

# Central Virginia Transportation Technical Committee

## Via Electronic Meeting

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**Thursday, June 11, 2020 – 10:30 a.m.**

## Agenda

1. **Call to Order**.....Paul Harvey, *Chair*
2. **Roll Call**.....Scott Smith, CVTPO
3. **Approval of Minutes:** (May 14, 2020 minutes will be available at the next meeting)
4. **Recommendation to TPO Policy Board of Central Virginia Transportation Improvement Program (CVTIP) for Fiscal Years 2021-24** (*see Attachment 2*).....Scott Smith, CVTPO
5. **Discussion on Long Range Transportation Plan (LRTP) Phase 2 Project Evaluation** (*see Attachment 3*).....EPR, PC Team
6. **Discussion on LRTP Virtual Public Workshop on June 30<sup>th</sup>**.....EPR, PC Team
7. **Matters from the Committee**.....All
8. **Adjournment** - Next meeting: **July 9, 2020 at 10:30 a.m.** (location TBA)

## **Announcements & General Information**

- **Transportation Technical Committee Statement of Purpose** (*See Attachment GI*)



# CVTPO

Central Virginia Transportation  
Planning Organization

# Central Virginia Transportation Improvement Program Fiscal Years 2021-2024

Prepared by the Central Virginia Planning District Commission for the Central Virginia Transportation Planning Organization with cooperative assistance from the Virginia Department of Transportation, the Virginia Department of Rail & Public Transportation, the Lynchburg Regional Airport, the Greater Lynchburg Transit Company, the City of Lynchburg, the Counties of Amherst, Bedford and Campbell, and the Town of Amherst through their participation on the Transportation Technical Committee.

**This document was funded in part by the Federal Highway Administration, the Federal Transit Administration, the Virginia Department of Transportation and the Virginia Department of Rail and Public Transportation.**

#### Revision History:

- **Adopted:** n/a
- **Amended:** n/a
- **Adjusted:** n/a
- **Edited:** n/a

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# SECTION 1: Narrative

## Introduction

The Central Virginia Transportation Improvement Program (CVTIP) is the Central Virginia Transportation Organization's (CVTPO) mechanism for allocating its limited transportation resources among the various needs of the area. It is a four-year program that addresses the immediate funding needs for transportation systems management (TSM) and operations. It also addresses the immediate funding needs for the transportation projects drawn from the Virginia Department of Transportation's Six-Year Improvement Program, public transit agencies, Lynchburg Regional Airport's Capital Improvement Plans and the Central Virginia Long Range Transportation Plan.

The CVTIP FY2021-2024 begins on October 1, 2020 and is applicable until September 30, 2024. Section 3 is made up of the current projects, projects from the CVTIP FY 2018-2021 that have not yet been closed out, and new projects for which VDOT expects to receive funding. Section 4 includes public transit agencies that will receive federal obligations in the coming four-year period. Section 5 gives an overview of airport facilities that are receiving federal obligations in the coming four-year period.

Required by federal law, the Long-Range Transportation Plan (LRTP) is the document that directs transportation decisions over a minimum 20-year horizon. The CVTIP 2021-2024 represents the programmed implementation of selected recommendations from the CVTPO's most recently adopted Long-Range Transportation Plan. The projects listed in the CVTIP FY2021-2024 encompass bridge rehabilitation and replacement, roadway widening, computerized signal systems, roadway construction, intersection improvements and public transit capital and operating expenditures, and airport expenditures. Through the projects listed in the CVTIP FY2021-2024, the CVTPO member jurisdictions and the state and federal transportation agencies hope to create a more effective transportation system to serve the Central Virginia urbanized area.

## What is the Central Virginia Transportation Planning Organization?

The Central Virginia Transportation Planning Organization (CVTPO) is the forum for cooperative transportation decision-making among the City of Lynchburg and sections of Bedford County, Campbell County, and Amherst County along with state and federal transportation officials.

The CVTPO considers:

- Long-range regional projects and combines public input, technical data, and agency collaboration to develop forward-thinking solutions.
- Carrying out a continuing, cooperative and comprehensive transportation planning and programming process (3-C Process).
- Transportation planning activities of the various transportation-related agencies that have both a direct and indirect impact on the Long-Range Plan and Transportation Improvement Program.

Originally known as the Central Virginia Transportation Planning Council and subsequently as the Central Virginia Metropolitan Planning Organization, the TPO was established pursuant to a cooperative agreement executed on September 13, 1979 (as amended or updated), by the City of Lynchburg and the Counties of Amherst, Bedford and Campbell, as authorized under Title 33.2, Subtitle IV, Chapter 32 of the Code of the Commonwealth of Virginia. On November 27, 1979, the organization was designated by the Governor of the Commonwealth of Virginia as the Metropolitan Planning Organization (MPO) for the Greater Lynchburg Area Transportation Study, also known as the Central Virginia TPO Urbanized Area (hereinafter also referred to as the "urbanized area" or "study area").

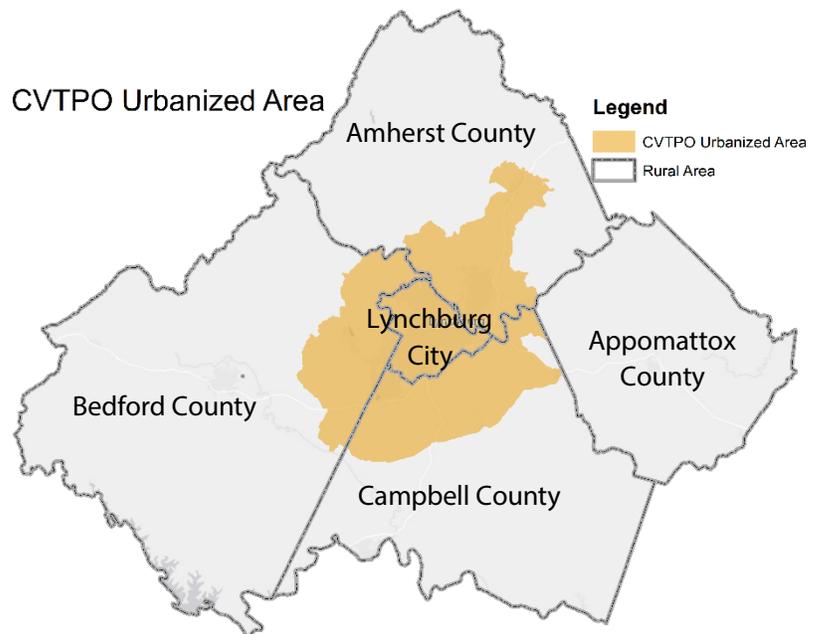
## Purpose and Powers

The TPO is the policy decision-making body for the purpose of carrying out the continuing, cooperative, comprehensive (3-C) transportation planning and programming process as defined in the United States Code Title 23, Section 134 and Title 49 Section 1607; and in accordance with the constitution and statutes of the Commonwealth of Virginia, particularly Title 33, Chapter 32 of the Code of Virginia. In carrying out its responsibilities, the TPO:

- Establishes policy for the continuing, comprehensive and cooperative (3-C) transportation planning process
- Develops the long-range transportation plan (LRTP) for the study area known as the Central Virginia TPO Urbanized Area
- Reviews the LRTP for the study area on an annual basis
- Updates the LRTP no less frequently than every five years
- Recommends action by other appropriate agencies
- Coordinates and conducts transportation planning and conceptual design studies with local governments, transit providers, and state/federal agencies
- Revises the Central Virginia TPO Urbanized Area
- Develops, in coordination with local governments and the state/federal partners, socio-economic data for the regional traffic model
- Reviews systems and proposals required by federal and state agencies
- Develops and approves the annual planning and programming documents as described in the U.S. Department of Transportation regulations, as amended
- Performs other studies, reviews, evaluations, and tasks that may be required

## Central Virginia TPO Urbanized Area

The CVTPO TIP must include all federally funded or regionally significant transportation projects that are located within the CVTPO Urbanized Area. The urbanized area must encompass the existing urbanized area as defined by the United States Census, as well as the adjacent areas anticipated to be included in the defined urbanized area boundaries in the next twenty years. For the CVTPO, this area includes all the City of Lynchburg, Town of Amherst, and portions of Amherst, Bedford, and Campbell Counties (see map below).



## **CVTPO Staff**

The CVTPO is staffed by the Central Virginia Planning District Commission (PDC #11) which was formed in 1969 and covers the City of Lynchburg and the Counties of Amherst, Appomattox, Bedford, and Campbell.

## **The Central Virginia Planning District Commission**

The Central Virginia Planning District Commission (CVPDC) is established under section 15.2-4200 of the Code of Virginia as one of 21 planning districts which serve the local governments of the Commonwealth. The CVPDC works to provide services for member localities and identify and develop opportunities for coordination among the region's local governments. Additionally, the CVPDC encourages and facilitates collaboration among local governments in addressing challenges and opportunities of greater-than-local significance. Areas where the CVPDC is active in the region include: Consolidated Services, Regional Initiatives, Community Development, and Transportation.

The purpose of planning district commissions, as set out in the Code of Virginia, Section 15.2-4207, is

"...to encourage and facilitate local government cooperation and state-local cooperation in addressing, on a regional basis, problems of greater than local significance. The cooperation resulting from this chapter is intended to facilitate the recognition and analysis of regional opportunities and take account of regional influences in planning and implementing public policies and services.

The planning district commission shall also promote the orderly and efficient development of the physical, social and economic elements of the district by planning, and encouraging and assisting localities to plan for the future."

Virginia's PDCs provide a variety of technical and program services to member local governments. They include grant application assistance, management services for program implementation, land use planning services and mapping. The merging of mapping and information services has created the field of geographic information systems, where PDC's often lead the way. Transportation planning is another role for PDCs, who may deal with highway development, ridesharing, airport planning, and specialized transit.

For the Commonwealth, PDCs serve as an accessible network that gives quick and complete statewide coverage. Each serves as the Affiliate State Data Center for the region. In this role they provide important information to businesses as well as citizens. PDCs are the regional contact for the Commonwealth Intergovernmental Review Process and provide input for a host of agencies and commissions.

The program work of PDCs has been meeting the needs of local and state government for the last 50 years. Within their region they may serve to build regional approaches to issues like economic development, solid waste management and legislative priorities. In other states, organizations like PDCs are known as regional councils, regional commissions, and councils of government.

One important duty of the PDC's is to create a strategic plan for their region of service. This plan is created in cooperation with local governments, businesses, citizen organizations, and other interested parties. The plan is intended to help promote the orderly and efficient development of the PDC by stating goals and objectives, strategies to meet those goals, and mechanisms for measuring progress.

## **Regional Consensus**

The production of the CVTIP 2021-2024 is the culmination of the transportation planning process and represents a consensus among state, regional, and local officials as to projects selected for implementation. A project's inclusion in the TIP signifies regional agreement on the priority of the project and establishes eligibility for federal funding.



## Project Chart Summary

Each project listing in the CVTIP FY2021-2024 has an information chart. The information for the projects listed in the Primary, Secondary and Urban categories appears in the chart format shown below. Project group listing charts and the associated project detail from Appendix A is shown on the following page. These project listings are provided to the TPO by the Virginia Department of Transportation. Definitions for the numbered terms appear in the corresponding Glossary of Terms table.

