



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF TRANSPORTATION

Stephen C. Brich, P.E.  
Commissioner

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November 21, 2022

The Honorable Governor Glenn Youngkin  
Members of the Virginia General Assembly

Dear Ladies and Gentlemen:

Section 33.2-1531 of the *Code of Virginia* directs the Commissioner of Highways to report annually on the use of monies in the Innovation and Technology Transportation Fund (ITTF). This letter provides the information as required by the statute.

ITTF monies are to be used solely for the purposes of funding pilot programs and fully developed initiatives related to high-tech infrastructure improvements. The term “high-tech infrastructure improvements” pertains to projects or programs that reduce congestion, improve mobility, improve safety, provide up-to-date travel data, or improve emergency response.

The Virginia Department of Transportation (VDOT) developed a Transportation Technology Plan that aligned its goals and technology strategies with the purpose of the monies allocated to the ITTF. Projects utilizing ITTF monies originate from the Transportation Technology Plan and have been approved by the Commonwealth Transportation Board.

The Transportation Technology Plan was developed to improve the efficiency, safety, and convenience of all modes of transportation throughout the Commonwealth. This plan incorporated recommendations from the VTrans 2040 needs assessment for the 12 corridors of statewide significance and from other VDOT planning documents. The eight technology strategies of the Transportation Technology Plan are:

1. **Enhance operations traffic management** – to improve corridor efficiency through active traffic management across multiple parallel freeways, arterial highways and transit systems;
2. **Strengthen incident and emergency response** – to detect, respond to and clear incidents on the roadway, which include collisions, disabled vehicles, weather events, emergencies, and man-made disasters;
3. **Support multimodal travel promotion** – to increase multimodal travel by increasing access and improving its efficiency;

4. **Manage arterials** – to optimize the performance of arterial roadways through signal operations improvements and performance monitoring;
5. **Furnish traveler information** – to provide real-time, multi-corridor, and multi-modal travel information to enable pre-trip and in-route trip planning;
6. **Support commercial vehicle/freight** – to manage and support freight mobility;
7. **Conduct emerging technology research** – to promote the development of new technologies to improve safety, convenience and efficiency of travel through connected and autonomous vehicle technologies, and bicycle/pedestrian programs; and
8. **Enhance enabling technology infrastructure** – to promote future expansion and resiliency of technologies by deploying and upgrading supporting communication and utility services.

In FY 2022, \$20 million was allocated to the ITTF program through the Six Year Improvement Program (SYIP). The attached table reflects the ITTF projects receiving FY 2022 funding allocations.

The ITTF program saw a number of significant accomplishments over the past year.

- The I-95 Variable Speed Limit (VSL) project went live between mile markers 115 and 130 northbound. The algorithm is designed to harmonize traffic flow to reduce crashes, reduce stop-and-go conditions, and improve travel time and reliability. Although the system has only been active for three months, early indications are that drivers are reacting to the VSLs. Average speeds have decreased 3 to 4 miles per hour when the transitional 45 and 55 mph speed limits are posted and speed differentials between lanes have declined.
- The Regional Multi-Modal Mobility Program (RM3P) is progressing towards full deployment. The Data Exchange Platform (DEP) is functional with the first phases of data ingestion complete. Data sources will continue to be added over the next year. The Artificial Intelligence Based Decision Support System (AI-DSS), Dynamic Incentivization (DI) and Smart Parking are in the final stages of procurement and will be delivered iteratively over the next 18 months. When fully deployed, RM3P will reduce congestion and improve travel reliability across modes in Northern Virginia through improved data and information for both system users and system operators.
- The I-81 Advanced Operational Strategies study identified a number of opportunities to improve safety and mobility in the I-81 corridor based on challenges at specific locations. Among the identified strategies are advanced curve speed warning, advanced work zone technologies, automated work zone speed enforcement, queue warning, and cameras on Safety Service Patrol vehicles for enhanced situational awareness. Work is underway to pilot automated speed enforcement in a work zone on I-81, to deploy queue warning in the Staunton District, and to pilot the placement of cameras on SSP vehicles. Additional pilots and deployments will be undertaken in the coming year.

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If you have any questions or seek details relating to specific ITTF-funded projects, please do not hesitate to contact Kevin Gregg, Chief of Maintenance and Operations, at (757) 620-3691 or me.

Sincerely,



Stephen C. Brich, P.E.  
Commissioner of Highways

c: The Honorable W. Sheppard Miller III  
Cathy McGhee, P.E.  
Mr. Kevin Gregg

<b>FY 2022 ITTF Projects</b>	
<b>Project Purpose</b>	<b>FY 22 Funding Allocations</b>
Performance Parking Deployment in Commercial Corridors	\$2,000,000
I-95 Variable Speed Limit	\$1,550,694
Parking Demand Management System	\$600,000
Pilot Program with Center of Innovative Technology Partnership	\$500,000
Technology for Field Operations	\$2,000,000
Locality Innovative Technology Implementation	\$500,000
I-81 Operational Improvements	\$5,000,000
I-64 Afton Mountain Safety Improvements	\$2,000,000
Route 19 & 460 - Signal Improvements and Cameras	\$295,000
Fiber Connections for Intelligent Transportation System Devices	\$375,000
High Speed Communications for Signals	\$813,941
Smarter Lighting Initiative	\$250,000
I-77 Variable Speed Limit Study	\$75,000
Data Driven Management Program for Pavement Marking	\$175,000
Connected Work Zones Program	\$150,000

<b>Project Purpose</b>	<b>FY 22 Funding Allocations</b>
City of Newport News Traffic Signal Upgrades	\$120,000
ITTF Project Evaluations	\$235,810
Incident Response Optimization	\$255,000
Guide Lights for Tunnel Speed Management	\$200,000
Improved Freeway Management Pilot Project with Virginia Tech Institute/ Collision Avoidance Metrics Partnership (CAMP)	\$200,000
Automated Speed Enforcement Pilot	\$200,000
Hampton Roads Bridge Tunnel System Enhancements	\$200,000
High-Water Monitoring System	\$155,000
ITTF Funds for Pilot / Future Projects	\$2,149,555
<b>Grand Total FY 22 Funding Allocation</b>	<b>\$20,000,000</b>