



The STIC supports the rapid implementation of innovative products and tools throughout the state.

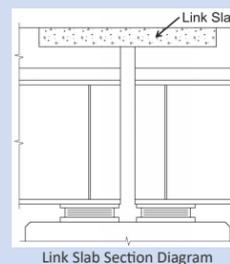
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## Bridge Link Slabs Innovation Advanced to Detailed Development

Traditional bridge joints are inexpensive to build, but often break down and allow water to leak on to and damage the elements below them requiring extensive and expensive repairs. With increasing pressure on bridge designers to minimize the number of joints on bridge decks to reduce maintenance and long-term costs, the use of concrete link slabs is gaining popularity.

A concrete link slab is a relatively thin piece of [Ultra-High Performance Concrete](#) that connects simply-supported deck spans. It is designed to flex with girder deflections and transmit compressive and tensile forces through the deck in conjunction with appropriately designed bearings. Link slabs will sometimes crack, but leakage is minimal, and maintenance is less expensive. They can be implemented as part of bridge rehabilitation, preservation and new construction projects. They also provide a smoother ride for drivers.



With concurrence to move this innovation forward at the July STIC Business Meeting, the STIC's Design Technical Advisory Group (TAG) will assign an Innovation Owner and convene an Innovation Development Team to further develop the innovation to advance to deployment across Pennsylvania.



One vendor demonstrates the Hot Pour Mastics innovation.

## Hot Pour Mastics Demonstration at STIC Business Meeting

Hot Pour Mastics (HPM) combine the flexibility and adhesion of rubberized asphalt sealants with the strength and load bearing of engineered aggregates that completely fills the repair void. Hot Pour Mastics can be used as a one-time application any time of year for large cracks and small potholes in pavements. The result provides a stable, flexible repair that bonds firmly with existing pavements to seal out water, return structural strength, improve ride quality, and prevent further damage for years to come.

Prior to the July STIC Business Meeting, STIC Members, TAG Members, Innovation Development Team members, PennDOT, Federal Highway Administration (FHWA) and Pennsylvania Turnpike Commission (PTC) employees, along with local government officials, gathered on a parking lot near PennDOT's Materials Testing Lab to view demonstrations of Hot Pour Mastics materials by four vendors.



Hot Pour Mastics can be used to fill large voids.

Stacy Cleary, Pennsylvania Association of Asphalt Material Applicants, attended the demonstration and explained some of the benefits of HPM. "This material is designed to fill (holes) two inches or bigger and go deeper (than routine crack sealing)," she said. HPM can help to improve the ride for drivers, and it is flexible at lower temperatures, allowing for repairs to be made during winter and spring. "It is a preservation technology," Cleary said.

## STIC Incentive Funding Awardees

Each year, the Federal Highway Administration allocates \$100,000 in STIC Incentive Funding to each state's STIC. The two Pennsylvania projects that received 2019 STIC Incentive Funding were announced at the July STIC Business Meeting.

- **Stormwater Management Training and Field Guidebook** - This project includes the development of training and a field guidebook for PennDOT maintenance employees and local municipalities about how to maintain stormwater facilities.
- **Unmanned Aerial Systems (UAS)** - This project will research how UAS or drones can improve the transportation system, including bridge inspections and surveying. The funds will help to produce a manual and guidelines for the use of drones at PennDOT.



Bioswale in Carlisle, Pa.



Low Cost Safety Improvements can be implemented across the state.

## Fact or Fiction

STIC innovations need to be major, new ideas that can be applied at the state level.

**Fiction:** STIC innovations can be any proven, well-researched and documented products, processes, technologies and tools that are new to Pennsylvania. They can be applicable to local, state, or interstate transportation networks.



The STIC meets three times per year.

## Calendar of Events

**SAVE THE DATE! National STIC Meeting - October 24**  
Stay tuned for more details about how you can participate.

**STIC Business Meeting - November 20**

For more information, please contact the STIC Team at [penndotstic@pa.gov](mailto:penndotstic@pa.gov).