### Primary, Secondary, and Urban Category Project Chart

UPC NO 58012		SCOPE ENVIRONMENTALLY RELATED			
SYSTEM Primary	JURISDICTION Amherst County		OVERSIGHT FO		
PROJECT RTE 29 - WETLAND MITIGATION			ADMIN BY VDOT		
DESCRIPTION FROM: 0.562 KILOMETER NORTH ROUTE 130 CONNECTOR TO: 0.112 KILOMETER SOUTH ROUTE 661 (8.7000 KM)					
ROUTE/STREET 0029			TOTAL COST	\$320,219	
FUND SOURCE	MATCH	FY09	FY10	FY11	FY12
	\$0	\$0	\$0	\$0	\$0
MPO Note					

### Project Group Listings Chart

GROUPING		Construction - Bridge Rehabilitation/Replacement/Reconstruction					TOTAL COST		\$25,312,308
ROUTE/STREET									
	FUND SOURCE	MATCH	FY09	FY10	FY11	FY12			
PE	MG/EB AC CONVERSION	\$10,002	\$0	\$0	\$0	\$40,006			
	STP AC CONVERSION	\$60,100	\$0	\$0	\$91,920	\$148,481			
PE TOTAL		\$70,102	\$0	\$0	\$91,920	\$188,487			
PE AC		\$47,122	\$0	\$188,487	\$0	\$0			
RW	BR AC CONVERSION	\$18,450	\$73,800	\$0	\$0	\$0			
	STP	\$29,076	\$0	\$116,302	\$0	\$0			
	STP AC CONVERSION	\$36,520	\$20,714	\$125,364	\$0	\$0			
RW TOTAL		\$84,045	\$94,514	\$241,666	\$0	\$0			
CN	BR	\$36,475	\$145,901	\$0	\$0	\$0			
	EB	\$21,428	\$85,710	\$0	\$0	\$0			
	MG/EB AC CONVERSION	\$51,737	\$0	\$64,322	\$63,071	\$79,554			
	STP AC CONVERSION	\$359,584	\$0	\$385,712	\$521,181	\$531,444			
CN TOTAL		\$469,224	\$231,611	\$450,034	\$584,252	\$610,998			
CN AC		\$0	\$1,220,197	\$0	\$0	\$0			
MPO Note									

### Grouped Projects Chart Shown in Appendix A

System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Secondary	1028	Amherst	UNION HILL ROAD (0659)	\$4,213,907
RTE 659 - RECONSTRUCTION AND BRIDGE OVER RUTLEDGE CREEK				
FROM: ROUTE T-606 TO: 0.090 KM WEST NORFOLK SOUTHERN RAILWAY (1.6200 KM)				

## Glossary of Terms Used in Project Charts

OBJECT #	TERM	DEFINITION																																																
1	<b>System</b>	Indicates which system, program, or mode of transportation the project falls within: Interstate, Primary, Secondary, Urban, Rail, Transportation Alternatives, or Miscellaneous																																																
2	<b>UPC No.</b>	Universal Project Code. Number assigned to each project at its conception and remains with the project until completion.																																																
3	<b>Scope</b>	This is a brief statement regarding the nature of the project																																																
4	<b>Federal Oversight Indicator (FO &amp; NFO)</b>	<b>FO:</b> Indicates Federal Oversight in the project construction contracting and management. <b>NFO:</b> Indicates No Federal Oversight in the construction contracting and management issues and does not affect the standard environmental review process for transportation projects. All federally funded transportation projects must include the required environmental documents regardless of whether there is federal oversight in the construction contracting and management phase of a project.																																																
5	<b>Admin By</b>	The agency that is administrating the project or a phase of the project.																																																
6	<b>Project Cost</b>	The summation of all shares to the project for all phases.																																																
7	<b>MPO/TPO Note</b>	This is a place where the TPO can insert further explanation for a project.																																																
8	<b>Fund Source</b>	The FHWA program which is the primary source of the funding for the project. FHWA funding sources are described below:																																																
		<table border="1"> <tbody> <tr> <td><b>AC</b></td> <td>Advance Construction Funds</td> <td><b>M</b></td> <td>Urban Funds</td> </tr> <tr> <td><b>AC Conversion</b></td> <td>Breakdown of the allocated amount of the advance construction (AC)</td> <td><b>MG/EB</b></td> <td>Minimum Guarantee &amp; Equity Bonus Funds</td> </tr> <tr> <td><b>BR</b></td> <td>Bridge Replacement Funds</td> <td><b>NHS</b></td> <td>National Highway System Funds</td> </tr> <tr> <td><b>BR-OS</b></td> <td>Bridge off -system Funds for Secondary Road Projects</td> <td><b>PPTA</b></td> <td>Public Private Transportation Act of 1995</td> </tr> <tr> <td><b>CM</b></td> <td>Congestion Mitigation and Air Quality Funds</td> <td><b>RRP</b></td> <td>Railway-Highway Crossing Funds</td> </tr> <tr> <td><b>EB</b></td> <td>Equity Bonds</td> <td><b>RSTP</b></td> <td>Regional Surface Transportation Program</td> </tr> <tr> <td><b>EN/TA</b></td> <td>Transportation Enhancement/ Alternatives Funds</td> <td><b>S</b></td> <td>State Construction Funds Only</td> </tr> <tr> <td><b>HES</b></td> <td>Hazard Elimination Funds</td> <td><b>STP</b></td> <td>Surface Transportation Program Funds</td> </tr> <tr> <td><b>HSIP</b></td> <td>Highway Safety Improvement Program Funds</td> <td><b>STP/RR</b></td> <td>Surface Transportation Program and Railroad Funds</td> </tr> <tr> <td><b>HMO</b></td> <td>Highway Maintenance &amp; Operating Funds</td> <td><b>STP Statewide</b></td> <td>Surface Transportation Program Funds</td> </tr> <tr> <td><b>HPD</b></td> <td>High Priority Funds</td> <td><b>TDM</b></td> <td>Transportation Demand Management</td> </tr> <tr> <td><b>IM</b></td> <td>Interstate Maintenance Funds</td> <td><b>VTA</b></td> <td>Virginia Transportation Act</td> </tr> </tbody> </table>	<b>AC</b>	Advance Construction Funds	<b>M</b>	Urban Funds	<b>AC Conversion</b>	Breakdown of the allocated amount of the advance construction (AC)	<b>MG/EB</b>	Minimum Guarantee & Equity Bonus Funds	<b>BR</b>	Bridge Replacement Funds	<b>NHS</b>	National Highway System Funds	<b>BR-OS</b>	Bridge off -system Funds for Secondary Road Projects	<b>PPTA</b>	Public Private Transportation Act of 1995	<b>CM</b>	Congestion Mitigation and Air Quality Funds	<b>RRP</b>	Railway-Highway Crossing Funds	<b>EB</b>	Equity Bonds	<b>RSTP</b>	Regional Surface Transportation Program	<b>EN/TA</b>	Transportation Enhancement/ Alternatives Funds	<b>S</b>	State Construction Funds Only	<b>HES</b>	Hazard Elimination Funds	<b>STP</b>	Surface Transportation Program Funds	<b>HSIP</b>	Highway Safety Improvement Program Funds	<b>STP/RR</b>	Surface Transportation Program and Railroad Funds	<b>HMO</b>	Highway Maintenance & Operating Funds	<b>STP Statewide</b>	Surface Transportation Program Funds	<b>HPD</b>	High Priority Funds	<b>TDM</b>	Transportation Demand Management	<b>IM</b>	Interstate Maintenance Funds	<b>VTA</b>	Virginia Transportation Act
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9	<b>Match</b>	Most federal fund sources require a match of some sort; most often 80-20 i.e. the federal government reimburses 80% of the total cost. For a full chart of match requirements, please refer to the <b>Funding Sources and Funding Ratios</b> section of this document.																																																

<b>10</b>	<b>Current and Future Obligation</b>	The budget for the indicated phase of work provided by the indicated funding source.
<b>11</b>	<b>Grouping</b>	This indicates the group in which the project falls. For more information about the groups, please refer to the <b>TIP Format</b> section of this document.
<b>12</b>	<b>Estimate</b>	The cost estimate reflects the current estimate for the listed phase of the project.

<b>AGENCY ABBREVIATIONS</b>			
<b>CVTPO (TPO)</b>	Central Virginia Transportation Planning Organization	<b>GLTC</b>	Greater Lynchburg Transit Company
<b>FAA</b>	Federal Aviation Administration	<b>MPO</b>	Metropolitan Planning Organization
<b>FHWA</b>	Federal Highway Administration	<b>VDOT</b>	Virginia Department of Transportation
<b>FTA</b>	Federal Transit Administration	<b>VDRPT</b>	Virginia Department of Rail and Public Transportation

<b>OTHER ABBREVIATIONS</b>			
<b>CFR</b>	Code of Federal Regulations	<b>PE</b>	Preliminary Engineering
<b>CE</b>	Categorical Exclusion	<b>RTE</b>	Route
<b>CN</b>	Construction	<b>RW</b>	Right of Way
<b>FAST ACT</b>	Fixing America's Surface Transportation Act	<b>SOP</b>	Standard Operating Procedure
<b>FO, NFO</b>	Federal Oversight, No Federal Oversight	<b>TDM</b>	Transportation Demand Management
<b>FY</b>	Funding Year / Fiscal Year	<b>TIP</b>	Transportation Improvement Program
<b>HWY</b>	Highway	<b>TO</b>	Total Project Cost
<b>ITE</b>	Intelligent Transportation System	<b>TSM</b>	Transportation System Management
<b>MAP-21</b>	Moving Ahead for Progress in the 21st Century Act		

Important points to remember when interpreting the data in the project listing charts:

- The TIP deals with fiscal years, not calendar years. As such, the project listing charts summarize planned expenditures for October 1 to September 30. Fiscal year 2021 begins on October 1, 2020.
- Expenditures for known programs that did not have specific projects identified at the time this document was developed are not shown, however, they will be amended into the program when the projects are identified.

## SECTION 2: Financial Plan

### Introduction

The Code of Federal Regulations (23 CFR 450.324(h)) specifies the inclusion of a financial plan in the TIP that shows how the projects or project phases identified in the TIP can reasonably be expected to be implemented, with the available public and private revenues identified. TIP projects or project phases are required to be consistent with the LRTP and must be fully funded in the TIP. To the extent that funding is available or shall be reasonably available, priority projects or project phases have been cooperatively selected for inclusion in this TIP. VDOT, DRPT, GLTC and the CVTPO have cooperatively developed financial forecasts for the TIP based on the latest official planning assumptions and estimates of revenue(s) and cost(s). The financial information is given by funding category for the projects listed and expected to be implemented during the four-year period beginning Fiscal Year 2021.

Some projects listed in the TIP may show \$0 for planned obligations. There are several reasons this may occur and include:

- Project is complete and awaiting closeout
- Subsequent phases beyond 4 years
- Information only, funding being pursued
- Project to be funded from [category] group funding

In addition to construction projects, financial projections have also been made to show revenues for maintaining and operating the region's highway and transit systems during the same 4-year period.

Funded TIP actions typically include, but are not limited to:

- Transportation Studies
- Ground Transportation System Improvement Projects (fixed-guide, highway, bicycle, pedestrian, commuter lots, etc.)
- Public Transit Systems and Services (components of coordinated human service mobility plans)
- System Maintenance (monitoring, repair and/or replacement of system facilities and support sites; snow removal; mowing; painting; rest area or weigh station sites; etc.)
- System Operations (ITS-TSM applications; traffic operations such as signalization, signal coordination, ramp meters, or message signs; roadside assistance; incident management; for the urbanized TMAs, their Congestion Management Process activities; VDOT traffic management centers; bridge-tunnel management; toll road or congestion pricing management; etc.)

### Funding Sources

The TIP funding summary tables summarize by year and by funding source the revenue amounts estimated and committed for fiscal year 2021 - 2024. The tables include expenditures and estimated revenues expected for each funding source and show that the program is financially constrained by year. The financial summary tables are based on total funds available, which include annual allocations of funds including any state and local matching dollars. These revenue sources are all reasonably expected to be made available and committed to the project phase during the programmed year of the TIP. The following provides a general overview of funding programs utilized in the development of the TIP. Note: not all funding sources below are applicable in all projects and geographic areas.

