



Roanoke Valley Transportation PLANNING ORGANIZATION

A Program of the
REGIONAL commission

Transportation Improvement Program

for the

ROANOKE VALLEY TRANSPORTATION PLANNING ORGANIZATION

Federal Fiscal Years 2024-2027

Adopted April 27, 2023

Amended: June, 27, 2024
Adjusted: December, 16, 2024

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The Honorable Steve Clinton
The Honorable Billy Martin, Sr., Chair

Montgomery County Representative
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The Honorable Stephanie Moon Reynolds

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The Honorable Renee Turk
The Honorable Hunter Holiday
(Alternate: The Honorable Randy Foley)

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The Honorable Mike Stovall

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(Valley Metro) Representative
Kevin Price

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Kevin Jones

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Committee (TTC) (Ex-Officio)
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Craig Meadows (Montgomery County CAO)
Cody Sexton (Town of Vinton Designee)
Gary Larrowe or Jon Lanford (Botetourt County)

RVTPO SECRETARY

Jeremy Holmes, RVARC Executive Director

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Acknowledgement

This report was prepared by the Roanoke Valley-Alleghany Regional Commission (RVARC) staff in cooperation with and assistance by the: Virginia Department of Rail and Public Transportation (DRPT), Virginia Department of Transportation (VDOT), Roanoke Valley Transportation Planning Organization (RVTPO) member localities, Greater Roanoke Transit Company (GRTC/Valley Metro), and RADAR (Unified Human Services Transportation Systems, Inc.).

Disclaimer

The contents of this report reflect the views of the Roanoke Valley Transportation Planning Organization. The Roanoke Valley-Alleghany Regional Commission (RVARC) staff is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Highway Administration, Federal Transit Administration, Virginia Department of Transportation, Virginia Department of Rail and Public Transportation, Valley Metro, RADAR, or the RVARC. This report does not constitute a standard, specification, or regulation. FHWA, FTA, VDOT and DRPT acceptance of this report as evidence of fulfillment of the objectives of this program does not constitute endorsement/approval of the need for any recommended improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

The data presented in this report is provided by VDOT, DRPT, GRTC and RADAR; and the data is compiled and presented by RVARC staff.

Non-Discrimination

The Roanoke Valley Transportation Planning Organization (RVTPO) fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The RVTPO will strive to provide reasonable accommodations and services for persons who require special assistance to participate in this public involvement opportunity. For more information on meeting accessibility, or to obtain a Title VI Complaint Form, see www.rvarc.org or call the Title VI Coordinator at 540-343-4417.

Transportation Improvement Program Abstract

The Roanoke Valley Transportation Planning Organization (RVTPO) is recognized as the official transportation planning agency for the Roanoke, Virginia Urbanized Area as required by federal law. For the region to receive federal funds for use on highway, transit, non-motorized, and multimodal systems, the RVTPO is required to develop a Transportation Improvement Program (TIP). The Transportation Improvement Program (TIP) is a four-year financial program that describes the schedule for obligating federal funds to state and local projects. For all non-transit projects in the region, the TIP serves as the document to obtain authority from the Federal Highway Administration to commit obligate (or commit) funds to a project.

The TIP contains federal funding information for all modes of transportation including highways, transit and pedestrian facilities. Additionally, the TIP also reflects projects and priorities identified in the Roanoke Valley Transportation Plan. The RVTPO works closely with the Virginia Departments of Transportation and Rail & Public Transportation, as well as local transit operators, to update and amend the TIP each year as funding conditions change. Finally, the RVTPO publishes an annual listing of TIP projects for which have federal funds have been obligated.



The 27th day of April 2023

RESOLUTION

Adoption of the FFY2024-2027 Transportation Improvement Program as a Component of the Roanoke Valley Transportation Plan

WHEREAS, federal regulations implemented as a result of the 2021 Infrastructure Investment and Jobs Act require urbanized area metropolitan planning organizations to develop and approve a fiscally constrained four-year transportation improvement program documenting planned obligations for transportation investments in the Roanoke Valley; and,

WHEREAS, the Federal Fiscal Year (FFY) 2024-2027 Transportation Improvement Program (TIP) satisfies these federal requirements; and,

WHEREAS, the TIP is the result of a continuing, comprehensive, and cooperative (3-C) performance-based transportation planning and programming (PBPP) process; and,

WHEREAS, federal transportation performance measures have been integrated into the RVTPO's PBPP process and are aligned with the region's transportation system goals and objectives; and,

WHEREAS, the RVTPO acknowledges the region's current transportation system performance and considered system performance targets and limitations on funding availability to obligate in the TIP in support of funded projects approved in the Roanoke Valley Transportation Plan (RVTP); and,

WHEREAS, in accordance with the Roanoke Valley Transportation Planning Organization's Public Participation Plan from May 27, 2021, public input has been sought on the TIP and public input on the RVTP's funded projects with planned obligations in FFY24-27 have been considered.

NOW, THEREFORE BE IT RESOLVED, that the Policy Board of the Roanoke Valley Transportation Planning Organization adopts the FFY2024-2027 Transportation Improvement Program as a component of the Roanoke Valley Transportation Plan.



Billy W. Martin, Sr.
Chair



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**METROPOLITAN TRANSPORTATION PLANNING AND PROGRAMMING PROCESS
SELF-CERTIFICATION STATEMENT**

In accordance with 23 CFR 450.336, the Virginia Department of Transportation, the Virginia Department of Rail and Public Transportation, and the Roanoke Valley Transportation Planning Organization (d.b.a. RVTPO), but officially known as the Roanoke Valley Area Metropolitan Planning Organization) for the Roanoke, VA urbanized area hereby certify that the transportation planning and programming process is being conducted in accordance with all applicable requirements of:

- (1) 23 U.S.C. 134, 49 U.S.C. 5303, and 23 CFR part 450 Subpart C (Metropolitan Planning);
- (2) In nonattainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93 (Conformity Determination);
- (3) Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) & 49 CFR part 21;
- (4) 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
- (5) Section 1101(b) of the FAST ACT (Pub. L. 114-357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects (DBE Involvement);
- (6) 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
- (7) The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38;
- (8) The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- (9) Section 324 of Title 23 U.S.C., regarding the prohibition of discrimination based on gender; and
- (10) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

TPO POLICY BOARD: Cities of Roanoke and Salem; Counties of Bedford, Botetourt, Montgomery and Roanoke; Town of Vinton; Greater Roanoke Transit Company (*Valley Metro*); Roanoke-Blacksburg Regional Airport; Virginia Department of Rail & Public Transportation; Virginia Department of Transportation

Roanoke Valley Transportation Planning Organization

Roanoke Valley Area MPO



Signature

Jeremy Holmes

Printed Name

Executive Director

Title

June 29, 2023

Date

Virginia Department of Transportation



Signature

Kenneth H. King Jr. PE

Printed Name

Salem District Engineer

Title

6-26-2023

Date

Introduction

The Roanoke Valley Transportation Planning Organization (RVTPO) is recognized as the official transportation planning agency for the Roanoke, Virginia Urbanized Area as required by federal law. For the region to receive federal funds for use on highway, transit, non-motorized, and multimodal systems, the RVTPO is required to develop a Transportation Improvement Program (TIP). Staff at the RVTPO developed this TIP for the MPO area which includes the 2010 Census urbanized area as well as the area projected to be urbanized by 2045. The RVTPO TIP was developed in cooperation with the Virginia Department of Transportation (VDOT), the Virginia Passenger Rail Authority (VPRA), the Virginia Department of Rail and Public Transportation (DRPT), local public transportation operators, and the local governments within the urbanized area. These officials, through the Metropolitan Planning Process, select and schedule projects for endorsement in the TIP. The Transportation Improvement Program may be modified as described in the next section.

The Transportation Improvement Program (TIP) is a four-year financial program that describes the schedule for obligating federal funds to state and local projects. For all non-transit projects in the region, the TIP serves as the document to obtain authority from the Federal Highway Administration to commit obligate (or commit) funds to a project.

The TIP contains federal planned obligation information for all modes of transportation including highways, transit and pedestrian facilities and is consistent with the projects and priorities identified in the Roanoke Valley Transportation Plan (RVTP). The RVTPO works closely with VDOT and DRPT, as well as local transit operators, to update and amend the TIP as funding conditions change. Finally, the RVTPO annually updates project information in the RVTP and TIP to reflect actual obligations of federal funds to funded projects/services.

