

The Mid-Allegheny Minutes



January 11, 2023 Dinner Meeting

The ASHE Mid-Allegheny Section held the third meeting of the 2022-2023 program at the Indiana Country Club. Following a welcome by Section President **William Ferko, PE** and dinner, **Alicia Kavulic, PE**, PennDOT District 10-0 District Geotechnical Engineer, gave a presentation on Geosynthetic Reinforced Slopes.

Alicia highlighted District projects with construction photos showcasing the GRS system. Explaining the construction sequence and challenges they have encountered. She also discussed the current standards and recent changes to them.



Alicia Kavulic and William Ferko

The ASHE Mid-Allegheny Section is grateful to Alicia for taking the time to educate the industry on the various components of and applying Geosynthetic Reinforced Slopes.

consultant professionals who work in a variety of disciplines offering the students a broad spectrum of insight. The panelists for the evening are listed under the photos below. The UPJ students presented on the Concrete Canoe Competition, Steel Bridge Competition, and updates on other student chapter activities. The UPJ students really enjoyed the networking opportunity talking with the engineering consultants and PennDOT employees prior to the dinner meeting. Several UPJ students received internship or job offers after the meeting. Thanks to all of the engineering consultants and PennDOT employees that make this a great event each year.



Marshall Kitchen, Jennifer McCracken, Matthew Hetrick (top left), Barbara Hoehne (bottom left) and Nicki Donahoe, Scott Roberts, Jason Layman, Doug Zubal, Tim Panzigrau (right)

February 15, 2023 Joint Meeting

The fourth meeting of the ASHE Mid-Allegheny Section 2022-2023 program was at the University of Pittsburgh Johnstown Living-Learning Center, Heritage Hall. Opening remarks were presented by ASHE Altoona Section President, **Barbara Hoehne, PE**, and ASHE Mid-Allegheny Section President **William Ferko, PE**. The panelists were made up of PennDOT employees and

March 22, 2023 Dinner Meeting

The fifth meeting of the ASHE Mid-Allegheny Section 2022-2023 program was held at the Hilton Garden Inn Indiana at IUP. The evening included dinner, a kickoff by Section President, **William Ferko, PE**, and a discussion of "The Good, The Bad, and The Ugly" by **Paul Koza, PE**, PennDOT District 10-0 Assistant District Executive – Construction. His presentation covered a variety of topics

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including constructability and crane placement to utility poles jogging into a newly replaced sidewalk.

The section appreciates Paul providing insight to the industry on situations that the District has encountered over the past year in both design and construction. Although you may cringe when you see your project appear on the screen, we are all working to prevent the same mishaps from repeating themselves.



Paul Koza and
William Ferko



May 17, 2023 Awards Meeting

The sixth meeting of the ASHE Mid-Allegheny Section 2022-2023 program was held at the Indiana Country Club. After the President's remarks the Officer Inductions were introduced by Regional ASHE Member **J.T. Lincoln, PE**.



The 2023-2024 ASHE Mid Allegheny Board

Robert Scheib, PE and **Jennifer Kacin, PE**, both with AECOM gave a presentation on the Brady Run Bridge #3 bridge replacement project. The project was selected for the ASHE Mid Allegheny Outstanding Highway Engineering Award greater than \$2.5M category. See below for more details.

(<\$2.5M) – Brady Run Bridge #3

Owner: PennDOT District 10-0

Prime Designers: AECOM Technical Services, Inc.

Contractor: Mekis Construction Corp.

Originally built in 1971, the Brady's Run bridge functions as an important community connector to the nearby residences and business. The existing bridge was a one lane bridge rated poor in 2016 inspection report.

In 2019, PennDOT District 10-0 selected AECOM to design an updated structure to replace the existing 1-lane bridge. In preliminary design, AECOM explored two full replacement options. Ultimately PennDOT selected the option for a 74' span with galvanized steel plate girders on integral abutments as it was the most cost-effective solution. An active business (the Leechburg Hungarian Club) and multiple single-family homes adjacent to the existing structure added complexity during construction. Maintaining access to these locations throughout construction was key to the success of the project. The new single span bridge carries two 10-foot traffic lanes with 2'-3¼" shoulders, utilizing PA Type 10M Bridge Barriers. The bridge carries 256 vehicles per day and spans over Brady's Run.

During the design process, it was determined that placing the new integral abutments behind the existing abutments would allow for the existing substructure to be used as scour protection. Doing so resulted in a span of 74'. This was determined to be the most economical solution. The existing substructure units were on a 45° skew; replacing them in kind would require a refined analysis, additional construction easement for excavation limits and potential noise disturbance to the neighborhood due to rock excavation. Lengthening the existing span eliminated these challenges.