<b>HIGHWAY FUNDING PROGRAMS</b>	
<b>Bridge Rehabilitation and Replacements (BR/BROS)</b>	Provides funding for bridge improvements both on and off the National Highway System (NHS)
<b>Congestion Mitigation and Air Quality Improvement Program (CMAQ)</b>	Provides flexible funding for congestion reduction and air quality improvement projects and programs; funding only available for areas not meeting federal air quality standards or maintenance areas
<b>Demonstration Program (DEMO)</b>	Provides specialized funding to demonstration, priority, pilot, or special interest projects
<b>Highway Safety Improvement Program (HSIP)</b>	Funds projects to reduce traffic fatalities and serious injuries on public roads; set aside for Railway Highway Crossings Program
<b>National Highway Freight Program (NHFP)</b>	Provides funding to improve the movement of freight on the National Highway Freight Network (NHFN)
<b>National Highway System/National Highway Performance Program (NHS/NHPP)</b>	Funds projects to construct new facilities on or improve the condition and performance of the National Highway System (NHS)
<b>Regional Surface Transportation Program</b>	Provides funding for a broad range of capacity, operational, and congestion mitigation related improvements. Allocated directly to the regional MPO.
<b>Surface Transportation Program/Surface Transportation Block Grant Program (STP/STBG)</b>	Provides flexible funding for wide range of eligible projects and programs to address state and local transportation needs
<b>Transportation Alternatives Program/Transportation Alternative Set-Aside (TAP/TA Set-Aside)</b>	Provided for bicycle and pedestrian facilities through the Surface Transportation Block Grant. A set aside from each state's allocation of STBG funds must be used for Transportation Alternatives activities.
<b>Urbanized Area Formula Grants (5307)</b>	Provides funding to public transit systems in large urban areas for capital, planning, job access projects, and some operating expenses such as ADA paratransit and preventive maintenance
<b>Fixed Guideway Capital Investment Grants (5309)</b>	Discretionary program for funding major transit capital projects such as BRT, light rail, and streetcars
<b>Enhanced Mobility of Seniors and Individuals with Disabilities (5310)</b>	Program to assist local transit agencies, governments, and nonprofit groups in meeting needs of elderly and persons with disabilities
<b>Rural Area Formula Grants (5311)</b>	Provides funding for capital, planning and operating assistance to support public transportation in small urban and rural areas under 50,000 in population
<b>State of Good Repair Formula Program (5337)</b>	Provide capital assistance for maintenance, replacement, and rehabilitation of existing fixed guideway (e.g., rail lines, bus lanes) facilities to maintain state of good repair
<b>Bus and Bus Facilities Formula Program (5339a)</b>	Provides funding to transit agencies and states to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities
<b>Bus and Bus Facilities Discretionary Grants (5339b)</b>	Discretionary component of the program to fund the same bus and bus facility improvements; includes Low or No Emissions Bus Program

## Financial Assumptions

The TIP financial plan is required to include only committed and/or reasonably available transportation funding sources. The estimates on funding sources and costs are based on reasonable financial principles and recent information. The financial estimates for both revenues and costs are given in year of expenditure dollars and reflect growth and inflation factors. VDOT cost estimates are from the VDOT Project Cost Estimating System. For projects not administered by the state, cost estimates are developed cooperatively through the RRTPO or responsible local governments and agencies. Maintenance and construction program financial planning assumptions used for the FY21 – FY24 TIP are consistent with assumptions and distribution methodology used for the adopted Transportation Plan.

**Table 1: Highway Projects**

Fund Source	FFY 2021		FFY 2022		FFY 2023		FFY 2024		TOTAL	
	Projected Obligation Authority	Planned Obligation								
<b>Federal</b>										
HSIP	\$50,000	\$50,000	\$65,166	\$65,166	\$1,019,523	\$1,019,523	\$0	\$0	\$1,134,689	\$1,134,689
NHS/NHPP	\$3,292,986	\$3,292,986	\$0	\$0	\$0	\$0	\$0	\$0	\$3,292,986	\$3,292,986
RAIL	\$0	\$0	\$0	\$0	\$0	\$0	\$450,000	\$450,000	\$450,000	\$450,000
STP/STBG	\$4,451,001	\$4,451,001	\$0	\$0	\$0	\$0	\$0	\$0	\$4,451,001	\$4,451,001
<b>Subtotal -- Federal</b>	<b>\$7,793,987</b>	<b>\$7,793,987</b>	<b>\$65,166</b>	<b>\$65,166</b>	<b>\$1,019,523</b>	<b>\$1,019,523</b>	<b>\$450,000</b>	<b>\$450,000</b>	<b>\$9,328,676</b>	<b>\$9,328,676</b>
<b>Other</b>										
State Match	\$721,796	\$721,796	\$7,241	\$7,241	\$113,280	\$113,280	\$50,000	\$50,000	\$892,317	\$892,317
<b>Subtotal -- Other</b>	<b>\$721,796</b>	<b>\$721,796</b>	<b>\$7,241</b>	<b>\$7,241</b>	<b>\$113,280</b>	<b>\$113,280</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$892,317</b>	<b>\$892,317</b>
<b>Total</b>	<b>\$8,515,783</b>	<b>\$8,515,783</b>	<b>\$72,407</b>	<b>\$72,407</b>	<b>\$1,132,803</b>	<b>\$1,132,803</b>	<b>\$500,000</b>	<b>\$500,000</b>	<b>\$10,220,993</b>	<b>\$10,220,993</b>
<b>Federal - ACC (1)</b>										
HSIP	\$0	\$0	\$104,834	\$104,834	\$143,601	\$143,601	\$0	\$0	\$248,435	\$248,435
NHFP	\$0	\$0	\$0	\$0	\$141,082	\$141,082	\$0	\$0	\$141,082	\$141,082
NHPP/E	\$0	\$0	\$0	\$0	\$0	\$0	\$495,057	\$495,057	\$495,057	\$495,057
NHS/NHPP	\$1,062,256	\$1,062,256	\$2,563,644	\$2,563,644	\$3,206,665	\$3,206,665	\$5,677,284	\$5,677,284	\$12,509,849	\$12,509,849
STP/STBG	\$0	\$0	\$1,553,094	\$1,553,094	\$3,754,073	\$3,754,073	\$1,421,886	\$1,421,886	\$6,729,053	\$6,729,053
<b>Subtotal -- Federal - ACC (1)</b>	<b>\$1,062,256</b>	<b>\$1,062,256</b>	<b>\$4,221,572</b>	<b>\$4,221,572</b>	<b>\$7,245,421</b>	<b>\$7,245,421</b>	<b>\$7,594,227</b>	<b>\$7,594,227</b>	<b>\$20,123,476</b>	<b>\$20,123,476</b>
<b>Maintenance - Federal (4)</b>										
STP/STBG	\$15,913,019	\$15,913,019	\$22,187,317	\$22,187,317	\$23,657,244	\$23,657,244	\$22,442,680	\$22,442,680	\$84,200,260	\$84,200,260
<b>Subtotal -- Maintenance - Federal (4)</b>	<b>\$15,913,019</b>	<b>\$15,913,019</b>	<b>\$22,187,317</b>	<b>\$22,187,317</b>	<b>\$23,657,244</b>	<b>\$23,657,244</b>	<b>\$22,442,680</b>	<b>\$22,442,680</b>	<b>\$84,200,260</b>	<b>\$84,200,260</b>

- (1) ACC -- Advance Construction -- Funding included in Federal Category based on year of AC Conversion
- (2) CMAQ/RSTP includes funds for TRANSIT projects
- (3) Statewide and/or Multiple MPO - Federal - Funding to be obligated in Multiple MPO Regions and/or Statewide for projects as identified
- (4) Maintenance Projects - Funding to be obligated for maintenance projects as identified

# SECTION 3: Highway Transportation Improvement Program

## Interstate Projects

UPC NO	115852	SCOPE	Traffic Management/Engineering			
SYSTEM	Interstate	JURISDICTION	Statewide	OVERSIGHT	NFO	
PROJECT	ITTF FY20 Micro Transit			ADMIN BY	DRPT	
DESCRIPTION	FROM: Various TO: Various					
ROUTE/STREET	9999			TOTAL COST	\$500,000	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
PE AC	Federal - AC OTHER	\$0	\$500,000	\$0	\$0	\$0

## Primary Projects

UPC NO	64773	SCOPE	Safety			
SYSTEM	Primary	JURISDICTION	Lynchburg	OVERSIGHT	NFO	
PROJECT	RTE 29/460 - ACCESS MANAGEMENT			ADMIN BY	VDOT	
DESCRIPTION	FROM: 0.163 MILE EAST INT. RTE 501 TO: 1.475 MILE EAST INT. RTE 501 (1.3110 MI)					
PROGRAM NOTE	Waiting Financial Closure.					
ROUTE/STREET	RICHMOND HIGHWAY (0460)			TOTAL COST	\$21,217,452	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
		\$0	\$0	\$0	\$0	\$0

## Secondary Projects

UPC NO	110390	SCOPE				
SYSTEM	Secondary	JURISDICTION	Amherst County	OVERSIGHT	NFO	
PROJECT	#HB2.FY17 RTE 682 - RECONSTRUCTION GARVEE DEBT SERVICE			ADMIN BY	VDOT	
DESCRIPTION						
PROGRAM NOTE	Includes \$379,889 GARVEE Debt Service Interest Prev, \$309,640 GARVEE Debt Service Interest FFY21, \$303,254 GARVEE Debt Service Interest FFY22, \$285,095 GARVEE Debt Service Interest FFY23, \$266,016 GARVEE Debt Service Interest FFY24, \$1,428,681 GARVEE Debt Service Interest FFY25-35. Total GARVEE Debt Service Interest \$2,972,574					
ROUTE/STREET	0682			TOTAL COST	\$2,972,574	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
PE	Federal - AC CONVERSION	\$0	\$0	\$303,254	\$285,095	\$266,016
	Federal - STP/STBG	\$0	\$309,640	\$0	\$0	\$0
PE TOTAL		\$0	\$309,640	\$303,254	\$285,095	\$266,016
PE AC	Federal - AC	\$0	\$2,283,046	\$0	\$0	\$0

## Urban Projects

UPC NO	110391	SCOPE				
SYSTEM	Urban	JURISDICTION	Lynchburg	OVERSIGHT	NFO	
PROJECT	#HB2.FY17 ODDFELL'S RD SEG B2 RECON GARVEE DEBT SERVICE			ADMIN BY	VDOT	
DESCRIPTION						
PROGRAM NOTE	Includes \$1,819,786 GARVEE Debt Service Interest Prev, \$573,808 GARVEE Debt Service Interest FFY21, \$536,505 GARVEE Debt Service Interest FFY22, \$497,319 GARVEE Debt Service Interest FFY23, \$456,150 GARVEE Debt Service Interest FFY24, \$1,897,402 GARVEE Debt Service Interest FFY25-FFY33. Total GARVEE Debt Service Interest \$5,780,970. Corresponding CN UPC 109554 which is included in the Lynchburg MPO CN: Safety/ITS/Operational Improvements grouping.					
ROUTE/STREET	9999			TOTAL COST	\$5,780,970	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
PE	Federal - AC CONVERSION	\$0	\$0	\$536,505	\$497,319	\$456,150
	Federal - STP/STBG	\$0	\$573,808	\$0	\$0	\$0
PE TOTAL		\$0	\$573,808	\$536,505	\$497,319	\$456,150
PE AC	Federal - AC	\$0	\$3,387,375	\$0	\$0	\$0

UPC NO	106320	SCOPE	Reconstruction w/ Added Capacity			
SYSTEM	Urban	JURISDICTION	Lynchburg	OVERSIGHT	NFO	
PROJECT	UR-6056 - D/B WIDEN FROM 2 TO 4 LANES (GREENVIEW DRIVE)			ADMIN BY	VDOT	
DESCRIPTION	FROM: 0.010 MI NORTH OF SC 1541 (HERMITAGE RD) TO: 0.215 MI SOUTH OF UR-6066 (LEESVILLE RD) (0.6200 MI)					
ROUTE/STREET	GREENVIEW DRIVE (6056)			TOTAL COST	\$14,285,241	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
CN	Federal - AC CONVERSION	\$0	\$0	\$495,561	\$513,854	\$532,876
	Federal - STP/STBG	\$0	\$471,643	\$0	\$0	\$0
CN TOTAL		\$0	\$471,643	\$495,561	\$513,854	\$532,876
CN AC	Federal - AC	\$0	\$4,609,064	\$0	\$0	\$0
	Federal - AC OTHER	\$0	\$721,862	\$0	\$0	\$0
CN AC		\$0	\$5,330,926	\$0	\$0	\$0