The TIP identifies capital and operating projects/services with planned federal obligations over a four-year period during federal fiscal years 2024 through 2027 (October 1, 2023 to September 30, 2027). The TIP serves as the transit “program of projects” for which public involvement is conducted through the RVTPO’s Public Participation Plan.

In accordance with 23 CFR 450.318(i), any project included in the TIP shall be consistent with the approved Metropolitan Transportation Plan (Roanoke Valley Transportation Plan). Once approved, the TIP is incorporated without change into the Statewide Transportation Improvement Program or STIP. The TIP makes progress toward achieving the RVTPO’s adopted performance measure targets as shown in the [System Performance Report Attachment](#).

Amendments and Adjustments Process

The Federal Fiscal Year (FFY) 2024-2027 TIP is the initial four-year timeframe of the region’s Financial Plan. The RVTPO follows the state’s schedule for developing the TIP. Virginia updates the Statewide TIP, which includes all Metropolitan Planning Organization TIPs, on a three-year basis. Federal law requires the TIP to be updated at least every four years.

Amendment vs. Adjustment

Amendments occur when changes are significant, where the public is engaged for comment, and the RVTPO Policy Board reviews public comment and decides on the proposed change. Adjustments are changes that are considered minor; thus, they do not involve the public for comment and do not require the Policy Board to decide. RVTPO staff coordinate details of the minor change with any necessary stakeholders and make the change within the document. Both amendments and adjustments are recorded and published online.

Amendments

Amendment A revision that involves a major change to a project included in a TIP including the addition or deletion of a project or a major change in project cost, project/project phase initiation dates, or a major change in design concept or design scope (e.g., changing project termini or the number of through traffic lanes or changing the number of stations in the case of fixed guideway transit projects).

An amendment is a revision that requires public review, a redemonstration of fiscal constraint, and RVTPO Policy Board approval. An amendment is required when a major change occurs. The following sections explain typical situations that would require an amendment.

Adding or deleting a grouping category or ungrouped project in the TIP

The TIP enables federal funds to be used on RVTPO approved projects; it outlines for which ungrouped projects or grouping categories the finances will be monitored by the RVTPO. Adding or deleting an ungrouped project or a grouping category from the TIP requires an amendment.

A major change in project cost estimate

Cost estimates evolve over the life of a project. Minor changes to a cost estimate are expected; but if a project’s estimated cost goes up beyond what is acceptable, as shown in the below tables, public comment and Board action are required.

Sliding Scale of FHWA Project/Phase Cost Increase Thresholds for Amendments

Approved RVTP Total Estimated Project Cost	Minimum Total Estimate Increase Requiring Amendment
\$2 million or less	> 100%
>\$2 million to \$10 million	> 50%
>\$10 million to \$20 million	> 25%
>\$20 million to \$35 million	> 15%
>\$35 million	> 10%

Sliding Scale of FTA Project/Phase Cost Increase Thresholds for Amendments

Approved RVTP Total Estimated Project Cost	Minimum Total Estimate Increase Requiring Amendment
\$2 million or less	> 100%
>\$2 million to \$10 million	> 50%
>\$10 million	> 25%

Major change in Project/Project Phase Initiation Dates

Where project/project phase initiation dates are provided, any major change to those dates, beyond a two-year period, will be advertised for public comment and shared with the Board for approval.

Major change in design concept or design scope

When a funded or unfunded project is approved for inclusion into the RVTP, it is with a shared understanding of the need(s) being addressed, what the scope entails as provided in the project

description, the estimated total cost, and the anticipated transportation benefit. The Transportation Solutions Utilized explain how the transportation need(s) will be addressed by the investment. These details are shared with the public and decision-makers and projects/services/studies are approved based on their anticipated transportation benefits.

Major changes could potentially affect how the project is used, and by whom, and thus requires public engagement and Board action before proceeding. Major changes to the design concept or scope include changing a project's start/end locations or the removal/addition/swapping of transportation solution(s) identified as part of the project.

Adjustments

Minor changes may be handled via adjustments. These changes are made by RVTPO staff and do not involve public participation or Board action. Summaries of TIP adjustments can be found in Appendix A.

Administrative Modification (Adjustment)

A minor revision that includes minor changes to project/project phase costs, minor changes to funding sources of previously included projects, and minor changes to project/project phase initiation dates.

Minor changes are not of the scale or impact outlined as major changes requiring amendments. Text changes may be made to clarify design concept, project scope/description, funding sources, and funding changes.

Examples of changes which may be handled via an Adjustment

- Minor changes in project design concept, scope, or description
- Moving a project's funding from year to year
- Minor changes within a project phase start date
- Change in a project's lead agency
- Change in the funding source(s)
- Funding changes less than the threshold established in the sliding scale

Other changes may arise which RVTPO staff may choose to handle as an adjustment; RVTPO staff may at any time determine that any proposed change will be handled as an amendment.

Procedures for Amendment/Adjustment Requests

Through its continuous collaboration and coordination with stakeholders, RVTPO staff may initiate amendments/adjustments to the RVTP. Additionally, adjustments or amendments may also be requested by localities or modal agencies using the Amendment/Adjustment Request Form available on the RVARC website.

Requests involving projects should include, at a minimum, the following information:

1. Submitting agency
2. Project manager
3. Project title
4. Road/Facility Route/Name/Number
5. Project start and end locations
6. Project length
7. General project description (include Common Transportation and/or Unique Solutions Utilized and how they are being used in the project)
8. Primary need for the project (include Need Categories and Need IDs)
9. Cost in present year dollars
10. Anticipated year of project initiation

11. Previous public involvement efforts

Requests involving new priority regional transportation needs should include, at a minimum, the following information:

1. Need Type
2. Location
3. Need Termini
4. Rationale
5. Source of identified need (plan/study, public involvement effort, data)

RVTPO staff may follow-up to obtain other project details. Any request for an adjustment or amendment must be submitted in writing to the RVARC Director of Transportation. RVARC staff will review the request and determine if it meets the required definitions and thresholds for an adjustment or an amendment. Depending on the circumstances, RVTPO staff may decide to pursue an amendment rather than an adjustment.

Administrative Modifications (Adjustments)

- If RVTPO staff determine an adjustment is appropriate, they will coordinate with appropriate local and state agencies and, in writing, submit a response on the adjustment request to the initiating agency within ten (10) working days of the request. The change will be updated in the relevant documents to reflect the adjustment and documentation of the adjustment action will be summarized in an appropriate section of Appendix A.
- For adjustments to priority needs in the RVTP, RVTPO staff may determine if another priority transportation need has been identified in between major updates and may adjust the priority regional transportation needs to include such need. Staff will notify the TTC and Policy Board of the adjustment and vet the possible and preferred solutions with relevant stakeholders.

Amendments

- If RVTPO staff determine an amendment is warranted, the initiating agency will be notified within five (5) working days of the request that the requested change will be handled as an amendment.
- For amendments to projects, RVTPO staff will initiate the public involvement process including a public comment period and a public hearing conducted per the RVTPO Public Participation Plan.
- Upon the RVTPO Policy Board's approval of the project amendment, the relevant document(s) are updated to reflect the amendment and documentation of the amendment action will be summarized in Appendix A.

The updated document(s) will be posted on the RVTPO website.

Public Engagement

Public input on amendments will be sought and provided to the RVTPO Policy Board for their consideration prior to the amendment's adoption. The RVTPO Public Participation Plan (PPP) provides a toolbox of activities that may be utilized for public engagement. At a minimum, a 14-day public comment period and an opportunity to address the Board during a public hearing prior to the amendment's adoption will be used to solicit public input. The public will be notified of input opportunities via notices provided on the RVTPO website, social media, one newspaper serving area minority populations, and emailed to identified interested stakeholders as maintained in a database by RVTPO staff. Other strategies to engage the public may also be explored.

Timelines

Adjustments may be initiated or requested on a rolling basis. The RVTPO Policy Board may consider amendments according to the following schedule shown below.

