



# COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION  
1401 EAST BROAD STREET  
RICHMOND, VIRGINIA 23219-2000

Stephen C. Brich, P.E.  
COMMISSIONER

November 30, 2018

The Honorable Governor Ralph S. Northam  
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 moneys 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 pertaining to high-tech infrastructure improvements. "High-tech infrastructure improvements" pertain 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.

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 VTrans2040 needs assessment for the 12 corridors of statewide significance and 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 and clear incidents on the roadway, which include collisions, disabled vehicles, weather events, emergencies, and man-made disasters.

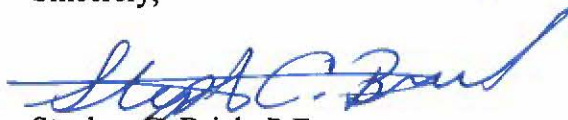
3. **Support multimodal travel promotion** – to increase multimodal travel by increasing access and improving its efficiency.
4. **Manage arterials** – to optimize the performance of arterial roadways through signal operations improvements and performance monitoring.
5. **Furnish traveler information** – 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.
8. **Enhance enabling technology infrastructure** – to promote future expansion and resiliency of technologies by deploying and upgrading supporting communication and utility services.

The current estimated total value of allocations for projects eligible for ITTF funding (“ITTF Projects”) is \$125 million. This number consists of \$96 million, which was allocated to the ITTF for FY 2018 through FY 2023 by the Commonwealth Transportation Board (CTB) pursuant to an action dated June 20, 2017, and \$29 million of allocations/projections of the CTB pursuant to the portion of the alternative CTB formula dedicated to smart roadway technology projects, prior to enactment of the ITTF, for FY 2018 through FY 2023.

In FY 2018, \$8.9 million was allocated to the ITTF. The attached tables provide information concerning ITTF Projects that were allocated funding, incurred expenditures, and /or are ongoing in FY 2018.

If you have any questions, please do not hesitate to contact Garrett Moore, Chief Engineer, at 804-786-4798 or me.

Sincerely,



Stephen C. Brich, P.E.

Commissioner of Highways

Cc: The Honorable Ms. Shannon Valentine  
Mr. Garrett Moore, P.E.

<b>“ITTF Projects” Allocated Funding in FY18<sup>1</sup></b>					
<b>UPC / Location</b>	<b>Project Purpose</b>	<b>Funding Allocation FY18 Final SYIP</b>	<b>Expenditures to Date</b>	<b>Expenditures FY 18</b>	<b>Status</b>
108587 Fredericksburg	I-95 Hard / Dynamic Shoulder Running to expand capacity to improve mobility.	\$6,559,880	\$0	\$0	Project cancelled due to a Federal Grant becoming available to improve the same section of roadway on I-95; Funding transferred back to UPC T-21588, main ITTF UPC
109482 Richmond	Richmond TOC Upgrade to house future transportation technology equipment and operations to improve traffic surveillance and management.	\$2,340,120	\$0	\$0	Construction underway
Grand Total FY-18 Funding Allocation		\$8,900,000			

<sup>1</sup> Information concerning FY17 allocations and expenditures for “ITTF Projects” may be found in the FY17 report published on Virginia’s Legislative Information System at: <https://rga.lis.virginia.gov/Published/2017/RD574/PDF>

**Breakout Projects / Ongoing / Completed Projects**

<b>UPC / Location</b>	<b>Project Purpose</b>	<b>Total Allocations</b>	<b>Expenditures to Date</b>	<b>Expenditures FY-18</b>	<b>Status</b>
105363 Northern Virginia	Expand ramp metering on I-395 to reduce congestion	\$821,006	\$821,006	\$3,026	Complete
105368 Hampton Roads	Prepare design plans for an upgraded control room to improve traffic operations at the Hampton Roads Bridge Tunnel	\$695,371	\$500,346	\$209,702	Design plans complete; Project closeout process underway
105369 Richmond	Prepare design plans for signal improvements for Route 1 from Caroline County to Colonial Heights to improve traffic flow	\$525,000	\$276,012	\$29,972	Design plans underway
105372 Northern Virginia	Upgrade outdated traveler information signs in Northern Virginia	\$1,172,310	\$1,172,310	\$29,972	Completed in FY17; Expenditures posted in FY18
105380 Bristol	Improve traffic management at the Big Walker Mountain Tunnel	\$368,233	\$242,608	\$107,276	Preliminary design underway; Removed surplus to partially fund UPC 110912
105381 Bristol	Improve traffic management at the East River Mountain Tunnel	\$588,233	\$230,163	\$107,463	Preliminary design underway
105388 Hampton Roads	Prepare design plans to improve traffic operations at the I-664 Monitor Merrimac Tunnel	\$620,448	\$271,512	\$96,180	Design plans underway
105404 Hampton Roads	Signal improvements for US 60 between New Kent and Newport News to improve traffic flow	\$385,000	\$260,350	\$101,156	Design plans underway
105443 Fredericksburg	I-95 Corridor Technology on Rt. 1, 17; Signal Communications Camera – Prince William to Hanover to improve situation awareness and the management of traffic	\$540,000	\$311,054	\$90,663	Preliminary engineering work underway; Funded by UPC 104593