UPC NO	106537	SCOPE	Reconstruction w/ Added Capacity			
SYSTEM	Urban	JURISDICTION	Lynchburg	OVERSIGHT	NFO	
PROJECT	UR-6056 - D/B WIDEN FR 2-4 LNS (GREENVIEW DR) DEBT SERVICE			ADMIN BY	VDOT	
DESCRIPTION	FROM: SC-1541 (HERMITAGE RD) TO: 0.220Mi. S. UR-6066 (LEESVILLE RD) (0.4500 MI)					
PROGRAM NOTE	Includes \$1,371,074 GARVEE Debt Service Interest Prev, \$241,639 GARVEE Debt Service Interest FFY21, \$217,774 GARVEE Debt Service Interest FFY22, \$192,688 GARVEE Debt Service Interest FFY23, \$166,844 GARVEE Debt Service Interest FFY24, \$454,548 GARVEE Debt Service Interest FFY25-FFY31. Total GARVEE Debt Service Interest \$2,644,567. Corresponding CN UPC 106320.					
ROUTE/STREET	GREENVIEW DRIVE (6056)			TOTAL COST	\$2,644,567	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
PE	Federal - AC CONVERSION	\$0	\$0	\$217,774	\$192,688	\$166,844
	Federal - STP/STBG	\$0	\$241,639	\$0	\$0	\$0
PE TOTAL		\$0	\$241,639	\$217,774	\$192,688	\$166,844
PE AC	Federal - AC	\$0	\$1,031,853	\$0	\$0	\$0

UPC NO	105515	SCOPE	New Construction Roadway			
SYSTEM	Urban	JURISDICTION	Lynchburg	OVERSIGHT	FO	
PROJECT	RTE 29/460 - D/B INTERCHANGE & EXTENSION (ODD FELLOWS ROAD)			ADMIN BY	VDOT	
DESCRIPTION	FROM: 0.48 MI. W. OF ODD FELLOWS ROAD TO: 0.54 MI. E. OF ODD FELLOWS ROAD (1.0220 MI)					
PROGRAM NOTE	All funding obligated based on current allocations/estimate. Linked with UPC 106533					
ROUTE/STREET	RICHMOND HIGHWAY (6029)			TOTAL COST	\$40,982,810	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
		\$0	\$0	\$0	\$0	\$0

UPC NO	112842	SCOPE	Safety			
SYSTEM	Urban	JURISDICTION	Lynchburg	OVERSIGHT	NFO	
PROJECT	ADAPTIVE SIGNAL CONTROL - RIVERMONT - FIBER INSTALLATION			ADMIN BY	Locally	
DESCRIPTION	FROM: UR 6012 TO: UR 6020 (1.0200 MI)					
PROGRAM NOTE	All funding obligated based on current allocations/estimate.					
ROUTE/STREET	RIVERMOUNT AVENUE (0501)			TOTAL COST	\$105,000	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
		\$0	\$0	\$0	\$0	\$0

UPC NO	113116	SCOPE	Reconstruction w/ Added Capacity			
SYSTEM	Urban	JURISDICTION	Lynchburg	OVERSIGHT	NFO	
PROJECT	#SMART20 RTE 221/501 - INTERSECTION IMPROVEMENT (SPLIT PAIR)			ADMIN BY	Locally	
DESCRIPTION	FROM: BREEZEWOOD DRIVE TO: RTE 501 (DESMOND T. DOSS MEM. EXP.) ( )					
ROUTE/STREET	ROUTE 501 (LYNCHBURG EXPRESSWAY) (0221)			TOTAL COST	\$38,538,037	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
PE	Federal - AC CONVERSION	\$0	\$0	\$0	\$0	\$3,195,066
RW	Federal - AC CONVERSION	\$0	\$0	\$0	\$2,406,199	\$2,977,275
RW AC	Federal - AC	\$0	\$5,383,474	\$0	\$0	\$0
	Federal - AC OTHER	\$0	\$4,941,728	\$0	\$0	\$0
RW AC		\$0	\$10,325,202	\$0	\$0	\$0
CN AC	Federal - AC OTHER	\$0	\$0	\$24,162,681	\$0	\$0

UPC NO	106533	SCOPE	New Construction Roadway			
SYSTEM	Urban	JURISDICTION	Lynchburg	OVERSIGHT	FO	
PROJECT	RTE 29/460 - INTCHG & EXT (ODD FELLOWS RD) DEBT SERVICE			ADMIN BY	VDOT	
DESCRIPTION	FROM: VARIOUS TO: Various					
ROUTE/STREET	VARIOUS (6029)			TOTAL COST	\$47,034,618	
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
PE	Federal - NHS/NHPP	\$0	\$3,292,986	\$0	\$0	\$0
PE AC	Federal - AC	\$0	\$30,549,818	\$0	\$0	\$0

## Project Groupings

GROUPING	Construction : Bridge Rehabilitation/Replacement/Reconstruction						
ROUTE/STREET						TOTAL COST	\$47,845,437
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24	
CN	Federal - AC CONVERSION	\$1,708,141	\$1,062,256	\$2,563,644	\$3,206,665	\$0	

GROUPING	Construction : Rail						
ROUTE/STREET						TOTAL COST	\$1,950,000
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24	
PE	Federal - RAIL	\$5,556	\$0	\$0	\$0	\$50,000	
CN	Federal - RAIL	\$44,444	\$0	\$0	\$0	\$400,000	

GROUPING	Construction : Safety/ITS/Operational Improvements						
ROUTE/STREET						TOTAL COST	\$101,148,668
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24	
PE	Federal - AC CONVERSION	\$11,648	\$0	\$104,834	\$0	\$0	
	Federal - HSIP	\$15,000	\$50,000	\$0	\$85,000	\$0	
PE TOTAL		\$26,648	\$50,000	\$104,834	\$85,000	\$0	
RW	Federal - AC CONVERSION	\$15,956	\$0	\$0	\$143,601	\$0	
	Federal - HSIP	\$7,241	\$0	\$65,166	\$0	\$0	
	Federal - STP/STBG	(\$2,672)	(\$10,688)	\$0	\$0	\$0	
RW TOTAL		\$20,524	(\$10,688)	\$65,166	\$143,601	\$0	
CN	Federal - HSIP	\$103,836	\$0	\$0	\$934,523	\$0	
	Federal - STP/STBG	\$716,240	\$2,864,959	\$0	\$0	\$0	
CN TOTAL		\$820,076	\$2,864,959	\$0	\$934,523	\$0	

GROUPING	Construction : Transportation Enhancement/Byway/Non-Traditional						
ROUTE/STREET						TOTAL COST	\$2,000,000
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24	
		\$0	\$0	\$0	\$0	\$0	

GROUPING	Maintenance : Preventive Maintenance and System Preservation						
PROGRAM NOTE	Funding identified to be obligated districtwide as projects are identified.						
ROUTE/STREET						TOTAL COST	\$60,798,374
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24	
CN	Federal - STP/STBG	\$0	\$12,169,660	\$16,124,118	\$16,033,673	\$16,470,923	

GROUPING	Maintenance : Preventive Maintenance for Bridges						
PROGRAM NOTE	Funding identified to be obligated districtwide as projects are identified.						
ROUTE/STREET						TOTAL COST	\$17,615,173
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24	
CN	Federal - STP/STBG	\$0	\$2,690,090	\$4,917,611	\$6,249,068	\$3,758,404	

GROUPING		Maintenance : Traffic and Safety Operations				
PROGRAM NOTE		Funding identified to be obligated districtwide as projects are identified.				
ROUTE/STREET					TOTAL COST	\$5,786,713
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
CN	Federal - STP/STBG	\$0	\$1,053,269	\$1,145,588	\$1,374,503	\$2,213,353

# SECTION 4: Public Transportation & Transportation Demand Management (TDM) Projects

## TRANSIT COSTS (in \$1,000's)

	Previous Funding	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2021-2024	
<b>CENTRAL VIRGINIA TRANSPORTATION PLANNING ORGANIZATION</b>							
STIP ID:	<b>GLTC001</b>	Title: Operating Assistance			Recipient: Greater Lynchburg Transit Co.		
FTA 5307		2,037	2,132	2,212	2,297	FTA 5307	8,678
State		2,044	2,095	2,125	2,156	State	8,420
Local		3,041	3,268	3,469	3,680	Local	13,458
Revenues		1,367	1,389	1,411	1,438	Revenues	5,605
<b>Year Total:</b>		<b>8,489</b>	<b>8,884</b>	<b>9,217</b>	<b>9,571</b>	<b>Total Funds:</b>	<b>36,161</b>
Description:							
STIP ID:	<b>GLTC006</b>	Title: Replacement Rolling Stock			Recipient: Greater Lynchburg Transit Co.		
Flexible STP		1,428	8,207	2,059	2,594	Flexible STP	14,288
State		286	1,641	412	519	State	2,858
Local		71	410	103	130	Local	714
<b>Year Total:</b>		<b>1,785</b>	<b>10,258</b>	<b>2,574</b>	<b>3,243</b>	<b>Total Funds:</b>	<b>17,860</b>
Description:							
STIP ID:	<b>GLTC010</b>	Title: Expansion Rolling Stock			Recipient: Greater Lynchburg Transit Co.		
Flexible STP		-	990	-	-	Flexible STP	990
State		-	198	-	-	State	198
Local		-	49	-	-	Local	49
<b>Year Total:</b>		<b>-</b>	<b>1,237</b>	<b>-</b>	<b>-</b>	<b>Total Funds:</b>	<b>1,237</b>
Description:							
STIP ID:	<b>GLTC012</b>	Title: Spare Parts			Recipient: Greater Lynchburg Transit Co.		
Flexible STP		240	-	-	-	Flexible STP	240
State		48	-	-	-	State	48
Local		12	-	-	-	Local	12
<b>Year Total:</b>		<b>300</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>Total Funds:</b>	<b>300</b>
Description:							

STIP ID:		Title: Transfer Location Improvements			Recipient: Greater Lynchburg Transit Co.		
Flexible STP		-	118	-	-	Flexible STP	118
State		-	24	-	-	State	24
Local		-	6	-	-	Local	6
<b>Year Total:</b>		-	<b>148</b>	-	-	<b>Total Funds:</b>	<b>148</b>
Description:							
STIP ID:	<b>GLTC018</b>	Title: Purchase Passenger Shelters			Recipient: Greater Lynchburg Transit Co.		
Flexible STP		-	133	102	-	Flexible STP	235
State		-	27	20	-	State	47
Local		-	7	5	-	Local	12
<b>Year Total:</b>		-	<b>167</b>	<b>127</b>	-	<b>Total Funds:</b>	<b>294</b>
Description:							
STIP ID:	<b>GLTC020</b>	Title: ADP Hardware			Recipient: Greater Lynchburg Transit Co.		
Flexible STP		403	-	-	-	Flexible STP	403
State		81	-	-	-	State	81
Local		20	-	-	-	Local	20
<b>Year Total:</b>		<b>504</b>	-	-	-	<b>Total Funds:</b>	<b>504</b>
Description:							
STIP ID:	<b>GLTC021</b>	Title: Purchase Support Vehicles			Recipient: Greater Lynchburg Transit Co.		
Flexible STP		-	-	312	144	Flexible STP	456
State		-	-	62	29	State	91
Local		-	-	16	7	Local	23
<b>Year Total:</b>		-	-	<b>390</b>	<b>180</b>	<b>Total Funds:</b>	<b>570</b>
Description:							
STIP ID:	<b>CVACL01</b>	Title: Paratransit Vehicles			Recipient: Central VA Alliance for Community Living		
FTA5310		72	-	-	-	FTA 5310	72
State		-	-	-	-	State	-
Local		18	-	-	-	Local	18
<b>Year Total:</b>		<b>90</b>	-	-	-	<b>Total Funds:</b>	<b>90</b>
Description:							
STIP ID:	<b>CVACL02</b>	Title: Operating Assistance			Recipient: Central VA Alliance for Community Living		
FTA5310		41	-	-	-	FTA 5310	41
State		33	-	-	-	State	33
Local		8	-	-	-	Local	8
<b>Year Total:</b>		<b>82</b>	-	-	-	<b>Total Funds:</b>	<b>82</b>
Description:							