Milestone	Date
Deadline to request an amendment for consideration as early as the following month	First Friday of month prior to the month when the amendment is desired
Opening of 14-day public comment period	By the Fourth Thursday of the month prior to the month when the amendment is desired
TTC considers draft amendment and makes recommendation to RVTPO Policy Board	The following month’s regularly scheduled TTC meeting unless a special-called meeting is requested.
Public hearing and consideration of draft amendment by the RVTPO Policy Board	The following month’s regularly scheduled Board meeting unless a special-called meeting is requested.

This amendment process enables stakeholders and project sponsors to provide the RVTPO Policy Board with new information so the Board may reevaluate identified investment priorities. In addition, technical corrections or formatting updates may be made by RVTPO staff as needed and do not require approval. Technical corrections may include typographical, grammatical, or syntactical errors that address, for example, an error in spelling, grammar, or deletion of a redundant word. It does not include changes to funding amounts.

Public and Stakeholder Involvement

In accordance with the RVTPO’s Public Participation Plan, the public has been afforded several opportunities to comment upon the development of the TIP.

The Comprehensive, Continuing, Cooperative, or “3C” Process of the RVTPO, provides a natural mechanism by which the TIP can be carefully reviewed and updated. Changes to the TIP are handled via administrative adjustments for minor changes or amendments for major changes to ungrouped projects or a project grouping category as described in the Amendments/Adjustments Process. Amendments to the TIP also offer the opportunity for public involvement.

The Greater Roanoke Transit Company (d.b.a. Valley Metro) satisfies the public hearing requirements per FTA Circular 9030.1E through the Transportation Improvement Program (TIP) development process of the RVTPO. The TIP public notice of public involvement activities and time established for public review and comment on the TIP meets the requirements for the Program of Projects of the Urbanized Area Formula Program as outlined in 49 U.S.C. 5307. The FTA Circular 9030.1E, allows the RVTPO public participation requirements for the TIP to be used in lieu of a local process when developing the required FTA Program of Projects (POP). A POP is a list or program of projects utilizing FTA funds. The first year of an approved TIP constitutes a list of "agreed to" projects for FTA purposes. To make it clear to the public, the public notice for the POP will state the TIP process is being used and it satisfies the FTA public involvement requirements for developing a POP. Before any Section 5307 or Section 5339 projects are added to the TIP, a public hearing is advertised, allowing comments on the proposed POP. Once that process is complete, projects are approved for the TIP by the RVTPO Policy Board, through a recommendation of its Transportation Technical Committee.

Ungrouped vs. Grouped Projects

The TIP lists some individual (ungrouped) projects whereas most funded projects are grouped together as part of a grouping category. The grouping of funded projects allows flexibility to make funding adjustments more easily to projects that don't merit the need for oversight and public involvement thus reducing paperwork. These projects may be grouped by function, work type, and/or geographic area using applicable classifications under [23 CFR 771.117\(c\) and \(d\)](#).

The RVTPO, VDOT, and DRPT coordinate on grouping or ungrouping projects every three years during the TIP development process or as needed in the years between during the amendment/adjustment process.

Grouping of Funded Roadway/Bicycle/Pedestrian/Rail Projects

No funded roadway/bicycle/pedestrian projects in the RVTPO area are considered to be regionally significant by the Virginia Department of Transportation because the Roanoke Valley is in an air quality attainment region, and none of the projects need to be analyzed for air quality conformity. Regional significance is defined differently by the federal definition and by the adopted RVTPO definition, but the state interpretation is what is being applied in this Transportation Improvement Program (TIP). Moreover, as defined in [23 CFR 450.104](#), regionally significant projects exclude those that may be grouped in the TIP. Therefore, the majority of projects in the FFY24-27 TIP are not regionally significant based upon this regulation.

The FHWA and FTA give the RVTPO the ability to determine how much planned federal obligation funding information it wishes to exercise oversight for in the TIP. By grouping most roadway/bicycle/pedestrian/rail projects, the RVTPO will only be notified by VDOT if the total group cost estimate exceeds allowable overrun amounts upon which it would need to be approved by the Board with consideration of public comment. As such, the RVTPO will not monitor annual planned federal obligations and schedule information for virtually all roadway/bicycle/pedestrian/rail projects in the region.

RVTPO FFY24-27 Roadway/Bicycle/Pedestrian/Rail Total Cost Estimate by Project Groupings

Project Grouping Category	Total Cost Estimate of Group
Construction: Bridge Rehabilitation/Replacement/Reconstruction	\$43,170,414
Construction: Federal Lands Highway	\$1,733,750
Construction: Safety/ITS/Operational Improvements	\$1,093,287,898
Construction: Transportation Enhancement/Byway/Non-Traditional	\$73,727,803
Maintenance: Preventive Maintenance and System Preservation	\$104,336,573
Maintenance: Preventive Maintenance for Bridges	\$77,508,932
Maintenance: Traffic and Safety Operations	\$11,824,327

Ungrouped Funded Roadway/Bicycle/Pedestrian/Rail Projects

One project required more environmental analysis, not related to air quality, and for that reason VDOT has requested it be listed individually or ungrouped in the TIP. RVTPO staff will track planned obligations and schedule for this project as information is provided by VDOT.

UPC NO	688	SCOPE	Reconstruction w/o Added Capacity			
SYSTEM	Urban	JURISDICTION	Roanoke	OVERSIGHT	NFO	
PROJECT	13TH STREET IMPROVEMENTS			ADMIN BY	VDOT	
DESCRIPTION	FROM: .046 MILE SOUTH OF CHURCH AVENUE TO: INT. OF NORFOLK AVENUE (0.2443 MI)					
ROUTE/STREET	13TH ST (U000)			TOTAL COST	\$25,294,957	
	FUND SOURCE	MATCH	FY24	FY25	FY26	FY27
CN	Federal – NHS/NHPP	\$0	\$3,074,186	\$0	\$0	\$0
	Federal – STP/STBG	\$59,323	\$237,291	\$0	\$0	\$0
	Other	\$450,619	\$450,619	\$0	\$0	\$0
CN TOTAL		\$509,942	\$3,762,096	\$0	\$0	\$0
CN AC	Federal – AC OTHER	\$0	\$3,172,621	\$0	\$0	\$0

Items Included for Administrative Purposes

The following non-project items are administrative in nature and are shown separately from ungrouped projects. This list includes GARVEE bond debt service for projects currently in the TIP.

UPC NO	110395		SCOPE			
SYSTEM	Interstate	JURISDICTION	Roanoke County		OVERSIGHT	NFO
PROJECT	#HB2 FY17 I-81 AUX LN FR EXIT 141 - 143 GARVEE DEBT SERVICE				ADMIN BY	VDOT
DESCRIPTION						
PROGRAM NOTE	Includes \$3,480,347 GARVEE Debt Service Interest Prev, \$695,246 FFY24 GARVEE Debt Service Interest, \$667,675 GARVEE Debt Service Interest FFY25, \$607,737 GARVEE Debt Service Interest FFY26, \$544,853 GARVEE Debt Service Interest FFY27, \$2,140,800 GARVEE Debt Service Interest FFY28-38. Total GARVEE Debt Service Interest \$8,136,658. Corresponding CN UPC 108906.					
ROUTE/STREET	0081				TOTAL COST	\$16,827,213
	FUND SOURCE	MATCH	FY24	FY25	FY26	FY27
PE	Federal – AC CONVERSION	\$0	\$0	\$667,675	\$607,737	\$544,853
RW	Federal – NHS/NHPP	\$0	\$695,246	\$0	\$0	\$0
CN TOTAL		\$0	\$695,246	\$667,675	\$607,737	\$544,853
PE AC	Federal – AC	\$0	\$3,961,065	\$0	\$0	\$0

