

State Transportation Innovation Council (STIC)

STIC Business Meeting

MEETING DATE: Wednesday, Nov. 15, 2023

TIME: 2 p.m. – 3:30 p.m.

LOCATION: Hershey Lodge, Hershey, Pa. (Remote option also available via Webex)

ATTENDANCE: Refer to Attendance List

Welcome and Introductory Remarks

PennDOT Executive Deputy Secretary Cheryl Moon-Sirianni and Federal Highway Administration Pennsylvania Division Administrator Alicia Nolan provided opening remarks.

FHWA Update

Yathi Yatheepan, P.E., FHWA PA Division Research and Innovation Coordinator, provided an overview of FHWA websites related to grant information under the new Bipartisan Infrastructure Law (BIL).

- [DOT Discretionary Grants Dashboard](#)
- [Bipartisan Infrastructure Law \(BIL\) Launchpad](#)
- [USDOT Project Delivery Center of Excellence](#)
- [Key Notices of Funding Opportunity](#)
- [DOT Navigator](#)

Grant funding is also available for the Every Day Counts Round 7 (EDC-7) innovation Environmental Product Declarations (EPDs) for Sustainable Project Delivery through the Inflation Reduction Act.

EDC-6 Targeted Overlay Pavement Solutions (TOPS) Update

Lydia Peddicord, P.E., Bureau of Design and Delivery, shared that PennDOT has already implemented several solutions that are part of the EDC-6 TOPS innovation and specifically focused on Highly Modified Asphalt (HiMA) and *Thin*-Bonded Concrete on Asphalt *with Fibers* as part of the EDC-6 round. In August 2023, PennDOT received \$700,000 through the Accelerated Innovation Deployment (AID) Demonstration program, which will be used to deploy solutions like Stone Matrix Asphalt (SMA) and HiMA. Specific projects are yet to be determined and districts were asked to identify potential project locations, if interested. Funding must be obligated by August 2024.

STIC New Innovation – Highly Modified Fuel Resistant (FR) Asphalt for Use in Combatting Amish Buggy Pavement Damage

Mary Robbins, Ph.D., P.E., Pennsylvania Asphalt Pavement Association, presented a new innovation, Highly Modified Fuel Resistant (FR) Asphalt for use in Combatting Amish Buggy Pavement Damage, to STIC members for

consideration. Pennsylvania has the largest Amish population in the U.S., and areas with large Amish populations experience pavement deterioration due to the carbide caulkins being welded to the horseshoe for added friction. Current repair methods only last between one and five years. Delaware DOT has used Highly Modified Fuel Resistant (FR) Asphalt, which has about twice the amount of polymer in the binder and has seen great success. It has also been applied on the runway at LaGuardia Airport. The product costs approximately 20 percent more than traditional asphalt mixes. The Construction and Materials TAG is looking to pilot the material in Pennsylvania.

Virage Simulation Truck Simulator Overview

Jim Bence, Manager of Maintenance Programs Pennsylvania Turnpike Commission (PTC), presented on the PTC's experience with the Virage Simulation Truck Simulator. Most notable benefits include:

- Size – Unit can be installed in a room and is not enclosed.
- Safety – Operators train under real conditions in a virtual world.
- Set-up – Console is designed to match real equipment, including spreader equipment, and can be customized depending on organizations' needs.
- Screen views – Realistic weather events and ability to upload own road network.
- Customer service – Vendor has been very accessible and able to fix any issues and concerns either remotely or in-person.

Jim Bence noted that maintenance costs have gone down since operators have been trained on the simulator and are not using actual equipment for training purposes.

Winter Operations Innovations

Ryan McNary, Operations and Transportation Systems Management and Operations (TSMO) Performance Division Chief, presented on current and future efforts related to data-driven operations. Last winter, PennDOT piloted automated weather messages and Variable Speed Limit (VSL) signs on certain corridors to alert drivers of whiteout conditions. This winter the pilot is being expanded to include additional corridors.