# SECTION 5: Six-Year Airport Project Grant Fund

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
<b>RESOURCES</b>					
Federal Aviation Administration	\$1,260,000	\$10,350,000	\$900,000	\$1,800,000	\$2,700,000
Virginia Department of Aviation	140,000	1,150,000	100,000	200,000	300,000
Local (Airport) Pay-As-You-Go					
<b>TOTAL ESTIMATED RESOURCES</b>	<b>\$1,400,000</b>	<b>\$11,500,000</b>	<b>\$1,000,000</b>	<b>\$2,000,000</b>	<b>\$3,000,000</b>
<b>PROPOSED PROJECTS</b>					
North GA Development Area, Phase II (Taxiway/Apron Construction)	1,400,000				
Runway 4-22 Rehabilitation & Lighting (LED HIRL)		11,500,000			
Runway 4-22 MALSF			1,000,000		
Taxiway "B" Rehabilitation				2,000,000	
North GA Development Area, Phase III (Final Apron Construction)					3,000,000
<b>TOTAL PROPOSED PROJECTS</b>	<b>\$1,400,000</b>	<b>\$11,500,000</b>	<b>\$1,000,000</b>	<b>\$2,000,000</b>	<b>\$3,000,000</b>

# APPENDIX A: Projects by Grouping

## Construction: Bridge Rehabilitation/Replacement/Reconstruction

	System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Miscellaneous	T19026	Lynchburg District-wide	0000		\$0
			BRIDGE REHABILITATION/REPLACEMENT		
Primary	104600	Campbell County	WARDS ROAD (0029)		\$17,161,661
			RTE 29 NBL - BRIDGE & APPR. OVER NS RR FED. ID. NO. (04144)		
			FROM: 0.006 MILE NORTH OF RTE 679 TO: 0.513 MILES NORTH OF RTE 679 (0.5070 MI)		
Secondary	97711	Bedford County	0621		\$3,160,819
			RTE. 621 OVER IVY CREEK (STR. ID 02707) - BRIDGE REPLACEMENT		
			FROM: 1.1 Mi. East of Rte. 662 TO: 0.5 Mi. West of Rte. 660 (0.2500 MI)		
Secondary	51916	Bedford County	GOODE ROAD (0668)		\$4,819,174
			#SGR Rt 668 Over NSRR(STR 02785) Replace Brg & Improve Appro		
			FROM: 0.33 mi North of Rt. 702 (Prophet Rd) TO: 0.37 mi South of Rt. 840 (Pilgrim Rd) (0.1990 MI)		
Urban	104599	Lynchburg	RICHMOND HIGHWAY (0029)		\$15,861,218
			RTE 29 SBL & NBL - BR & APPR OVER NSRR FED ID 20579 & 20580		
			FROM: 0.320 MILES WEST OF NS RAILROAD TO: 0.300 MILES EAST OF NS RAILROAD (0.6200 MI)		
Urban	111279	Lynchburg	RICHMOND HIGHWAY (0029)		\$6,842,565
			#SGR - RTE 29 SBL - BRIDGE & APPR OVER NSRR (FED ID 20579)		
			FROM: 0.118 MILES WEST OF NS RAILROAD TO: 0.096 MILES EAST OF NS RAILROAD (0.2140 MI)		
Construction : Bridge Rehabilitation/Replacement/Reconstruction Total					\$47,845,437

## Construction: Rail

	System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Miscellaneous	T23508	Lynchburg District-wide	0000		\$0
			CN RAIL		
Miscellaneous	112018	Statewide	HIGHWAY-RAIL SAFETY (0000)		\$700,000
			Highway-Rail Safety Inventory Section 130 PE Only		
			FROM: Statewide TO: Statewide		
Miscellaneous	112213	Statewide	HIGHWAY RAIL SAFETY (0000)		\$300,000
			Highway-Rail Section 130 Pre Scoping PE Only		
			FROM: Statewide TO: Statewide		
Miscellaneous	112497	Statewide	VARIOUS (0000)		\$500,000
			ENVIRONMENTAL EQ429 FORM PROCESSING CHARGES		
			FROM: FOR HIGHWAY/RAIL SAFETY PROJECTS WITHOUT PE NUMBERS TO: ASSIGNED		
Urban	115031	Lynchburg	CHAPEL LANE (9999)		\$450,000
			CHAPEL LANE - INSTALL FLASHING LIGHTS & GATES		
			FROM: OLD FOREST RD TO: 0.220 MILE NORTH OF OLD FOREST ROAD (0.2200 MI)		
Construction : Rail Total					\$1,950,000

## Construction: Safety/ITS/Operational Improvements

	System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Enhancement	109730	Lynchburg	STONERIDGE STREET (EN16)		\$112,422
			SRTS - DEARINGTON ELEMENTARY SCHOOL (TAP GRANT)		
			FROM: CAROLINE STREET TO: KIRBY STREET (0.0860 MI)		
Interstate	107802	Statewide	9999		\$918,907
			Incident Management Emergency Evacuation and Detour Plans		
			FROM: Various TO: Various		
Interstate	110551	Statewide	9999		\$362,560
			Traffic Video Expansion - Statewide		
			FROM: Various TO: Various		
Interstate	110912	Statewide	9999		\$813,019
			Statewide Truck Parking Management System - Phase 1		
			FROM: Various TO: Various		
Interstate	111613	Statewide	9999		\$1,807,000
			Statewide Truck Parking Management System - Phase 2		
			FROM: Various TO: Various		
Interstate	111892	Statewide	9999		\$0
			ATMS - Phase 1, 2, 3, 4		
			FROM: Various TO: Various		
Interstate	114400	Statewide	9999		\$300,000
			Drone Technology Project		
			FROM: Various TO: Various		
Interstate	115854	Statewide	9999		\$1,250,000
			ITTF FY20 Arterial Operations Program Dashboard		
			FROM: n/a TO: n/a		
Interstate	115855	Statewide	9999		\$4,700,000
			ITTF FY20 High Speed Communications		
			FROM: Various TO: Various		
Miscellaneous	T19022	Lynchburg District-wide	0000		\$0
			CN: SAFETY/ITS/OPERATIONAL/IMPROVEMENTS		
Miscellaneous	105481	Statewide	0000		\$1,400,000
			Impement iPeMS (Iteris Performance Measrement System)		
			FROM: various TO: various		
Miscellaneous	109817	Lynchburg District-wide	VARIOUS (9999)		\$515,576
			SAFETY PRESCOPING - LYNCHBURG		
			FROM: VARIOUS TO: VARIOUS		
Miscellaneous	114193	Statewide	VARIOUS (9999)		\$0
			PEDESTRIAN IMPROVEMENTS AT PRIORITY CORRIDOR STATEWIDE		
			FROM: VARIOUS TO: VARIOUS		
Primary	114093	Amherst County	NORTH AMHERST HIGHWAY (0029)		\$2,879,985
			RTE 29 - SHOULDER WIDENING AND RUMBLE STRIPS (AMHERST)		
			FROM: 0.19 MILE NORTH US-29 NB ON RAMP FROM BUS US-29 S. INT. TO: US-29 NB AMHERST NELSON LINE (8.7700 MI)		
Primary	114094	Campbell County	US-29 WARDS ROAD (0029)		\$1,338,194
			RTE 29 - SHOULDER WIDENING AND RUMBLE STRIPS (CAMPBELL)		
			FROM: RTE 24 TO: RTE 738 (4.5800 MI)		

	System	UPC Jurisdiction / Name / Description	Street(Route)	Estimate
Primary	109577	Amherst County	RICHMOND HIGHWAY (0060) RTE 60 - CONSTRUCT SIDEWALK FROM: RTE 1102 / 1112 (WASHINGTON ST / WHITEHEAD ST) TO: BUS 29 Business (0.3070 MI)	\$711,613
Primary	108914	Bedford County	FOREST ROAD (0221) #HB2.FY17 Route 221 Congestion and Safety Improvements FROM: Graves Mill Road TO: Gristmill Drive (0.4000 MI)	\$8,137,995
Primary	109555	Lynchburg	TIMBERLAKE ROAD (0460) #HB2.FY17 BUS 460 - RECONSTRUCT INTERSECTION AT RTE 622 FROM: 0.087 MILE WEST OF RTE 622 TO: 0.104 MILE EAST OF RTE 622 (0.1910 MI)	\$3,233,297
Primary	111976	Campbell County	LUSARDI DR / BROOKNEAL HWY / CAMPBELL HWY (0501) PM3B18 CAMPBELL COUNTY - RTE 501 - CENTERLINE RUMBLE STRIPS FROM: HALIFAX / CAMPBELL COUNTY LINE TO: 0.04 MILES NORTH ROUTE 898 (TRESTLE RD) (23.2400 MI)	\$126,079
Primary	107015	Amherst County	SOUTH AMHERST HIGHWAY (7029) BUS 29 - SHOULDER WIDENING/RUMBLE STRIPS/GR - AMHERST COUNTY FROM: 0.03 MILE NORTH RTE 646 TO: 0.16 MILE NORTH RTE 661 (5.8200 MI)	\$2,930,241
Primary	109586	Amherst County	SOUTH AMHERST HIGHWAY (7029) BUS 29 - CONSTRUCT SIDEWALK (MADISON HEIGHTS) FROM: 0.011 MILE SOUTH RTE 1054 (LAKEVIEW DR) TO: 0.01 MILE NORTH RTE 682 (WOODYS LAKE RD) (1.4210 MI)	\$2,038,648
Primary	108054	Lynchburg District-wide	VARIOUS (9999) DISTRICTWIDE - ADA COMPLIANCE CURB RAMP IMPROVEMENTS FROM: VARIOUS TO: VARIOUS	\$922,398
Primary	112887	Lynchburg District-wide	VARIOUS (9999) DISTRICTWIDE CENTERLINE RUMBLE STRIP INSTALLATION FROM: VARIOUS TO: VARIOUS	\$620,498
Primary	113933	Lynchburg District-wide	VARIOUS (9999) DISTRICTWIDE ON-CALL RUMBLE STRIP INSTALLATION FROM: VARIOUS TO: VARIOUS	\$749,968
Secondary	109550	Amherst County	WOODY'S LAKE ROAD (0682) #HB2.FY17 RTE 682 - RECONSTRUCTION FROM: 0.195 MI. EAST OF RTE. BUS 29 TO: 0.776 MILE EAST OF RTE BUS 29 (0.5800 MI)	\$7,855,088
Secondary	5542	Campbell County	LYNBROOK ROAD (0622) #SMART18 #SGR - RTE 622 - RECONSTRUCTION FROM: 0.004 MILE EAST OF ROUTE 683 TO: 1.231 MILE EAST OF ROUTE 683 (1.2270 MI)	\$11,520,435
Secondary	114091	Campbell County	VARIOUS (1520) RTES 1520 & 9070 - CONSTRUCT SIDEWALK FROM: VARIOUS TO: VARIOUS	\$633,550
Urban	114064	Lynchburg	GRAVES MILL ROAD (6009) GRAVES MILL ROAD - INSTALL ADAPTIVE SIGNAL CONTROLS FROM: RTE 6073 (MCCONVILLE RD) TO: WCL LYNCHBURG (1.4900 MI)	\$462,500
Urban	114062	Lynchburg	KEMPER STREET (0501) BUS 501 - CONSTRUCT SIDEWALK (KEMPER STREET) FROM: 0.086 MILE SOUTH OF BUS 29 TO: 0.346 MILE SOUTH OF BUS 29 (0.2550 MI)	\$250,845

	System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Urban	108165	Lynchburg	LIBERTY MOUNTAIN DRIVE (0906)		\$607,096
			RTE F906 - CONSTRUCT SIDEWALK & INSTALL ROADWAY LIGHTING		
			FROM: 0.021 MILE EAST OF RTE F907 TO: 0.176 MILE EAST OF RTE F907 (0.1550 MI)		
Urban	8759	Lynchburg	MIDTOWN CONN. (U000)		\$26,180,934
			MIDTOWN CONNECTOR - NEW 2-LANE, W/ FLUSH MED., C&G,S/W.		
			FROM: INT. RTE. 29 BUS. TO: INT. MEMORIAL AVE. (1.0200 MI)		
Urban	109554	Lynchburg	ODDFELLOWS ROAD (9999)		\$16,023,177
			#HB2.FY17 ODDFELLOWS ROAD SEGMENT B2 - RECONSTRUCTION		
			FROM: 0.10 WEST OF ROUTE 128 (MAYFLOWER DR.) TO: BUS. 29 (LYNCHBURG EXPRESSWAY) (0.4070 MI)		
Urban	114065	Lynchburg	OLD FOREST ROAD (6044)		\$844,779
			UR 6044 - PEDESTRIAN IMPROVEMENTS (OLD FOREST ROAD)		
			FROM: UR 6081 (FOREST BROOK RD) TO: RTE 221 (LAKESIDE DR) (2.2680 MI)		
Urban	109702	Lynchburg	RIVERMONT AVENUE (0501)		\$416,864
			ADAPTIVE SIGNAL CONTROL - RIVERMONT AVENUE		
			FROM: UR 6012 TO: UR 6020 (1.0200 MI)		
Urban	115489	Lynchburg	RIVERMONT AVENUE (9999)		\$485,000
			#SMART20 RIVERMONT AND BEDFORD AVE INTERSECTION IMPROVEMENT		
			FROM: 0.047 MILE SOUTH OF BEDFORD AVENUE TO: 0.047 MILE NORTH OF BEDFORD AVENUE (0.0950 MI)		
Construction : Safety/ITS/Operational Improvements Total					\$101,148,668