UPC NO	111983		SCOPE			
SYSTEM	Interstate	JURISDICTION	Roanoke County		OVERSIGHT	NFO
PROJECT	#SMART18 – 81 SB Aux Ln frm Exit 143 -141 GARVEE Debt Service				ADMIN BY	VDOT
DESCRIPTION						
PROGRAM NOTE	Includes \$424,071 FFY24 GARVEE Debt Service Interest, \$464,749 GARVEE Debt Service Interest FFY25, \$439,246 GARVEE Debt Service Interest FFY26, \$412,640 GARVEE Debt Service Interest FFY27, \$2,418,619 GARVEE Debt Service Interest FFY28-38. Total GARVEE Debt Service Interest \$4,159,325. Corresponding CN UPC 111373.					
ROUTE/STREET	0081				TOTAL COST	\$5,791,593
	FUND SOURCE	MATCH	FY24	FY25	FY26	FY27
PE	Federal – AC CONVERSION	\$0	\$0	\$464,749	\$439,246	\$412,640
RW	Federal – NHS/NHPP	\$0	\$424,071	\$0	\$0	\$0
CN TOTAL		\$0	\$424,071	\$464,749	\$439,246	\$412,640
PE AC	Federal – AC	\$0	\$3,735,254	\$0	\$0	\$0

Roanoke Valley Transportation Plan
 Transportation Improvement Program FFY 2024-2027



UPC NO	121433	SCOPE				
SYSTEM	Primary	JURISDICTION	Roanoke County	OVERSIGHT	NFO	
PROJECT	#SMART20 RTE 419&220 DIVERGING DIAMOND GARVEE DEBT SERVICE			ADMIN BY	VDOT	
DESCRIPTION	FROM: 0.5 Mi. W. Rte. 220 TO: 0.23 Mi. E.. Rte. 220 (0.7300 MI)					
PROGRAM NOTE	Includes \$108,628 GARVEE Debt Service Interest FFY24, \$119,047 GARVEE Debt Service Interest FFY25, \$112,515 GARVEE Debt Service Interest FFY26, \$105,700 GARVEE Debt Service Interest FFY27, \$619,539 GARVEE Debt Service Interest FFY28-38, Total GARVEE Debt Service Interest \$1,065,429. Corresponding CN UPC 115460					
ROUTE/STREET	ELECTRIC ROAD (0419)			TOTAL COST	\$1,213,841	
	FUND SOURCE	MATCH	FY24	FY25	FY26	FY27
PE	Federal – AC CONVERSION	\$0	\$0	\$119,047	\$112,515	\$105,700
RW	Federal – NHS/NHPP	\$0	\$108,628	\$0	\$0	\$0
CN TOTAL		\$0	\$108,628	\$119,047	\$112,515	\$105,700
PE AC	Federal – AC	\$0	\$956,801	\$0	\$0	\$0

Ungrouped Funded Transit Projects and Services

Upon agreement by the FTA, DRPT, FHWA, and VDOT, the RVTPO Policy Board tracks and is requested to provide oversight over annual planned federal obligations for all transit projects. The ungrouped transit projects included in the FFY24-27 TIP are displayed in the following project sheets. For more detail on the information provided in the transit project sheets, as well as the most common federal funding programs for transit projects, or to better understand grouped and ungrouped projects, please refer to the [Acronyms/Definitions Attachment](#). Any administrative adjustments or amendments to grouped or ungrouped projects will be noted in Appendix A: Amendments/Adjustments Summary.

Summary of Ungrouped Transit Projects

State ID	Locality/Recipient	Title	Description
GRT0001	Valley Metro (GRTC)	Operating Assistance VM Fixed-Routes, SmartWay: Base, Express and Connector. Starline Trolley.	See the list of all fixed-route buses, SmartWay Base, Express and Connector and Starline Trolley.
GRT0002	Valley Metro (GRTC)	Preventative Maintenance for Valley Metro Vehicles	Maintenance to keep vehicles/equipment running smoothly.
GRT0003	Valley Metro (GRTC)	Replace Valley Metro transit vehicles	Fixed-route buses and paratransit service vehicles utilized by RADAR under contract to Valley Metro.
GRT0004	Valley Metro (GRTC)	Valley Metro Support Vehicles	These are vehicles used by supervisors, dispatch, maintenance, admin, etc. that support the service but don't carry passengers.
GRT0005	Valley Metro (GRTC)	Bus Stop Enhancements	Bus stop amenities may include trashcans, lights, benches, or shelters. The specific stops have not been identified.
GRT0006	Valley Metro (GRTC)	Rehab/Renovation Admin/Maint Building	Renovation of the Valley Metro Administration/Maintenance building.
GRT0007	Valley Metro (GRTC)	Construction Maintenance Service Lot	A construction maintenance service lot designed for vehicles, equipment, and other maintenance related activities at Valley Metro.
GRT0008	Valley Metro (GRTC)	ADP Software	Purchase of Automated Data Processing software of administrative purposes at Valley Metro.
GRT0009	Valley Metro (GRTC)	Shop Equipment	Equipment used to maintain buses and non-bus support vehicles.
GRT0010	Valley Metro (GRTC)	Electric Charging Infrastructure	Electric charging stations and equipment designed to accommodate future electric bus purchases.
GRT0011	Valley Metro (GRTC)	Real-Time Passenger Information System Project	Provides technology that coordinates on-board passenger counters and real-time technology for users to locate the buses.
RAD0001	Roanoke County CORTRAN	Purchase of RADAR paratransit vehicles	Capital assistance to support transportation for people with disabilities in the City of Roanoke, City of Salem, and the Town of Vinton beyond the 3/4-mile area around fixed routes to destinations within those localities.
ROA0001	Roanoke County CORTRAN	CORTRAN turnkey third-party provided operating assistance	Operating assistance for Via Transportation, Inc. under contract with Roanoke County to provide on-demand transit services for Roanoke County residents 70+ or of any age with a disability.

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Summary of Ungrouped Transit Project's Planned Obligations

		FY 2024	FY 2025	FY 2026	FY 2027	Total FY 2024-2027
STIP ID:	GRT0001	Title: Operating Assistance		Recipient: Greater Roanoke Transit Company		
FTA 5307		5,445,488	2,696,481	2,696,481	2,696,481	FTA 5307 13,534,931
FTA 5311		354,000	354,000	354,000	354,000	FTA 5311 1,416,000
State		3,100,000	3,100,000	3,100,000	3,100,000	State 12,400,000
Local		1,700,000	1,700,000	1,700,000	1,700,000	Local 6,800,000
Revenues		2,314,000	2,314,000	2,314,000	2,314,000	Revenues 9,256,000
Year Total:		12,913,488	10,164,481	10,164,481	10,164,481	Total Funds: 43,406,931
Adjustment 7/25/23: Decrease FTA 5307 funds in FY24 by \$296,910.						
STIP ID:	GRT0002	Title: Preventative Maintenance		Recipient: Greater Roanoke Transit Company		
FTA 5307		1,815,163	719,062	719,062	719,062	FTA 5307 3,972,349
State		-	-	-	-	State -
Local		459,032	179,765	179,765	179,765	Local 998,327
Year Total:		2,274,195	898,827	898,827	898,827	Total Funds: 4,970,676
Adjustment 7/25/23: Increase FTA 5307 funds in FY24 by \$1,096,101 and Local by \$279,367 in FY24, for a total of \$1,375,368.						
STIP ID:	GRT0003	Title: Replacement Bus		Recipient: Greater Roanoke Transit Company		
FTA 5339			97,200			FTA 5339 97,200
FTA 5307				1,036,000	1,036,000	FTA 5307 2,072,000
STBG		4,768,121				STBG 4,768,121
State		1,192,031	248,400	2,516,000	2,516,000	State 6,472,431
Local			14,400	148,000	148,000	Local 310,400
Year Total:		5,960,152	360,000	3,700,000	3,700,000	Total Funds: 13,720,152
STIP ID:	GRT0004	Title: Support Vehicles		Recipient: Greater Roanoke Transit Company		
FTA 5339		80,000	48,000	48,000	48,000	FTA 5339 224,000
Flexible STP						Flexible STP -
State		10,000	6,000	6,000	6,000	State 28,000
Local		10,000	6,000	6,000	6,000	Local 28,000
Year Total:		100,000	60,000	60,000	60,000	Total Funds: 280,000
Adjustment 7/25/23: In FY24, increase FTA 5339 funding by \$32,000, State by \$4,000, and Local by \$4,000 for a total of \$40,000.						
STIP ID:	GRT0005	Title: Bus Stop Enhancements		Recipient: Greater Roanoke Transit Company		
FTA 5339		100,417	40,500	40,500	40,500	FTA 5339 221,917
State		-	103,500	103,500	103,500	State 310,500
Local		25,583	6,000	6,000	6,000	Local 43,583
Year Total:		126,000	150,000	150,000	150,000	Total Funds: 576,000
Adjustment 7/25/23: In FY24, increase FTA 5339 funding by \$59,917 and Local by \$4,000 for a total of \$79,500; and decrease State by \$103,500.						
STIP ID:	GRT0006	Title: Rehab/Renovation of Admin/Maint Building		Recipient: Greater Roanoke Transit Company		
FTA 5339		80,000				FTA 5339 80,000
STBG						STBG -
State						State -
Local		20,000				Local 20,000
Year Total:		100,000	-	-	-	Total Funds: 100,000
Adjustment 11/10/23: In FY24, add \$80,000 in FTA 5339 funding and \$20,000 in Local.						
STIP ID:	GRT0007	Title: Construction Maintenance Service Lot		Recipient: Greater Roanoke Transit Company		
FTA 5339			680,000			FTA 5339 680,000
STBG						STBG -
State			280,000			State 280,000
Local			40,000			Local 40,000
Year Total:		-	1,000,000	-	-	Total Funds: 1,000,000
Description:						
STIP ID:	GRT0008	Title: ADP Hardware		Recipient: Greater Roanoke Transit Company		
FTA 5339		4,000	4,000	4,000	4,000	FTA 5339 16,000
State						State -
Local		1,000	1,000	1,000	1,000	Local 4,000
Year Total:		5,000	5,000	5,000	5,000	Total Funds: 20,000