The existing Brady's Run Bridge site had multiple utilities that were impacted during the design of the proposed

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structure. The overhead utilities were temporary relocated, while the water line was relocated away from the structure. After multiple discussions with the District and Gas Company, it was determined that the proposed structure would have the gas line attached to the structure between Girders 2 and 3. This resulted in modifying the end diaphragms, intermediate diaphragms, approach slabs and coordination with the gas company for the proposed gas line support frames.

A non-standard design element that was incorporated in this project is the tapered shape of Wingwall A. The adjacent Hungarian Club is accessed via a private bridge over Brady's Run at the south-east corner of the proposed structure. Wingwall A is located at this corner and was required to be a tapered wingwall instead of the standard rectangular wingwall. The excavation and grading required to construct the rectangular wingwall would have encroached on the Hungarian Club property. By using the tapered wingwall, the contractor was able to construct the wingwall and match the grading to the existing downstream bridge.

Another non-standard design element was the stone toe wall that was utilized downstream of the existing abutment. Due to the channel wall existing condition downstream of the existing abutment, it was decided to remove the deteriorated section. The crest and footer stone were made up of masonry stones that were approximately 30" in diameter. The stone toe wall was set below the bottom of streambed to an elevation that matched the capped existing abutment and extended to the channel wall that was to remain.

Mekis Construction maintained an aggressive schedule to open the bridge to traffic within the scheduled road closure. During construction the nearby Hungarian Club maintained access throughout the duration of the project.



Completed Brady's Run Bridge #3



Robert Scheib (AECOM) and Jennifer Kacin (AECOM)

Fall 2023 Scholarships

The ASHE Mid-Allegheny Section is pleased to announce Mr. Cain Pfoutz as their engineering scholarship recipient and Ms. Katelyn Pepe as their engineering scholarship runner-up for the 2023-2024 academic year. Both students will be receiving scholarships from Mid-Allegheny in recognition of their achievements.

Cain will be entering his senior year at the University of Pittsburgh, where he participates in a number of extracurricular activities while pursuing his degree in civil engineering. His academic activities include secretary for the student chapter of the American Society of Civil Engineers (ASCE), Steel Bridge Team, Associated General Contractors (AGC) Pitt Student Chapter, and the Constructors Association of Western Pennsylvania (CAWP) Estimating Competition. Cain has also participated in numerous community service activities

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including Project Gifts for Elk County, Ecology Club, and the Clarion River Clean-up Project. During his time at Pitt, Cain has completed in co-op rotations with AM Higley and HRI, Inc. He has been named to the Swanson School of Engineering Dean's list for multiple semesters and received the ASCE Pittsburgh Section Achievement Award. After graduation, Cain plans on working as a construction manager on heavy highway/civil construction projects and earning his professional engineering license.

Katelyn is a civil engineering major at West Virginia University and has maintained an outstanding academic record as she enters her senior year. She is actively involved in the student chapter of ASCE, where she serves as the fundraising coordinator. Katelyn will also be stepping into the role of president of her university's student chapter of Chi Epsilon, a civil engineering honor society. In addition to her involvement with these activities at WVU, Katelyn also helps out within her local community as a volunteer at the Turkeyfoot Valley Historical Society. She also volunteers as a part time grader and was named to the President's list in recognition of her academic achievement. After graduation, Katelyn plans to pursue a career in the field of water resources to help address the rapidly expanding need to build, manage and update our nation's water systems.



*Brad Dicola (left), Cain Pfoutz (middle)
and William Ferko (right)*

ASHE Mid-Allegheny Golf Outing

The 23rd annual Mid-Allegheny Section golf outing was held on June 2, 2023 at Lenape Heights Golf Resort. The winning team is featured below with a score of 59 at 12 under par.



2023 ASHE Mid-Allegheny Golf Outing Winners

Left to Right: Matt Pierce, Dean Morrison, Eric Meyer, and Ryan Meyer

A few other photos from the day:



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Upcoming events include:

- Sporting Clay Shoot at Promised Lands Sporting Clays on July 28, 2023.
- Denny Shaffer Memorial Golf Outing at Birdsfoot Golf Club on August 10, 2023.
- September Dinner Meeting on the SR 0228 Corridor Update, more information to follow.
- District 10 Construction Golf Outing at the Links at Spring Church on September 22, 2023, more information to follow.

Additional information on the events above can be found on our website.

We sincerely thank all of our Members and Sponsoring Firms for your continued support of the Section.

ASHE Mid-Allegheny Meeting Location

Throughout the 2022-2023 program the section held meetings at three locations to determine the ideal location for meetings over the next year. Thanks to the effort of **Tim Panzigrau** for evaluating and soliciting feedback on the three locations, the Indiana Country Club will be the meeting location for the 2023-2024 program.

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Contact the ASHE Mid-Allegheny Section

Website: www.midallegheny.ashe.pro

Email: ashe.midallegheny@gmail.com

If you have comments or suggestions related to presentations, meetings, or this newsletter, please forward a brief e-mail to the effect. Our board welcomes feedback so we can better serve our membership and industry.