## Construction: Transportation Enhancement/Byway/Non-Traditional

	System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Enhancement	81757	Lynchburg	NA (EN06)		\$0
			CITY OF LYNCHBURG - RIVERSIDE PARK MASTER PLAN		
			FROM: NA TO: NA		
Enhancement	111723	Lynchburg	BLACK WATER CREEK TRAIL (EN17)		\$2,000,000
			LANGHORNE ROAD TRAIL EXTENSION		
			FROM: ED PAGE PARKING LOT TO: LINKHORNE MIDDLE SCHOOL (0.5000 MI)		
Enhancement	17595	Amherst	NA (EN97)		\$0
			TOWN OF AMHERST - DEPOT RELOCATION & RENOVATION		
			FROM: NA TO: NA		
Miscellaneous	T19016	Lynchburg District-wide	0000		\$0
			CN: TRANSPORTATION ENHANCEMENT/BYWAY/OTHER NON-TRADITIONAL		
Construction : Transportation Enhancement/Byway/Non-Traditional Total					\$2,000,000

## Maintenance: Preventive Maintenance and System Preservation

	System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Miscellaneous	T14716		Lynchburg District-wide	0000	\$60,798,374
			STIP-MN Lynchburg: Preventive MN and System Preservation		
Maintenance : Preventive Maintenance and System Preservation Total					\$60,798,374

## Maintenance: Preventative Maintenance for Bridges

	System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Miscellaneous	T14715		Lynchburg District-wide	0000	\$17,615,173
			STIP-MN Lynchburg: Preventive MN for Bridges		
Maintenance : Preventive Maintenance for Bridges Total					\$17,615,173

## Maintenance: Traffic and Safety Operations

	System	UPC	Jurisdiction / Name / Description	Street(Route)	Estimate
Miscellaneous	T14714		Lynchburg District-wide	0000	\$5,786,713
			STIP-MN Lynchburg: Traffic and Safety Operations		
Maintenance : Traffic and Safety Operations Total					\$5,786,713

<b>Lynchburg MPO Total</b>	<b>\$237,144,365</b>
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# **APPENDIX B: Resolution of Adoption and Statement of Certification**

## APPENDIX C: Performance Based Planning and Programming

The two most recent federal transportation laws, MAP-21 and FAST Act establish performance measure requirements to ensure States and Transportation planning organizations (MPOs) are investing transportation funds in projects that collectively will contribute towards the achievement of national goals. The USDOT recently published new rules for States and MPOs to collect data and establish performance targets that will support performance and outcome-based investment decisions.

The new federal performance measurement requirements focus on three main areas – safety, asset management (maintenance), and system performance. Safety measures are associated with highway fatalities and injuries as well as transit fatalities; injuries; and incidents such as derailments, collisions, and fires. Asset management measures are associated with the condition of roads and bridges while system measures are associated with congestion and reliability.

From the 23 CFR 450, Subpart B:

*Prior to May 27, 2018, a State may adopt a long-range statewide transportation plan that has been developed using the SAFETEA-LU requirements or the provisions and requirements of this part.*

*On or after May 27, 2018, FHWA/FTA may only approve a STIP update or amendment that a State has developed according to the provisions and requirements of this part, regardless of when the State developed the STIP.*

*On or after May 27, 2018, a State may make an administrative modification to a STIP that conforms to either the SAFETEA-LU requirements or to the provisions and requirements of this part.*

*Two years from the effective date of each rule establishing performance measures under 23*

*U.S.C. 150(c), 49 U.S.C. 5326, or 49 U.S.C. 5329, FHWA/FTA will only approve an updated or amended STIP that is based on a statewide transportation planning process that meets the performance-based planning requirements in this part and in such a rule.*

On October 1, 2016 Virginia submitted to the U.S. Secretary of Transportation the required Initial State Performance Report. This report describes performance management efforts currently underway in Virginia and highlights the State's commitment to investing limited transportation funds in the best manner possible. Virginia is currently reviewing the Final Rules associated with the performance measure requirements; along with available data sources to determine the best manner in which to establish the required performance targets.

VDOT will work with DRPT, TPB, MPOs, PDCs, and other agencies to discuss the methodology, assumptions, and possible targets. Comments from all stakeholders will be considered when determining the performance measures, data sets, methodology, and targets. Statewide performance targets will be set first, in accordance with federally established compliance dates, followed by MPO establishment of performance targets.

In future years the STIP will describe, to the maximum extent possible, the anticipated effect of the STIP toward achieving the performance targets in the following program areas: National Highway Performance Program (NHPP), Highway Safety Improvement Program (HSIP), Congestion Mitigation and Air Quality

Improvement Program (CMAQ), and Freight Movement, along with reference to associated state plans, (i.e. State Asset Management Plan, Strategic Highway Safety Plan (SHSP), State Freight Plan, etc.)

Additional information on performance management and performance measures may be found on FHWA's Transportation Performance Management site located here: <https://www.fhwa.dot.gov/tpm/>.

## Safety Performance Measures

### Performance Targets

In accordance with the requirements of MAP-21 and the FAST Act, Virginia has established safety performance objectives as published in [Virginia's 2017 - 2021 Strategic Highway Safety Plan \(SHSP\)](#) and, starting in 2017, annual targets in the Highway Safety Improvement Program (HSIP) Annual Report. The SHSP performance measure objectives are indicated in Table 1 below.

**Table 1: 2017 – 2021 SHSP Safety Performance Objectives**

	<b>Performance Target</b>	<b>Per Year Reduction</b>
1	Number of Fatalities	2%
2	Rate of Fatalities per 100 Million Vehicle Miles Travelled	3%
3	Number of Serious Injuries	5%
4	Rate Serious Injury Million Vehicle Miles Travelled	7%
5	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	4%

For safety performance measures 1, 2, and 3, annual targets are developed collaboratively by the Department of Motor Vehicles (DMV) Highway Safety Office (HSO) and VDOT HSIP staff.<sup>1</sup> The DMV HSO includes these measures in their Highway Safety Plan submitted to the National Highway Traffic Safety Administration (NHTSA) every June.

The Commonwealth Transportation Board approves all five annual targets and VDOT includes these in the HSIP Annual Report submitted to FHWA every August. Within 180 days of VDOT's annual report submission to FHWA, MPOs must indicate their support of the state targets or submit their unique regional targets for one or more of the safety measures.

### Connection to Other Performance Based Planning Documents

The federally required SHSP, a five-year multi-agency comprehensive plan focused on reducing fatalities and serious injuries on all public roads, serves as the coordinating document for other plans and programs that involve traffic safety. This coordination involves the long-range statewide transportation plan (LRSTP), the metropolitan transportation plans (MTP), and three plans that implement parts of the SHSP – the Highway Safety Plan (HSP), the HSIP, and the Commercial Vehicle Safety Plan (CVSP). This integration is important for improving overall safety coordination amongst various partners and leads to more comprehensive transportation safety planning.

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<sup>1</sup> It is a federal requirement that safety performance measures 1, 2, and 3 are identical targets for NHTSA's Highway Safety Grants Program and FHWA's Highway Safety Improvement Program. This requirement allows States to align their safety performance targets and work collaboratively to achieve them.

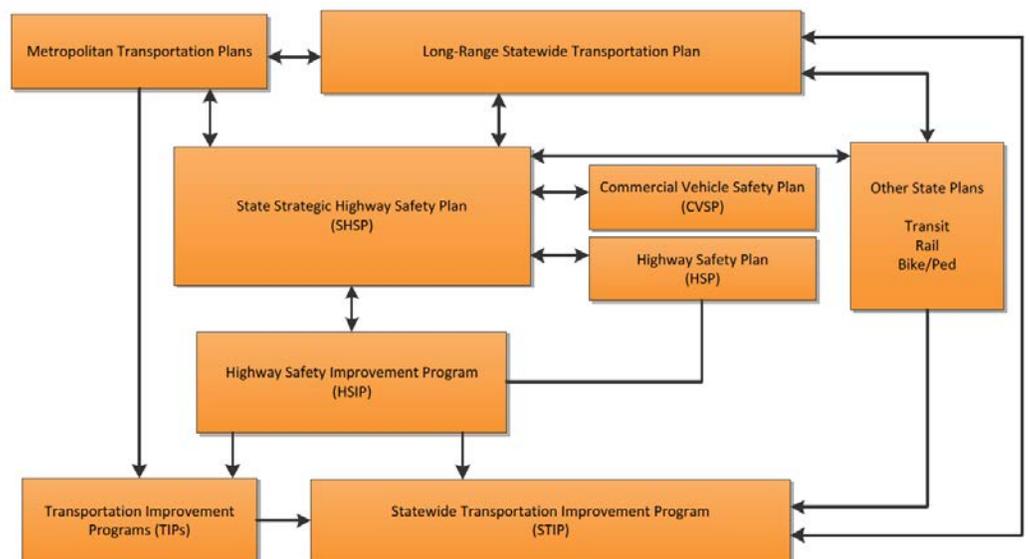
The LRSTP, VTrans2040, guides the state’s investment decisions for transportation improvements. Safety and performance management is included in the VTrans2040 Vision, Goals & Objectives, and Guiding Principles:

- **Guiding Principle 2:** Ensure Safety, Security, and Resiliency – Provide a transportation system that is safe for all users, responds immediately to short-term shocks such as weather events or security emergencies, and adapts effectively to long-term stressors such as sea level rise.
- **Guiding Principle 5:** Ensure Transparency and Accountability, and Promote Performance Management – work openly with partners and engage stakeholders in project development and implementation, and establish performance targets that consider the needs of all communities, measure progress towards targets, and to adjust programs and policies as necessary to achieve the established targets.
- **Goal C:** Safety for All Users – provide a safe transportation system for passengers and goods on all travel modes.
  - Objectives:
    - Reduce the number and rate of motorized fatalities and serious injuries.
    - Reduce the number of non-motorized fatalities and injuries.

MTPs are similar to the LRSTP however a MTP covers a specific metropolitan planning area. MTPs include goals and objectives for their respective areas/regions and identify strategies for advancing long-term transportation investments in a specific region.

The HSP is an annual plan to address highway user behaviors that will improve safety through education and enforcement campaigns. The HSP and associated NHTSA grants are administered through the Highway Safety Office at the DMV. Furthermore, each year Virginia State Police (VSP) submits a Commercial Vehicles Safety Plan (CVSP) to Federal Motor Carrier Safety Administration as a requirement of obtaining related enforcement grants.

The relationship between the various plans and programs is shown here:



Projects in the STIP are directly linked to the safety objectives outlined in the SHSP through the strategies and actions that are priorities in Virginia.

### **Funding for Safety Projects**

Safety targeted improvements are implemented through HSIP projects. Each year Virginia is allocated ~\$55 Million for HSIP and \$5 Million for Railway Grade Crossing improvements. Virginia is also subject to a Penalty Transfer provision, Section 154 "Open Container", such that 2.5% of NHPP funds are reserved for either NHTSA Alcohol-Impaired Driving or HSIP projects. The State determines what proportion goes to each program. Of the HSIP funds, about 10 percent is set aside for non-motorized safety projects and 20 percent of the remainder for improvements on locally-maintained roadways.