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		FY 2024	FY 2025	FY 2026	FY 2027	Total FY 2024-2027		
STIP ID:	GRT0009	Title: Shop Equipment			Recipient: Greater Roanoke Transit Company			
FTA 5339		56,000	5,400	5,400	5,400	FTA 5339	72,200	
State			13,800	13,800	13,800	State	41,400	
Local		14,000	800	800	800	Local	16,400	
Year Total:	-	70,000	20,000	20,000	20,000	Total Funds:	130,000	
Adjustment 7/25/23: In FY24, increase FTA 5339 funding by \$50,600 and Local by \$13,200 for a total of \$63,800; and decrease State by \$13,800.								
STIP ID:	GRT0010	Title: Electric Charging Infrastructure			Recipient: Greater Roanoke Transit Company			
FTA 5307				140,000		FTA 5307	140,000	
State				340,000		State	340,000	
Local				20,000		Local	20,000	
Year Total:	-	-	-	500,000	-	Total Funds:	500,000	
STIP ID:	GRT0011	Title: Real Time Passenger Information System Project			Recipient: Greater Roanoke Transit Company			
STBG			320,000			STBG	320,000	
State			80,000			State	80,000	
Local						Local	-	
Year Total:	-	-	400,000	-	-	Total Funds:	400,000	
Revision 02/15/24: to reflect proper inclusion in FFY24-27 TIP, revised project title, and STIP ID of GRT0011. Revision 12/16/24: decrease \$400,000 from FY24 and increase \$400,000 to FY25.								

		FY 2024	FY 2025	FY 2026	FY 2027	Total FY 2024-2027		
STIP ID:	ROA0001	Title: Capital Assistance			Recipient: County of Roanoke			
FTA 5310		628,000	240,000	240,000	240,000	FTA 5310	1,348,000	
State		125,000	48,000	48,000	48,000	State	269,000	
Local		31,000	12,000	12,000	12,000	Local	67,000	
Year Total:	-	784,000	300,000	300,000	300,000	Total Funds:	1,684,000	
Adjustment 11/08/23: FY24 add \$251K FTA 5310, add \$50K State, add \$13K Local. Adjustment 7/9/24: FY25 add \$136K FTA 5310, add \$25,200 State, add \$5,800 Local. Adjustment 8/15/24: FY25 subtract \$130K FTA 5310, \$27,200 State, and \$6K Local; FY24 add \$377K FTA 5310, \$75K State, and \$18K Local.								

Funding for the TIP

The TIP financial plan summarizes by year and by funding source the projected and planned obligation authority of VDOT for fiscal years 2024-2027. Funding for transit projects are listed on the transit project sheets. The following tables show that the program is financially constrained by year. These revenue sources are all reasonably expected to be made available and committed to the project phase during the programmed year of the TIP.

RVTPO Federal Funding Categories and Fiscal Constraint by Year: Roadway, Bicycle and Pedestrian Projects, FFY 2024-2027

**TABLE C : Roanoke MPO
 FEDERAL FUNDING CATEGORIES
 FISCAL CONSTRAINT BY YEAR**

Highway Projects
 FFY 2024 - 2027

Fund Source	FFY 2024		FFY 2025		FFY 2026		FFY 2027		TOTAL	
	Projected Obligation Authority	Planned Obligation	Projected Obligation Authority	Planned Obligation	Projected Obligation Authority	Planned Obligation	Projected Obligation Authority	Planned Obligation	Projected Obligation Authority	Planned Obligation
Federal										
BR	\$804,297	\$804,297	\$0	\$0	\$0	\$0	\$0	\$0	\$804,297	\$804,297
DEMO	\$1,644,075	\$1,644,075	\$0	\$0	\$0	\$0	\$0	\$0	\$1,644,075	\$1,644,075
HIP/F	\$67,473	\$67,473	\$580,436	\$580,436	\$0	\$0	\$0	\$0	\$647,909	\$647,909
HSIP	\$1,990,272	\$1,990,272	\$367,182	\$367,182	\$0	\$0	\$0	\$0	\$2,357,454	\$2,357,454
NHS/NHPP	\$8,420,806	\$8,420,806	\$108,249	\$108,249	\$2,687,759	\$2,687,759	\$0	\$0	\$11,216,814	\$11,216,814
RSTP (2)	\$3,863,867	\$3,863,867	\$801,624	\$801,624	\$3,579,985	\$3,579,985	\$405,964	\$405,964	\$8,651,440	\$8,651,440
STP/STBG	\$513,193	\$513,193	\$60,000	\$60,000	\$2,307,749	\$2,307,749	\$387,372	\$387,372	\$3,268,314	\$3,268,314
TAP	\$364,799	\$364,799	\$359,999	\$359,999	\$0	\$0	\$0	\$0	\$724,798	\$724,798
Subtotal -- Federal	\$17,668,782	\$17,668,782	\$2,277,490	\$2,277,490	\$8,575,493	\$8,575,493	\$793,336	\$793,336	\$29,315,101	\$29,315,101
Other										
Non-Federal	\$450,619	\$450,619	\$0	\$0	\$0	\$0	\$0	\$0	\$450,619	\$450,619
State Match	\$3,515,856	\$3,515,856	\$518,375	\$518,375	\$2,143,873	\$2,143,873	\$198,334	\$198,334	\$6,376,438	\$6,376,438
Subtotal -- Other	\$3,966,475	\$3,966,475	\$518,375	\$518,375	\$2,143,873	\$2,143,873	\$198,334	\$198,334	\$6,827,057	\$6,827,057
Total	\$21,635,257	\$21,635,257	\$2,795,865	\$2,795,865	\$10,719,366	\$10,719,366	\$991,670	\$991,670	\$36,142,158	\$36,142,158
Federal - ACC (1)										
HSIP	\$1,416,420	\$1,416,420	\$253,382	\$253,382	\$0	\$0	\$0	\$0	\$1,669,802	\$1,669,802
NHS/NHPP	\$1,600,000	\$1,600,000	\$4,470,737	\$4,470,737	\$5,482,336	\$5,482,336	\$4,263,193	\$4,263,193	\$15,816,266	\$15,816,266
RSTP (2)	\$0	\$0	\$782,862	\$782,862	\$979,944	\$979,944	\$1,675,941	\$1,675,941	\$3,438,747	\$3,438,747
STP/STBG	\$1,067,339	\$1,067,339	\$0	\$0	\$0	\$0	\$2,012,628	\$2,012,628	\$3,079,967	\$3,079,967
Subtotal -- Federal - ACC (1)	\$4,083,759	\$4,083,759	\$5,506,981	\$5,506,981	\$6,462,280	\$6,462,280	\$7,951,762	\$7,951,762	\$24,004,782	\$24,004,782
Statewide and/or Multiple MPO - Federal (3)										
NHS/NHPP	\$1,031,697	\$1,031,697	\$0	\$0	\$0	\$0	\$0	\$0	\$1,031,697	\$1,031,697
Subtotal -- Statewide and/or Multiple MPO - Federal (3)	\$1,031,697	\$1,031,697	\$0	\$0	\$0	\$0	\$0	\$0	\$1,031,697	\$1,031,697
Maintenance - Federal (4)										
BR	\$850,620	\$850,620	\$6,450,972	\$6,450,972	\$19,947,300	\$19,947,300	\$11,502,750	\$11,502,750	\$38,751,642	\$38,751,642
NHFP	\$4,147,232	\$4,147,232	\$4,147,232	\$4,147,232	\$4,147,232	\$4,147,232	\$4,147,232	\$4,147,232	\$16,588,928	\$16,588,928
NHS/NHPP	\$4,678,788	\$4,678,788	\$10,709,744	\$10,709,744	\$4,678,788	\$4,678,788	\$4,678,788	\$4,678,788	\$24,746,108	\$24,746,108
Subtotal -- Maintenance - Federal (4)	\$35,803,230	\$35,803,230	\$51,668,358	\$51,668,358	\$55,109,118	\$55,109,118	\$46,771,846	\$46,771,846	\$189,352,552	\$189,352,552

