction work, where cofferdam and trestle construction is restricted through the Spring months. These restrictions drive the construction approach where foundations construction is advanced rapidly after the moratorium is lifted, allowing work to proceed “in the dry” during the remainder of the year. Field trip participants witnessed pier demolition and construction work being advanced from the south trestle causeway.



Mr. Skeels explained that the Contractor, Trumbull Corporation was able to make an important adjustment to the of the trestle causeways design, raising the grade to match the adjacent River Road, and allowing better access to pier work. This approach required the Contractor to receive expedited approval from regulators. The tour allowed participants to see pier construction in various stages of completion.

November Meeting on Hyperloop Technology and the Imperative for Speed

The presentation described the PA Turnpike Commission study into the current state of hyperloop technology. The presenters, Barry Altman of the Pennsylvania Turnpike Commission and Dan Corey, of AECOM started with the brief description of hyperloop technology and how it works. Hyperloop is envisioned as a system that utilizes magnetic levitation to support passenger pods that run at speeds of 500 mph in vacuum filled tubes. While there are no operating systems there are test facilities and several metropolitan areas have developed long range plans. For example, the planners are considering a mid-Ohio route linking Pittsburg, Columbus and Chicago. Other potential routes include New York to Philadelphia, Baltimore and Washington D.C. The current thinking is that HyperLoop systems would likely be implemented for high value freight instead of passenger transit.



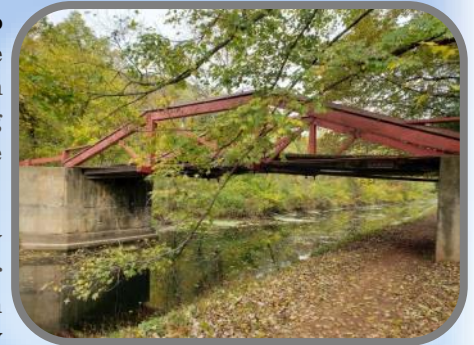
2021 Scholarship Application Coming Out In January

In 2020 ASHE SNJ awarded a record \$11,500 to four applicants, bringing the overall total of ASHE SNJ scholarship awards to date to over \$200,000. If you know a civil engineering student, make sure that they download an application from the ASHE SNJ website <https://ashesnj.wildapricot.org/>. Remember that the secret to winning a scholarship is to follow the instructions.

Delaware River & Scudder Falls Bridge Bicycle Tour

On a warm afternoon in October, a group of about 20+ engineering professionals met outside the offices of the Delaware River Joint Toll Bridge Commission (DRJTBC) in Yardley, Pennsylvania, for the ASHE Southern New Jersey (SNJ) Delaware River Bicycle Tour. The tour featured great views of the Delaware River, a scenic ride along the tow paths, a visit to Washington Crossing historic sites, plus an up-close view of the \$396 million DRJTBC Scudder Falls Bridge Replacement Project.

the-art transportation in the 1850s and now. We left the D&L Canal tow path to stroll through the Village in Washington Crossing Historic Park, a historic site near where George Washington made his Delaware River crossing to attack the Hessians in Trenton, turning the tide of the Revolution.



After a leisurely lunch, the tour continued down the New Jersey side of the river

along the Delaware & Raritan Canal to the Scudder Falls Bridge project on the “Jersey” side. While the ASHE SNJ tour officially ended at the Scudder Falls project with a shuttle back to the DRJTBC offices, most riders were having too much fun and just not ready to go home. The majority of the group continued on to Trenton and crossed back to PA on the Calhoun Street Bridge, extending the Delaware River Tour another 9 miles. Based on the level of enthusiasm, ASHE SNJ plans another bicycle tour in Spring 2021.



The Scudder Falls Bridge Replacement project is over half complete, with the new southbound structure carrying both directions of I-295 over the Delaware River while the new northbound structure is under construction. The bicycle tour began with a side trip down River Road (PA 32) for a quick view of the Scudder Falls Bridge Pennsylvania abutments plus the trestle causeways that extend hundreds of feet into the river supporting massive cranes. From the end of the Yardley boat ramp, we could see the multi-span bridge construction with work extending from both the Pennsylvania and New Jersey sides of the river. Back at the bridge, the tour continued north along the Delaware & Lehigh (D & L) Canal in Pennsylvania to Washington Crossing. Many historic features from the original canal remain, including sluice gates, locks, and tender houses, providing a poignant contrast between state-of-



Thank You to Our Sponsors

PLATINUM LEVEL

GPI

Naik
GROUP



Richard Grubb & Associates, Inc.
Cultural Resource Consultants



TRAFFIC PLANNING
AND DESIGN, INC.



Dewberry[®]



Advanced Infrastructure Design, Inc.



NJAPA

www.njapa.com



ARORA and ASSOCIATES, P.C.
Consulting Engineers

McCORMICK
TAYLOR

URBAN
ENGINEERS

HNTB

GOLD
LEVEL

REMINGTON AND
VERNICK

Upcoming Events

LOOKING
AHEAD

Ethics
(Online via REMO)
January, 2021