



This edition of the STIC *Innovation in Motion* e-newsletter highlights the Federal Highway Administration (FHWA) Every Day Counts (EDC) innovations – Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE), and Unmanned Aerial Systems (UAS), Pennsylvania is pursuing.

CHANGE, an EDC Round 4 (EDC-4) and EDC-5 innovation, is encouraging the shift from one-dimensional (1D) to two-dimensional (2D) hydraulic modeling with the goal to improve the understanding of the complex interactions between waterways and infrastructure. The benefits of the EDC-5 UAS innovation are wide ranging and impact nearly all aspects of highway transportation. UAS improve operations, construction, inspection, and safety by collecting data needed to design, build, and operate the highway system.

This e-newsletter also features an update on the Lane Reservation System, an innovation being advanced through the STIC's Safety and Traffic Operations TAG. The Lane Reservation System minimizes congestion while needed work repairs to the road and bridge network are being completed.

Stay tuned for next month's STIC *Innovation in Motion* e-newsletter to learn more about several STIC innovations that are advancing through the Innovation Development Process, including the Certified Concrete Finishers Course, the Stormwater Management Training and Field Guidebook, and the Brushing Loader

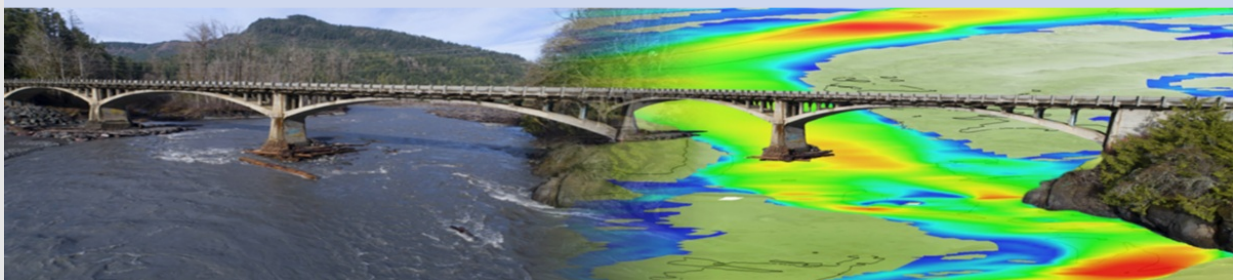
2021 STIC Incentive Program Funding Project Recipients Announcement

FHWA's STIC Incentive Program offers technical assistance and funds – up to \$100,000 per STIC per year – to support the costs of standardizing innovative practices. In 2021, two projects in Pennsylvania were selected to share the \$100,000 STIC Incentive Program funding.



Bridge Deck Link Slabs: Bridge deck joints have been one of the leading causes for premature bridge deterioration. Link slabs are an economical way to eliminate bridge joints by connecting adjacent deck sections with a specially designed slab composed of either traditional or Ultra-High Performance Concrete. The 2021 STIC Incentive Program funding will be used to support the development of the design procedures and design tools for using Bridge Deck Link Slabs in Pennsylvania.

Automated Traffic Signal Performance Measures (ATSPMs) Pilot: ATSPMs are an innovative way to use data to analyze and optimize the performance of traffic signals. Poorly timed traffic signals are the most significant contributor to traffic congestion on arterial roadways. The 2021 STIC Incentive Program funding will be used to procure a vendor software that has the capability to flag anomalies in various performance measures as a pilot to determine whether having this functionality in software can minimize staff resources and provide effective improvements to traffic flow. The pilot will include intersections that are already connected to the PennDOT network, and have controllers and detection capable of collecting ATSPM data.



Collaborative Hydraulics: Four PennDOT Districts Select Bridges for the Innovation

PennDOT continues to advance the Collaborative Hydraulics: Advancing to the Next

Generation of Engineering (CHANGE) innovation.

The innovation involves shifting from one-dimensional (1D) to two-dimensional (2D) hydraulic modeling to provide improved understanding of the complex interactions between waterways and infrastructure. CHANGE is a Federal Highway Administration (FHWA) Every Day Counts Rounds 4 and 5 (EDC-4 and EDC-5) innovation that Pennsylvania championed.

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Flying Forward: PennDOT's Use of UAS Progresses with Efficiency Gains

PennDOT's use of unmanned aerial systems (UAS) – also known as drones – is assisting the agency in its mission to effectively manage Pennsylvania's far-flung transportation system.

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Reserving Lanes To Minimize Congestion During Road Work

As part of its mission to improve transportation statewide, PennDOT is moving closer to adopting a new system to minimize congestion while completing needed repairs to the road and bridge network.

Known as a Lane Reservation System, the concept began when PennDOT and the Pennsylvania Turnpike Commission presented the idea to the State

Transportation Innovation Council (STIC) in 2016. Since that initial discussion, interest in the idea grew to include agencies in other states through PennDOT's participation with the Smart Belt Coalition and then over time was reduced back to just PennDOT due to funding constraints resulting from the COVID-19 pandemic.

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**For more information, please contact the STIC Team at
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