(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

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RVTPO Federal Funding Categories and Fiscal Constraint Summary by Transit Agency

Greater Roanoke Transit Company	FY 2024	FY 2025	FY 2026	FY 2027	TOTAL FY 2024-2027		
FTA 5307	7,260,651	3,415,543	4,591,543	4,451,543	FTA 5307	19,719,280	
FTA 5309	-	-	-	-	FTA 5309	-	
FTA 5310	-	-	-	-	FTA 5310	-	
FTA 5311	354,000	354,000	354,000	354,000	FTA 5311	1,416,000	
FTA 5314	-	-	-	-	FTA 5314	-	
FTA 5337	-	-	-	-	FTA 5337	-	
FTA 5339	320,417	875,100	94,252	97,900	FTA 5339	1,387,669	
FTA ADTAP	-	-	-	-	FTA ADTAP	-	
FTA DPF	-	-	-	-	FTA DPF	-	
FTA TIGER	-	-	-	-	FTA TIGER	-	
FBD	-	-	-	-	FBD	-	
Flexible STP	-	-	-	-	Flexible STP	-	
STBG	4,768,121	320,000	-	-	STBG	5,088,121	
FHWA TAP	-	-	-	-	FHWA TAP	-	
Other Federal	-	-	-	-	Other Federal	-	
State	4,302,031	3,831,700	6,079,300	5,739,300	State	19,952,331	
Local	2,208,615	1,947,965	2,061,565	2,041,565	Local	8,259,710	
Revenues	2,314,000	2,314,000	2,314,000	2,314,000	Revenues	9,256,000	
Totals	-	21,527,835	13,058,308	15,494,660		65,079,111	

County of Roanoke	FY 2024	FY 2025	FY 2026	FY 2027	TOTAL FY 2024-2027		
FTA 5307	-	-	-	-	FTA 5307	-	
FTA 5309	-	-	-	-	FTA 5309	-	
FTA 5310	628,000	240,000	240,000	240,000	FTA 5310	1,348,000	
FTA 5311	-	-	-	-	FTA 5311	-	
FTA 5314	-	-	-	-	FTA 5314	-	
FTA 5337	-	-	-	-	FTA 5337	-	
FTA 5339	-	-	-	-	FTA 5339	-	
FTA ADTAP	-	-	-	-	FTA ADTAP	-	
FTA DPF	-	-	-	-	FTA DPF	-	
FTA TIGER	-	-	-	-	FTA TIGER	-	
FBD	-	-	-	-	FBD	-	
Flexible STP	-	-	-	-	Flexible STP	-	
STBG	-	-	-	-	STBG	-	
FHWA TAP	-	-	-	-	FHWA TAP	-	
Other Federal	-	-	-	-	Other Federal	-	
State	125,000	48,000	48,000	48,000	State	269,000	
Local	31,000	12,000	12,000	12,000	Local	67,000	
Revenues	-	-	-	-	Revenues	-	
Totals	-	784,000	300,000	300,000		1,684,000	

Roanoke Valley TPO		FY 2024	FY 2025	FY 2026	FY 2027	TOTAL FY 2024-2027	
FTA 5307		7,260,651	3,415,543	4,591,543	4,451,543	FTA 5307	19,719,280
FTA 5309		-	-	-	-	FTA 5309	-
FTA 5310		628,000	240,000	240,000	240,000	FTA 5310	1,348,000
FTA 5311		354,000	354,000	354,000	354,000	FTA 5311	1,416,000
FTA 5314		-	-	-	-	FTA 5314	-
FTA 5337		-	-	-	-	FTA 5337	-
FTA 5339		320,417	875,100	94,252	97,900	FTA 5339	1,387,669
FTA ADTAP		-	-	-	-	FTA ADTAP	-
FTA DPF		-	-	-	-	FTA DPF	-
FTA TIGER		-	-	-	-	FTA TIGER	-
FBD		-	-	-	-	FBD	-
Flexible STP		-	-	-	-	Flexible STP	-
STBG		4,768,121	320,000	-	-	STBG	5,088,121
FHWA TAP		-	-	-	-	FHWA TAP	-
Other Federal		-	-	-	-	Other Federal	-
State		4,427,031	3,879,700	6,127,300	5,787,300	State	20,221,331
Local		2,239,615	1,959,965	2,073,565	2,053,565	Local	8,326,710
Revenues		2,314,000	2,314,000	2,314,000	2,314,000	Revenues	9,256,000
<i>Totals</i>	-	22,311,835	13,358,308	15,794,660	15,298,308		66,763,111

As illustrated in the previous tables, there are a number of federal funding sources with which projects/services/studies could be and are funded. Please refer to [Acronyms/Definitions Attachment](#) for more information on the most common federal funding programs. Funded projects make up the first part of the region’s transportation financial plan followed by the second part of unfunded projects to be pursued. Project details are included in the Roanoke Valley Transportation Plan for each RVTPO approved project eligible for funding through the TIP.

Performance Measures Targets

Beginning in 2018, and pursuant to 23 CFR §450.306(d)(2), each MPO shall establish performance targets that address the performance measures or standards established under 23 CFR part 490 to use in tracking progress toward attainment of critical outcomes for the MPO region.

Beginning in the fall of 2017, the RVTPO has coordinated with VDOT, DRPT, Valley Metro, RADAR, the Federal Highway Administration, and the Federal Transit Administration to set and adopt performance measure targets. The target establishment dates vary based on the effective date of the federal Final Rule, the establishment of state targets by VDOT (no later than one year following effective date of Final Rule), and the development or acceptance of VDOT targets by the MPO (no later than 180 days after VDOT target is set). Regarding the performance measures targets and their relationship to the TIP, and pursuant to 23 CFR §450.326(c) and (d):

(c) *The TIP shall be designed such that once implemented, it makes progress toward achieving the [performance targets](#) established under [§450.306\(d\)](#).*

(d) *The TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the [performance targets](#) identified in the [metropolitan transportation plan](#), linking investment priorities to those performance targets.*

Metropolitan Planning Organizations have the option to create their own Performance Targets or adopt those developed by VDOT. The RVTPO has historically adopted the VDOT and VDRPT targets for the required performance measures applicable to the RVTPO study area. The 2045 Roanoke Valley Transportation Plan includes a discussion of the performance measures and targets. Additionally, refer to the [System Performance Report Attachment](#) for a system performance report current to the time of most recent RVTTP adoption.

Appendix A: TIP Amendments and Adjustments Summary Document

Roanoke Valley Transportation Planning Organization



This spreadsheet lists all amendments and adjustments to the FFY2024-2027 Transportation Improvement Program.