Probe Data-Driven Queue Protection Corridors are available to districts for deployment in work zones. Benefits include major cost savings and increased safety.

PennDOT also started a partnership with WAZE. Districts can send information, including specific project data, directly to WAZE using a resource account. Additional trip data is available to all districts and entities doing business with PennDOT. This can be used for Highway Occupancy Permit (HOP) studies to understand traffic movement for different scenarios.

The Lane Reservation System, a Safety and Traffic Operations Technical Advisory Group (TAG) innovation, will be a web-based platform to schedule, coordinate, conflict screen and digitally track work zone activities on impacted roads, to determine the best times for road construction and closures. The goal is to include digital traffic control plans in the future as well. Power User testing is anticipated for summer 2024.

Moving forward, the goal is to also utilize the Automated Vehicle Locator (AVL) information to post automatic protection messages for mobile work zones. The real-time road condition pilot is moving forward this winter to ensure validity of the collected data.

Attendance List

- Brian Allen, P.E., PennDOT
- Zachary Appleby, PennDOT
- Karen Atkinson, PSATS
- Andrea Bahoric, PennDOT
- Bill Beaumariage, P.E., PennDOT
- John M. Becker, P.E., ACPA/PA, PennDOT
- Louis Belmonte, P.E., PennDOT
- Jim Bence, PTC
- Scott Benedict, PennDOT
- Nathan Bragunier, PA Municipal League
- Matt Briggs, PennDOT (Remote)
- Nicholas Burdette, P.E., ACEC/PA
- Matthew Burkett, PennDOT
- John Caperilla, EIT, ASHE
- Jim Casilio, P.E., PACA
- Michael Castellano, P.E., Pennoni
- Steve Chizmar, PennDOT
- Chris de Leon, PennDOT
- Danielle Derolf, Dawood Engineering
- Carrie Fischer, Meng, P.E., WTS
- Jon Fleming, PennDOT
- Melissa Gates, CCAP
- Vikash Gayah, Penn State
- Charles Goodhart, PAPA
- Gavin Gray, P.E., PennDOT
- Vince Greenland, P.E., PennDOT
- Alice Hammond, P.E., PennDOT
- Adrian Hatch, Imajion
- Brad Heigel, P.E., PTC
- Richard Heineman, P.E., PennDOT
- Eric High, P.E., PennDOT
- Jeremy Hughes, P.E., PennDOT
- Jaclyn Huss, PennDOT
- David Kammerer, P.E., PennDOT
- Kevin Keefe, P.E., PennDOT
- Danielle Klinger-Grumbine, PennDOT
- Chris Kufro, P.E., PennDOT
- Andrew Lawrence, P.E., PACA
- Bret Lundgren, P.E., PennDOT
- Ryan McNary, PennDOT
- Brian McNulty, P.E., PennDOT
- Chris Metka, PennDOT
- Dennis Moody, PUC
- Kristin Mulkerin, PennDOT
- Lori Musto, PennDOT
- Alicia Nolan, FHWA
- Lydia Peddicord, P.E., PennDOT
- Corey Pellington, PennDOT
- Todd Porter, PTC
- Tom Prestash, P.E., PennDOT
- Mike Rebert, P.E., PennDOT
- Rich Reisinger, P.E., PennDOT
- Anton Rizk, PennDOT
- Mary Robbins, Ph.D., P.E., PAPA
- Rich Roman, P.E., PennDOT
- Dean Schmitt, PennDOT
- Ron Seybert, P.E., APWA
- Larry Shifflet, PennDOT
- Glenn Silfies, PTC
- Cheryl Moon-Sirianni, P.E., PennDOT
- Joseph Szczur, P.E., University of Pittsburgh
- Doug Tomlinson, P.E., PennDOT
- Anja Walker, PennDOT
- Dan Walston, FHWA
- J Brian Walter, P.E., PennDOT
- Gerald Wertz, P.E., PennDOT

- Monica Wesner, PennDOT
- Yathi Yatheepan, P.E., FHWA
- Jason Zang, P.E.
- Chuck Zimmerman, PennDOT