UPC / Location	Project Purpose	Total Allocations	Expenditures to Date	Expenditures FY-18	Status
105444 Richmond	Signal improvements for US 60 between New Kent and Richmond to improve traffic flow	\$180,000	\$47,377	\$2,711	Reported complete in FY17; however, the project was placed on hold & then re-started; Construction is underway
105476 Hampton Roads	Install traffic monitoring devices and traveler information signs on I-64 near the Mercury Boulevard interchange to improve incident management & improve traffic flow	\$1,516,092	\$1,505,173	\$123,362	Construction complete; project closeout process underway
107540 Northern Virginia	Install signal improvements with CCTV improvements for arterial highways in Northern Virginia to improve traffic flow for US 1 - Phase 2	\$158,091	\$158,091	\$665	Complete
107541 Northern Virginia	Install signal improvements with CCTV improvements for arterial highways in Northern Virginia to improve traffic flow for US 1 - Phase 3	\$384,711	\$297,364	\$249,591	Construction underway
107542 Northern Virginia	Install signal and camera Improvements on Routes 28, 234, 286, & 294 in Northern Virginia to improve traffic flow - Phase 2	\$125,823	\$125,823	\$825	Complete
107543 Northern Virginia	Install signal and camera improvements on Routes 28, 234, 286, & 294 in Northern Virginia to improve traffic flow - Phase 3	\$274,930	\$231,923	\$177,023	Construction complete; project closeout process underway
107544 Northern Virginia	Install signal and camera improvements on Routes-29, 50, 7, 236 in Northern Virginia to improve traffic flow - Phase 1	\$168,520	\$168,520	\$435	Complete
107545 Northern Virginia	Install signal and camera improvements on Routes-29, 50, 7, 236 in Northern Virginia to improve traffic flow - Phase 3	\$533,206	\$367,005	\$266,969	Construction underway

UPC / Location	Project Purpose	Total Allocations	Expenditures to Date	Expenditures FY-18	Status
107548 Northern Virginia	Install infrastructure to support adaptive / real time signal improvements for US Route 1 in Northern Virginia to improve traffic flow – Phase 4	\$359,139	\$359,139	\$129,120	Complete
107549 Northern Virginia	Install infrastructure to support adaptive / real time signal improvements for Routes 28, 234, 286 and 294 in Northern Virginia to improve traffic flow – Phase 4	\$694,261	\$390,611	\$229,417	Construction complete; project closeout process underway
107550 Northern Virginia	Install infrastructure to support adaptive / real time signal improvements for Routes 29, 50, 7 and 236 in Northern Virginia to improve traffic flow	\$1,047,143	\$947,554	\$618,643	Construction complete; project closeout process underway
107663 Fredericksburg	Intelligent Transportation System Deployment – District wide Fredericksburg District – Deployment of various signal related technology	\$3,800,000	\$13,398	\$8,139	Construction underway
107818 Richmond	Intelligent Transportation System Deployment – Districtwide Richmond District – Deployment of various signal related technology	\$3,366,250	\$22,681	\$5,586	Construction underway; Funded by UPC 104593
108423 Hampton Roads	I-64 WB Over-Height Vehicle Detection System to prevent closures at the Hampton Roads Bridge Tunnel to prevent congestion	\$900,000	\$956,582	\$687,612	Construction complete; project closeout process underway
109232 Hampton Roads	ITTF Arterial Operation Improvements for US 60, Route 143 & 199 to improve travel on the parallel routes to I-64 around the Williamsburg area.	\$1,391,601	\$60,374	\$0	Awarded

UPC / Location	Project Purpose	Total Allocations	Expenditures to Date	Expenditures FY-18	Status
109487 Northern Virginia	I-66 Corridor Technology Advancements for Route 29, 50, 7, & 236 Connected Vehicle Development to promote this emerging technology to improve safety and mobility	\$500,000	\$162,085	\$94,098	Project underway; Funded by UPC 104590
109506 Statewide	Statewide Communitywide Adaptive Signal Control	\$638,399	\$0	\$0	This line item is a funding source for breakout projects; awaiting additional funding to develop a new breakout project.
110208 Statewide	Safety Service Patrol Communications Upgrade to improve incident management to minimize delays.	\$225,000	\$217,946	\$96,257	Procurement underway; Funded by UPC 104591
110497 Northern Virginia	I-95 & I-66 Corridor Technology Advancement – System Security Enhancement for networks & Information Technology systems	\$441,047	\$17,654	\$12,154	Project scoping underway; Funded by UPC 104590
110526	Enhancements to the Statewide 511 System	\$326,899	\$326,899	\$0	Complete
110561 Statewide	I-95 Ramp Metering to improve traffic management and reduce congestion ( Design only)	\$200,000	\$89,529	\$71,477	Design plans underway; Funded by UPC 109536
110912 Statewide	Statewide Truck Parking Management System – Phase 1 to improve safety for commercial vehicle operations	\$925,000	\$641,918	\$605,202	Project underway; Funded by multiple UPCs 109545, T15660, 109547, 105380
111613 Statewide	Statewide Truck Parking Management System – Phase 2 to improve safety for commercial vehicle operations	\$1,807,000	\$292,397	\$292,397	Design plans underway; Funded by UPC 109536
111892 Statewide	Advanced Traffic Management System – Phases 1,2,3,4 to support implementation / upgrades to advanced traffic management system; This is VDOT’s Master Traffic Control System	\$6,504,832	\$3,322,945	\$3,272,912	Project underway, Funded by UPC 104591

UPC / Location	Project Purpose	Total Allocations	Expenditures to Date	Expenditures FY-18	Status
111943 Statewide	Network Operations Center Support 24/7 service to improve the reliability of transportation technology devices used to manage traffic operations.	\$554,000	\$554,000	\$554,000	Complete; Funded by UPC 104591
112254 Statewide	Pedestrian Collision Avoidance System to improve transit travel times & transit system reliability	\$250,000	\$0	\$0	Assessing which vehicles to retrofit; Funded by UPC 109542; DRPT partnered project