Action	Date Approved	Universal Project Code	Nature of Revision	Revision Document
Amendment	4/27/2023	GRT0006	Title and Scope Change: the project's name, Rehab/Renovation of Admin/Maint Building, was changed to Construction Maintenance Lot due to the purchase and development of a construction maintenance service lot adjacent to the current Valley Metro administration building.	Approval Package
Amendment	4/27/2023	GRT0009	New Project: the addition of a new project, Electric Charging Infrastructure, which includes electric charging stations and equipment designed accommodate future electric bus purchases.	Approval Package
Amendment	4/27/2023	T14720	New Project: addition of a bucketed variety of highway projects throughout the VDOT Salem District (to include the Roanoke Urbanized Area) which can include signs, traffic signals, pavement markings and markers, guardrail replacement/preventive maintenance of roadway lighting, maintenance/replacement/upgrade of traffic calming devices, etc.	Approval Package
Amendment	4/27/2023	T14721	New Project: addition of a bucketed variety of highway projects throughout the VDOT Salem District (to include the Roanoke Urbanized Area) which can include: sealing, replacement, and reconstruction of joints, deck overlays, painting, corrosion protection, retrofit of fracture critical members and fatigue prone details, and some concrete repairs). Also included are bridge safety inspections.	Approval Package

Action	Date Approved	Universal Project Code	Nature of Revision	Revision Document
Amendment	4/27/2023	T14722	New Project: addition of a bucketed variety of highway projects throughout the VDOT Salem District (to include the Roanoke Urbanized Area) to include area wide programs for cleaning drainage facilities, corrosion protection activities, and highway sign face cleaning. Pavement preservation projects that extend pavement life between two and 10 years. This also includes pavement resurfacing, restoration, and rehabilitation activities.	Approval Package
Amendment	4/27/2023	GRT0007	New Project: addition of ADP Hardware, which is the purchase of Automated Data Processing hardware for administrative purposes at Valley Metro.	Approval Package
Adjustment	7/25/2023	GRT0001	Adjustment to Ungrouped Project: the total cost estimate of this TIP project changed since TIP adoption on 4/27/23.	Approval Package
Adjustment	7/25/2023	GRT0002	Adjustment to Ungrouped Project: the total cost estimate of this TIP project changed since TIP adoption on 4/27/23.	Approval Package
Adjustment	7/25/2023	GRT0004	Adjustment to Ungrouped Project: the total cost estimate of this TIP project changed since TIP adoption on 4/27/23.	Approval Package
Adjustment	7/25/2023	GRT0005	Adjustment to Ungrouped Project: the total cost estimate of this TIP project changed since TIP adoption on 4/27/23.	Approval Package
Adjustment	7/25/2023	GRT0008	Adjustment to Ungrouped Project: the total cost estimate of this TIP project changed since TIP adoption on 4/27/23.	Approval Package
Adjustment	11/13/2023	GRT0006	Adjustment to Ungrouped Project: the total cost estimate of this TIP project changed since TIP adoption on 4/27/23.	Approval Package
Amendment	12/14/2023	20299/120532	New Rail Project: Virginia State Supported Amtrak Operations	Approval Package
Amendment	12/14/2023	RAD0001	Remove Project from TIP: RADAR Paratransit Vehicles	Approval Package
Amendment	6/27/2024	124308	New Project: addition of Virginia Passenger Rail Authority for capital construction costs.	Approval Package
Adjustment	7/9/2024	ROA0001	Adjustment to Ungrouped Project: the total cost estimate of this TIP project changed since last adjustment on 11/8/23.	Approval Package
Adjustment	8/15/2024	ROA0001	Adjustment to Ungrouped Project: the total cost estimate of this TIP project changed since last adjustment on 7/9/24.	Approval Package

Adjustment	12/16/2024	GRT0011	Adjustment to Ungrouped Projects: the total cost estimate of this TIP project changed since last approval or adjustment.	Approval Package

APPENDIX B: Highway Performance Based Planning

Beginning in 2018, and pursuant to 23 CFR §450.306(d)(2), each MPO shall establish performance targets that address the performance measures or standards established under 23 CFR part 490 to use in tracking progress toward attainment of critical outcomes for the MPO region.

Beginning in the fall of 2017, the RVTPO has coordinated with VDOT, DRPT, Valley Metro, RADAR, the Federal Highway Administration, and the Federal Transit Administration to set and adopt performance measure targets. The target establishment dates vary based on the effective date of the federal Final Rule, the establishment of state targets by VDOT (no later than one year following effective date of Final Rule), and the development or acceptance of VDOT targets by the MPO (no later than 180 days after VDOT target is set).

The table below shows the timeline of target rollout.

Performance Measures and Target Deadlines

Rule and Effective Date(s)	Performance Measures
Safety Final Rule published 1/15/16. Effective date 1/14/16. RVTPO adopted PM targets 1/25/18.	1. Number of fatalities 2. Fatality rate (per 100 million VMT) 3. Number of serious injuries 4. Serious injury rate (per 100 million VMT) 5. Number of non-motorized fatalities and serious injuries.
Pavement and Bridge Final Rule published 1/18/17. Effective date 5/20/17. RVTPO adopted PM targets 10/25/18.	1. % of pavements on the Interstate system in good condition 2. % of pavements on the Interstate system in poor condition 3. % of pavements on the non-Interstate NHS in good condition 4. % of pavements on the non-Interstate NHS in poor condition 5. % of NHS bridges classified as in good condition 6. % of NHS bridges classified as in poor condition
Highway System Performance Final Rule published 1/18/17. Effective date 5/20/17. RVTPO adopted PM targets 10/25/18.	1. % of person miles traveled on the Interstate system that are reliable 2. % of person miles traveled on the non-Interstate NHS that are reliable 3. % of Interstate system mileage providing for reliable truck travel times (Truck Travel Time Reliability)
Transit Asset Management Final Rule published 7/26/16. Effective date 10/1/16. RVTPO adopted PM targets 10/25/18.	1. % of revenue vehicles that have met or exceeded their useful life benchmark 2. % of non-revenue vehicles that have met or exceeded their useful life benchmark 3. Percentage of facilities rated in poor condition
Public Transit Agency Safety Plan Final Rule published 7/19/18. Effective date 7/19/19. RVTPO adopted PM targets 1/28/21.	1. Fatalities (total number of reportable fatalities per year) 2. Fatalities (rate per total vehicle revenue miles by mode) 3. Injuries (total number of reportable injuries per year) 4. Injuries (rate per total vehicle revenue miles by mode) 5. Safety events (total number of safety events per year) 6. Safety events (rate per total vehicle revenue miles by mode) 7. System Reliability: Distance between Major Failures 8. System Reliability: Distance between Minor Failures

Regarding the performance measures targets and their relationship to the TIP, and pursuant to 23 CFR §450.326(c) and (d):

(c) The TIP shall be designed such that once implemented, it makes progress toward achieving the performance targets established under §450.306(d).

(d) The TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan transportation plan, linking investment priorities to those performance targets.

Correlation to the 2045 Roanoke Valley Transportation Plan

The RVTPO, Virginia Department of Transportation (VDOT), and providers of public transportation in the RVTPO planning area are required to monitor and report on recent and current performance and must apply a transportation performance management (TPM) approach when conducting their transportation planning and programming activities. TPM requires agencies to use a coordinated, performance-based approach to make transportation decisions that support national goals established in Moving Ahead for Progress in the 21st Century (MAP-21) for the federal-aid highway and public transportation programs. These national goals are:

MAP-21 National Goals for Transportation Performance Management

National Goal Area	Goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads and public transportation systems
Infrastructure Condition	To maintain the highway infrastructure and transit capital asset systems in a state of good repair
Congestion Reduction	To achieve a significant reduction in congestion on the National Highway System (NHS)
System Reliability	To improve the efficiency of the surface transportation system
Freight Movement and Economic Vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental Sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced Project Delivery Delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practice

The US Department of Transportation (USDOT), in consultation with states, MPOs, and other stakeholders, established performance measures relevant to the national goals through a series of federal rulemakings. States, MPOs, and providers of public transportation must set performance targets for each measure, and then monitor performance and periodically report to USDOT on progress achieved toward meeting the targets.

The federal performance measure rules fall into five broad categories – highway safety, highway asset management, highway system performance, transit asset management, and public transportation safety.

Definitions Used in the TPM Framework

Performance measure: an expression based on a quantifiable indicator of performance that is used to establish targets and to assess progress toward meeting established targets.

Target: a quantifiable level of performance, expressed as a value for a measure, to be achieved within a time period.