### **How do Safety Projects get selected for Inclusion in the STIP?**

The HSIP project planning and delivery follows these steps:

- Each year highway segment and intersection locations that have the highest potential for safety improvement are identified based on the previous five years of traffic crash and volume data. These above average crash locations are provided to the VDOT Districts to determine appropriate locations and countermeasures for HSIP funding. The potential for vehicle-train crashes at each at-grade railroad crossing is also distributed.
- HSIP project proposals are submitted through the SMART Portal for the appropriate safety program.
- VDOT and locality submitted HSIP proposals are reviewed and prioritized based on the number of targeted crashes and the benefit to cost ratio or the potential risk reduction for non-motorized and rail highway grade crossing improvements.
- Projects are selected and programmed for the last two or three years of the SYIP. At present there are over \$100 million of safety improvement proposals, with an expected benefit, that remain unfunded.

In recent years, programmed priority HSIP projects have shifted from being higher cost spot intersection and segment improvements to lower cost systemic improvements that target specific crash types and/or roadway characteristics that are factors in crashes across the network.

Examples of systemic improvements include traffic signal devices and timing at intersections and curve signing, higher friction surfaces and rumble strips on segments.

Safety improvements are also included within projects funded with non-HSIP funds. The SMART SCALE scoring and prioritization process for inclusion of projects in the SYIP, considers safety benefits from improvements addressing travel of all modes. Many of the large SMART SCALE projects, upon completion, will have distinct impacts on safety performance in the Commonwealth. In addition, projects funded through other state and federal sources in the SYIP, such as the Transportation Alternatives Program, including Safe Routes to School grants, Revenue Sharing, and even some CMAQ and maintenance projects, will also have crash reduction benefits that contribute to improved safety performance.

Thus, the funding to meet Virginia's safety objectives and targets is allocated to projects in the CTB approved SYIP, and is consistent with VTrans2040. Since the SYIP is the foundation for the STIP, the program of projects in the STIP demonstrates support to achieve Virginia's safety performance objectives and targets and is consistent with Virginia's SHSP and the HSIP.

## Transit Asset Management

The two most recent federal transportation laws, MAP-21 and FAST Act, establish performance measure requirements to ensure states and Transportation planning organizations (MPOs) are investing transportation funds in projects that collectively will contribute towards the achievement of national goals. The USDOT recently published new rules for states and MPOs to collect data and establish performance targets that will support performance and outcome-based investment decisions.

The new federal performance measurement requirement for transit agencies focuses on one area: transit asset management (TAM). The measures look specifically at the percentage of revenue vehicles that have exceeded their Useful Life Benchmark (ULB), the percentage of non-revenue and service vehicles that have exceeded their ULB, and percentage of facilities with a condition below 3.0 on the Federal Transit Administrator's TERM Scale. All transit agencies receiving grants from the FTA are required to complete a TAM plan. The FTA has established two tiers of agencies based on size parameters.

- A Tier I agency operates rail, OR has 101 vehicles or more all fixed route modes, OR has 101 vehicles or more in one non-fixed route mode.
- A Tier II agency is a subrecipient of FTA 5311 funds, OR is an American Indian Tribe, OR has 100 or less vehicles across all fixed route modes, OR has 100 vehicles or less in one non-fixed route mode.

The Department of Rail and Public Transportation (DRPT) has opted to sponsor a group TAM plan for Tier II providers. Tier I providers are not eligible for group plans.

For further details, refer to the plan of the Greater Lynchburg Transit Company.

For Tier II providers under the DRPT Group Plan, any Transportation Improvement Program (TIP) document or Metropolitan Transportation Plan (MTP) adopted after October 1, 2018 will be in compliance with the TAM Plans developed by DRPT and adopted by the Tier II transit providers within the MPO as well as the regional performance measures adopted by the MPO as a whole. The performance measurements and the targets can be found in the DRPT *Group Transit Asset Management Plan*.

The Central Virginia Transportation Planning Organization's planning process will integrate, either directly or by reference, the goals, objectives, performance measures, and targets described in the applicable Tier I and Tier II group plan.

## Pavement and Bridge Performance Measures

### Performance Targets

In accordance with the requirements of MAP-21 and the FAST Act, Virginia has established pavement and bridge condition performance targets as reported in Virginia's Baseline Performance Period Report for 2018-2021.<sup>2</sup> This report, submitted to FHWA in October 2018, satisfies the federal requirement that State DOTs submit a Baseline Performance Period Report to FHWA by October 1<sup>st</sup> of the first year in a performance period. Performance measures for pavement condition are required for the National Highway System (NHS), while bridge condition requirements relate to structures identified as part of the National Bridge Inventory on the NHS. The pavement condition measures and established performance targets for the 2018-2021 performance period are indicated in Table 1 below.

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<sup>2</sup> Virginia's Baseline Performance Period Report data is through December 2017  
**Central Virginia TIP FY 21-24**

**Table 1: Pavement Condition Measures and Performance Targets**

<b>Interstate Pavement Condition Measures<sup>3</sup></b>	<b>CY 2018-2019</b>	<b>CY 2018-2021</b>
Percentage of Pavements in Good Condition	N/A <sup>4</sup>	45.0%
Percentage of Pavements in Poor Condition	N/A <sup>3</sup>	3.0%
<b>Non-Interstate NHS Pavement Condition Measures<sup>5</sup></b>	<b>2018-2019</b>	<b>2018-2021</b>
Percentage of Non-Interstate Pavements in Good	25.0%	25.0%
Percentage of Non-Interstate Pavements in Poor Condition	5%	5.0%

Bridge condition measures and established performance targets for the 2018-2021 performance period are indicated in Table 2 below.

**Table 2: NHS Bridge Condition Measures and Performance Targets**

<b>NHS Bridge Condition Measures</b>	<b>CY 2018-2019</b>	<b>CY 2018-2021</b>
	<b>Two Year Target</b>	<b>Four Year Target</b>
Percentage of Deck Area of NBI Bridges on the NHS in Good Condition	33.5%	33.0%
Percentage of Deck Area of NBI Bridges on the NHS in Poor Condition	3.5%	3.0%

## **Background/History**

Virginia’s history of monitoring asset conditions and utilizing performance information to determine investment strategies based on available funding levels spans over 10 years for pavements and bridges.

VDOT maintains a comprehensive inventory of all pavement and bridges on the state-maintained network. This inventory, which includes location, maintenance responsibility, ownership, and current condition or inspection information, serves as the foundation for life cycle planning, performance forecasting, maintenance and rehabilitation needs estimation, as well as prioritization of work to maximize asset life given available funding. Condition information is also important for communicating with external stakeholders, including the general public.

<sup>3</sup> Interstate condition measures are based on four distresses: International Roughness Index (IRI), cracking, rutting, and faulting.

<sup>4</sup> During this first performance period, States are not required to establish 2-year targets for interstate pavements; however, Virginia has chosen to establish performance targets and are 45.0% and 3.0% for percentage of pavements in good and poor condition, respectively.

<sup>5</sup> During this first performance period, Federal requirements for Non-Interstate NHS pavement condition and performance targets are based on a single distress, IRI. However, Federal guidance outlined in a September 27, 2018 Memorandum on State DOT Targets for Non-Interstate NHS Pavement Measures allows for the use of full distress data when reporting Non-Interstate NHS performance targets. Given the availability of full distress data, Virginia has chosen this approach and reported performance targets for Non-Interstate NHS pavements based on all four distresses. This allows for consistency in assessing the condition and setting performance targets for both Interstate and Non-Interstate NHS pavements.

VDOT’s commitment to responsible Transportation Asset Management (TAM) practice is demonstrated through VDOT’s annual condition data collection programs and its establishment and publication of network level pavement and bridge performance goals. VDOT’s current condition measures and performance goals have been in place for many years and are fully integrated into VDOT’s budgeting process and investment strategies.

The federal pavement and bridge performance measures apply to a limited portion of the network for which VDOT is responsible (less than 15% of all lane miles and 18% of the bridge inventory).

**Connection to Other Performance Based Planning Documents**

VTrans, the state’s long-range multimodal plan, provides the overarching vision and goals for transportation in the Commonwealth. The long-range plan provides a vision for Virginia’s future transportation system and defines goals, objectives, and guiding principles to achieve the vision. It also provides direction to state and regional transportation agencies on strategies and policies to be incorporated into their plans and programs. The most recent approved long-range multimodal plan is VTrans2040.

Performance management, specifically as it relates to pavements and bridges, is included in the VTrans2040 Vision, Goals & Objectives, and Guiding Principles as noted below:

- **Guiding Principle 5:** Ensure Transparency and Accountability, and Promote Performance Management - Work openly with partners and engage stakeholders in project development and implementation, and establish performance targets that consider the needs of all communities, measure progress towards targets, and to adjust programs and policies as necessary to achieve the established targets.
- **Goal D:** Proactive System Management - maintain the transportation system in good condition and leverage technology to optimize existing and new infrastructure.
  - Objectives:
    - Improve the condition of all bridges based on deck area.
    - Increase the lane miles of pavement in good or fair condition.

Virginia’s federally required Transportation Asset Management Plan (TAMP) presents pavement and bridge inventory and conditions, along with the Commonwealth’s performance objectives, measures, and associated risks as they relate to the federal requirements. Asset funding, investment strategies, forecasts, goals, and gaps are also included. The TAMP is specific to the NHS and provides the Commonwealth’s Transportation Asset Management (TAM) processes and methodology to meet federal requirements. Pavement and bridge projects included in the STIP are consistent with Virginia’s reported TAM processes and methodology.

The program of projects in the STIP are directly linked to the pavement and bridge objectives outlined in VTrans2040 and the TAMP through the strategies and actions that are priorities in Virginia.

**Funding for Pavement and Bridge Projects**

There are two key funding sources for pavement and bridge projects, the Highway Maintenance and Operations Fund (HMOF) and State of Good Repair (SGR) program funds. The pavement and bridge funding is used for differing projects from routine maintenance to reconstructive work. Funds are allocated to pavement and bridge projects based on an annual needs assessment process supported by a data-driven prioritization and selection process. The prioritization process is the same for the various

funding sources; however, the [State of Good Repair](#) program funds are designated for deteriorated pavements and structurally deficient bridges.

The SGR program requires funds be distributed proportionality between VDOT and localities, based on assessed needs. More details, including the requirements for pavements and bridges, and the SGR prioritization process methodology, can be found at: [State of Good Repair for Bridges](#) and [Local Assistance Funding Programs](#).

VDOT has developed a robust asset management program, placing maintenance of the transportation network at the forefront of VDOT's investment decisions. This commitment to responsible asset management practice is demonstrated through VDOT's annual collection of condition data on pavements and bridges along with its establishment and publication of network-level pavement and bridge performance targets. For more than a decade, VDOT has monitored pavement and bridge conditions using performance information (measures and targets) to determine investment strategies based on available funding levels.

In the annual needs assessment process, VDOT assesses 100% of the pavement network on Virginia's Interstate and Primary systems and approximately 20% of the Secondary system. In 2016, VDOT assessed 100% of the Secondary pavement network to create a condition baseline. The pavement condition data is compiled, analyzed and reviewed to report the optimized needs at a roadway system and district level. VDOT's pavement program selects resurfacing projects, in relation to needs, and optimizes the timing of projects through a data-driven pavement management system.

For bridges, VDOT follows national standards in performing safety inspections and determining general condition of the structures. Condition assessments are performed by certified safety inspection personnel. The inspection program requires a qualified inspector to complete a "hands-on" review of the structure or bridge during each inspection. By federal regulation, VDOT is required to conduct detailed inspections of NBI structures at intervals not to exceed 24 months. VDOT uses BrM software to store bridge condition and inventory data for each structure and to program, schedule, and track bridge and structure inspections. The data collected during inspections allows VDOT to use a proactive approach to maintenance.

Preventive maintenance and timely intervention repairs are performed to avoid and slow deterioration that leads to greater rehabilitation or replacement cost. Virginia's bridge maintenance program is large and complex, so in order to direct its efforts more easily, performance targets have been developed.

VDOT uses a prioritization process when determining funding for the pavement and bridge programs and prioritizes work ranging from preventative maintenance to replacement. The prioritization processes take into account similar factors such as condition, cost effectiveness, maintenance history, and traffic volumes. While the systematic prioritization processes are a guide to assist in funding projects, districts direct the work performed as the local experts.

### **How do Pavement and Bridge Projects get selected for Inclusion in the STIP?**

As noted above, the funding to meet Virginia's pavement and bridge objectives and targets is allocated to projects in the CTB-approved SYIP and is consistent with VTrans2040. Each spring, the public is invited to comment on projects included in the draft SYIP prior to CTB approval. Since the SYIP is the foundation for the STIP, the program of projects in the STIP demonstrates support to achieve Virginia's pavement and bridge performance objectives and targets and is consistent with Virginia's TAMP.

## Highway System Performance

### Performance Targets

In accordance with the requirements of MAP-21 and the FAST Act, Virginia has established performance targets for three reliability performance measures to assess the Highway System Performance. All three measures are included in Virginia’s Baseline Performance Period Report for 2018-2021 which was submitted to FHWA in October 2018. This report satisfies the federal requirement that State DOTs submit a Baseline Performance Period Report to FHWA by October 1<sup>st</sup> of the first year in a performance period and establishes baseline performance as of December 31, 2017.

Performance of the NHS is measured by the level of travel time reliability. The travel time reliability performance measures and performance targets for the 2018-2021 performance period are indicated in Table 1 below.

**Table 1: National Highway System Travel Time Reliability Performance Measures and Targets**

NHS Travel Time Reliability Performance	CY 2018-2019	CY 2018-2021
	Two Year Target	Four Year Target
Percent of Person Miles Traveled on the Interstate That Are Reliable	82.2%	82.0%
Percent of Person Miles Traveled on the Non-Interstate NHS That Are Reliable	N/A <sup>6</sup>	82.5%

The assessment for freight reliability is based on the truck travel time reliability index. The truck travel time reliability performance measure and performance targets for the 2018-2021 performance period are indicated in Table 2 below.

**Table 2: Freight Reliability Performance Measure and Targets**

Truck Travel Time Reliability Performance	CY 2018-2019	CY 2018-2021
	Two Year Target	Four Year Target
Truck Travel Time Reliability Index	1.53	1.56

The Commonwealth Transportation Board (CTB) approves the performance measures and targets developed for Virginia’s surface transportation network. Such targets, including those for Highway System Performance, are linked to the goals and objectives in Virginia’s long-range transportation plan, or VTrans.

### Connection to Other Performance Based Planning Documents

VTrans, the state’s long-range multimodal plan, provides the overarching vision and goals for transportation in the Commonwealth. The long-range plan provides a vision for Virginia’s future transportation system and defines goals, objectives, and guiding principles to achieve the vision. It also provides direction to state and regional transportation agencies on strategies and policies to be incorporated into their plans and programs. The most recent approved long range multimodal plan is VTrans2040.

VTrans2040 identifies the most critical transportation needs in Virginia to ensure the overarching transportation goals in the long-range plan are achieved. The screening process was informed by a data-

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<sup>6</sup> During this first performance period, States are not required to establish 2-year targets for the Non-Interstate NHS reliability measure.

driven approach that considers highway system performance measures and targets in addition to other performance indicators.

Performance management, as it relates to the reliability of the NHS and freight, is included in the VTrans2040 Vision, Goals & Objectives, and Guiding Principles as noted below:

- Guiding Principle 4: Consider Operational Improvements and Demand Management First. Maximize capacity of the transportation network through increased use of technology and operational improvements as well as managing demand for the system before investing in major capacity expansions.
- Goal A – Economic Competitiveness and Prosperity: invest in a transportation system that supports a robust, diverse, and competitive economy.
  - Objectives:
    - Reduce the amount of travel that takes place in severe congestion.
    - Reduce the number and severity of freight bottlenecks.
    - Improve reliability on key corridors for all modes.
- Goal B – Accessible and Connected Places: increase the opportunities for people and businesses to efficiently access jobs, services, activity centers, and distribution hubs.
  - Objectives:
    - Reduce average peak-period travel times in Transportation areas.
    - Reduce average daily trip lengths in Transportation areas.
    - Increase the accessibility to jobs via transit, walking and driving in Transportation areas.

Additionally, the Virginia Freight Element (VFE), a component of VTrans2040, discusses freight system trends, needs, and issues. The VFE also includes freight policies, strategies, and performance measures that guide Virginia’s freight-related investment decisions.

Projects included in the STIP are directly linked to the Highway System Performance objectives outlined in VTrans2040 and associated needs analysis, and the VFE through the strategies and actions that are priorities in Virginia.

### **Funding for Highway System Performance Projects**

SMART SCALE, Virginia’s data-driven prioritization process for funding transportation projects, considers the potential of a project to improve reliability. In order to be considered for SMART SCALE, a project must first meet a need identified in VTrans2040, thus strengthening the connection between the planning and programming processes. Congestion mitigation, safety, accessibility, economic development, environment, and land use are the factors used to score SMART SCALE projects. Freight considerations are included in the economic development factor.

The FAST Act established a National Highway Freight Program, including a freight-specific funding program to highlight the focus on freight transportation needs. Projects eligible for National Highway Freight Program (NHFP) funding must contribute to the efficient movement of freight on the National Highway

Freight Network (NHFN) and be included in the VFE. VDOT uses NHFP funding to construct freight beneficial projects identified through the SMART SCALE process.

SMART SCALE screening and scoring results, along with public feedback and CTB guidance, are used to develop the SYIP.

Other projects selected for funding are subject to program specific prioritization processes approved by the CTB. All funding (federal, state, and other sources) for transportation projects are allocated to projects in the CTB approved SYIP.

### **How do Highway System Performance Projects Get Selected for Inclusion in the STIP?**

As noted above, the funding for all transportation projects, including funding for projects to meet Virginia's NHS system performance and freight movement targets is allocated to projects in the CTB approved SYIP, and is consistent with VTrans2040 and the VFE. Since the SYIP is the foundation of the STIP, the program of projects in the STIP demonstrates support to achieve Virginia's NHS and Freight Reliability performance objectives and targets.



## MEMO

**TO:** Scott Smith, CVMPO  
Transportation Technical Committee  
**FROM:** Will Cockrell, EPR-PC  
**DATE:** June 5<sup>th</sup>, 2019

**RE:** Connect Central Virginia 2045, Round 2 Project Evaluation

**PURPOSE:** The purpose of this memo is to discuss the next round of project evaluation for the **CONNECT CENTRAL VIRGINIA 2045** (LRTP) planning process. EPR, P.C. updated and affirmed projects costs from the Candidate List of Projects, then calculated the draft benefit-cost scores for an initial ranking of projects.

**BACKGROUND:** In 2019, EPR, P.C. assembled a list of proposed transportation improvements from all known plans, studies, and reports in the region. EPR vetted this initial list of 2045 Candidate Projects with CVMPO and VDOT staff in late 2019. In February 2020, EPR met with CVMPO and VDOT staff at the CVPDC offices for a more detailed review of the Candidate List of Projects, which would eventually form the Constrained List of Projects and Vision List. On March 12, the TTC held their regular meeting to review the Candidate List of Projects, finetuning and affirming what projects are included in the evaluation process. In April, CVMPO staff organized individual calls with TTC members to explain the forthcoming project scores and answer questions before receiving scoring sheets.

During the April calls, EPR invested additional time refining project descriptions and costs. The purpose of this additional effort was to validate project scoring by increasing confidence in the cost denominator for benefit-cost calculations. The more detailed project descriptions and costs also align with the way Virginia evaluates projects for funding under Smart Scale. The TTC held their May 14<sup>th</sup> meeting remotely, reviewing the Benefit Scores calculated for each project. There were no comments on those scores, though several TTC members asked that EPR confirm the history and need for listed projects.

**ISSUES:** Since the March meeting, EPR finalized its refinement of project descriptions and cost estimates. EPR also conducted a call with VDOT staff to review the list of projects, requesting that the Lynchburg District examine the list and provide additional guidance on scoring. Attached is the updated list of projects by benefit-cost score.

The attached spreadsheets list the projects evaluated through the 2045 process, per the vetting done by the TTC. Due to the constrained nature of funding at this time, not all Vision projects can be funded to be eligible for the Constrained List. All other projects will be recorded in the Vision List and are still eligible for funding, despite their exclusion from the Constrained List of Projects. EPR displayed the top 30 projects by benefit-cost scores. Note: the list of top 30 projects does not necessarily represent the Constrained List of Projects, as staff continues to finalize the constrained budget and must include funded projects from the TIP.

### Overview of Results

The latest ranking of projects is consistent with expected results. Low-cost projects tend to score well, which is also consistent with the results of Smart Scale typically as well, due to the cost/benefit filtering. Lynchburg City has the highest share of the top 30 projects as might be expected, due to its higher traffic counts and concentrations of employment. Almost half of the top ten projects involve Lynchburg Expressway or Candler Mountain Road. However, the top 30 list also includes projects in all localities in



the MPO area. Campbell and Amherst counties each have three projects represented and Bedford County has two.

#### City of Lynchburg

As would be expected, City projects account for much of the top 30 list. The 22 Lynchburg projects total \$118,195,000. The most expensive city project on the list is \$23,770,000 for Candler Mountain Road (Project ID: 60). The top-rated project (Project ID: 96) is a \$70,000 effort to close an unsignalized intersection at Murray Place on the Lynchburg Expressway.

#### Amherst County

The top 30 list includes three projects from Amherst County, totaling \$16,810,000. The highest rated Amherst County project is traffic operations and signal coordination on South Amherst Highway (ranking 7 out of 30). The two remaining projects are ranked 28<sup>th</sup> and 29<sup>th</sup>, involving Amelon Expressway and a second South Amherst Highway project.

#### Campbell County

Campbell County projects in the top 30 total \$12,350,000. All three are in the top 15 for benefit-cost scores. All three projects are for access management improvements on Timberlake Road.

#### Bedford County

The Bedford County projects in the top 30 total \$8,500,000. The higher rated project (ranked 11<sup>th</sup>) is an intersection reconstruction at Forest Road and Enterprise Drive. The second project (ranked 23<sup>rd</sup>) is a roadway expansion on Graves Mill Road. The later includes sidewalks, turn lanes, an additional lane with curb and gutter, as well as signal and utility upgrades.

**ACTIONS NEEDED:** In the attachment, EPR included a ranked list of all projects, plus versions for each locality. The TTC members should review this next round of rankings and provide feedback. *Most importantly, TTC members should comment on any highly desirable projects that received low benefit-cost scores. This is a critical element of the process, as EPR can reevaluate and restructure those projects for a final round of scoring.* Project restructuring could not only assist with LRTP ranking but could help position projects for the state's funding processes.

While comments should be forward to MPO staff, other questions can be directed to Will Cockrell, at [w.cockrell@epr-pc.com](mailto:w.cockrell@epr-pc.com).

STATEMENT OF PURPOSE  
Approved September 5, 2002

The Central Virginia Transportation Technical Committee (Committee) is responsible for supporting the Central Virginia Transportation Planning Organization's (CVTPO) and Central Virginia Planning District Commission's transportation policy decision-making efforts.

The Committee provides technical advice in coordinating the federally-mandated "3-C" or continuing, comprehensive, and cooperative, transportation planning and programming process.

The Committee's three principal work efforts are updating the long range transportation plan, updating the transportation improvement program (TIP), and developing the annual unified planning work program. The Committee, in conjunction with its rural colleagues, also develops the annual Rural Transportation Planning Assistance Program Scope of Work. The Committee's intent is to review and comment on TIP projects and work program products.

The Committee acknowledges that the long range transportation plan update is the primary planning document for transportation issues in the Central Virginia region. This planning initiative drives the formulation of the transportation improvement program, as well as the annual work programs.

The Committee further realizes that the long range transportation planning process must identify regional priorities in order to fully influence project funding decisions ultimately exercised by the Commonwealth Transportation Board. The Committee's intent is to recommend priorities and encourage the CVMPO to set these priorities at the regional level.

Because of its importance, the Committee is fully committed to actively being involved in the long range transportation planning process.

In carrying out its responsibilities, the Committee will:

1. Coordinate with local planning departments to ensure an understanding of pertinent local development issues and their impact on the region;
2. Coordinate with nearby MPOs and develop an ongoing dialogue with them;
3. Strive to integrate land use and economic development, as well as transportation considerations, in its planning process;
4. Strive to be proactive as opposed to reactive in problem solving.