Federal Performance Measures Rules Categories

Performance Area	What is Measured	Where it is Measured
Highway Safety	Vehicle, bicycle, and pedestrian fatalities and serious injuries	All public roads
Highway Asset Management	Physical condition of pavement and bridges	All National Highway System (NHS) roads
Highway System Performance	Reliability of highway passenger travel	All Interstate and non-Interstate NHS roads
	Reliability of highway truck freight travel	Interstate System only
	Highway congestion and emissions	NHS roads in some air quality nonattainment and maintenance areas (not applicable to RVTPO)
Transit Asset Management	Physical condition of transit vehicles, equipment, and facilities	Assets maintained by transit providers in RVTPO planning area
Transit Safety	Transit related fatalities, serious injuries, and incidents	Transit providers in RVTPO planning area

Establishing Performance Targets

RVTPO collaborates with the Virginia Office of Intermodal Planning and Investment (OIPI), VDOT, Department of Rail and Public Transportation (DRPT), and local public transportation providers to incorporate the new TPM requirements into planning and programming activities. The Commonwealth Transportation Board (CTB) has provided direction to OIPI, VDOT, and DRPT and has adopted statewide performance targets, starting in 2017, for several performance measures, consistent with Federal requirements. The CTB also adopts statewide performance targets for unique VDOT defined measures. More information on recent Federal and state measure performance trends and targets is available through [OIPI's performance management program](#), including the Virginia-required [Biennial Performance Report](#). This RVTPO System Performance Report focuses exclusively on the Federal-required measures, consistent with the requirements in [23 CFR 450.321](#).

Virginia, RVTPO, and regional transit providers regularly establish performance targets, as follows:

- For the highway safety performance measures, VDOT establishes statewide safety targets annually and reports them to FHWA each year by August 31 within the Highway Safety Improvement Program (HSIP) Annual Report.
- For the highway asset management and highway system performance measures, VDOT and OIPI establish statewide targets every two years. VDOT and OIPI subsequently review progress towards those targets in the time between
- For the transit asset measures, Valley Metro and RADAR establish targets in coordination with DRPT and other transit providers in development of the statewide Group Transit Asset Management (TAM) Plan. DRPT's TAM Plan includes performance analysis and targets for more than 30 eligible transit providers in Virginia (including Valley Metro and RADAR).
- For the transit safety targets, the eligible transit providers in the RVTPO region established initial targets in 2021 that are required to be reviewed and updated annually.

The RVTPO has flexibility to establish targets by either:

- Agreeing to plan and approve projects in the RVTP that contribute toward the accomplishment of the VDOT or DRPT (and transit provider) targets by adopting the same target.
- Or committing to a different quantifiable target for a performance measure for the RVTPO planning area than the target adopted by VDOT, DRPT, or transit provider. RVTPO will plan and approve projects that contribute to the RVTPO's unique numeric target.
- Regardless of the target setting decision, RVTPO is required to share its decision through documentation provided to the Commonwealth within 180 days of the establishment of the target by VDOT, OIPI, DRPT, or a transit provider.

These requirement details and responsibilities are also specified in RVTPOs "3C" Planning Agreement between RVTPO, the Commonwealth of Virginia, and Valley Metro and RADAR.

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), 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.

The LRSTP, VTrans 2045, guides the state's investment decisions for transportation improvements. Safety and performance management is included in the VTrans 2040 Vision, Goals & Objectives, and Guiding Principles:

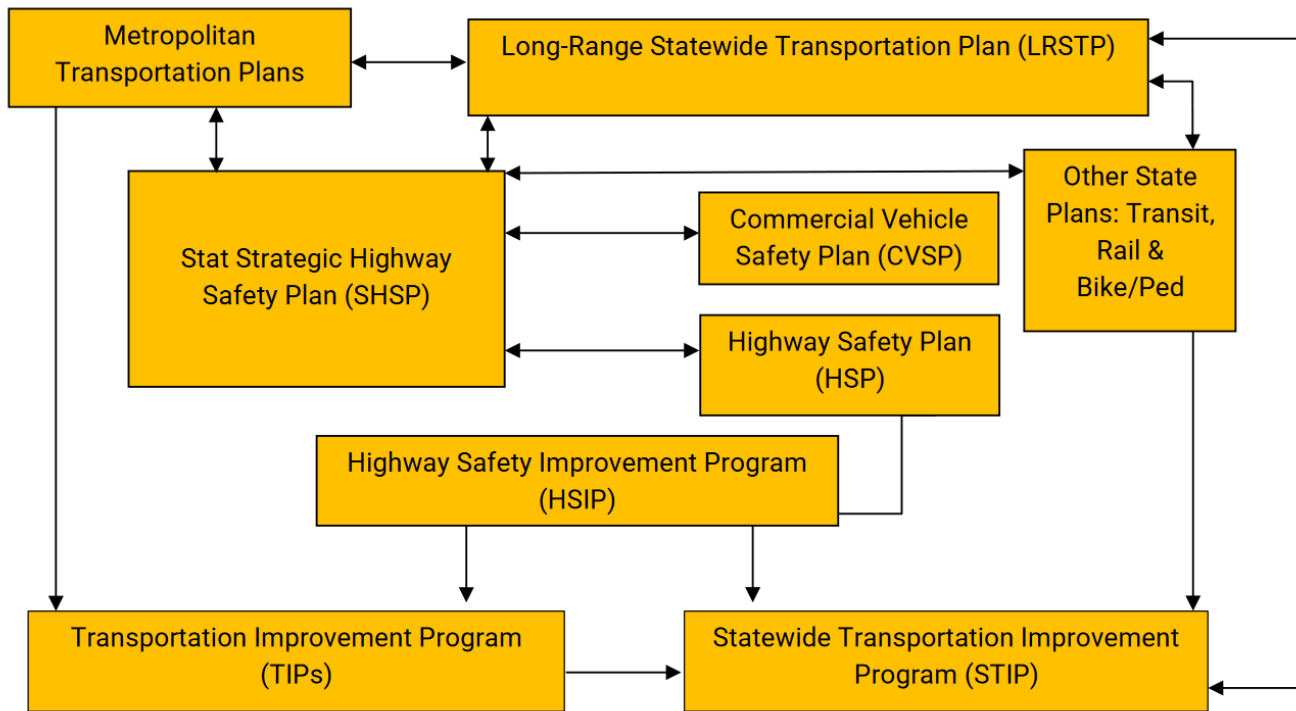
- **Guiding Principle 2:** Ensure Safety, Security, and Resiliency – Provide a transportation system that is safe for all users, responds immediately to short-term shocks such as weather events or security emergencies, and adapts effectively to long-term stressors such as sea level rise.
- **Guiding 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 of All Users** – Provide a safe transportation system for passengers and goods on all travel mode.
 - 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 an 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 HSIP is an annual plan to address highway user behaviors that will improve safety through education and enforcement campaigns. The HSP and associated NHTSA grant are administered through the DMV’s HSO.

Furthermore, each year the Virginia State Police (VSP) submits a Commercial Vehicles Safety Plan (CVSP) to the Federal Motor Carrier Safety Administration as a requirement of obtaining related enforcement grants. The relationship between the various plans and programs is shown below:



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.

APPENDIX C: Safety Performance Measures

The Virginia 2017-2021 Strategic Highway Safety Plan (SHSP) provides a comprehensive framework for Virginia stakeholders to address transportation-related crashes. The vision for the plan is for every road user, whether driving, walking, bicycling, or taking transit, to “Arrive Alive” at their destination. The Virginia Department of Transportation and other state safety stakeholders will accomplish this by addressing the most pressing safety issues, through a combination of safety programs and projects. Within the CLRMT and other short- and long-range transportation planning and programming activities, the RVTPO can apply information from the SHSP and the results of regional crash analysis to support investments that render regional and local travel safer and ultimately contribute to the “Arrive Alive” vision.

The Virginia SHSP is a data-driven plan which establishes a framework of emphasis areas, strategies, and actions to guide stakeholders toward the implementation of effective programs and projects. Key factors contributing to crashes are impaired driving, speed, occupant protection, roadway departures, intersections, young drivers, bicycles, and pedestrians. Each of these emphasis areas is supported by a range of multi-disciplinary (engineering, enforcement, education, and emergency response) strategies and actions to characterize effective solutions.

To follow-up on the Virginia SHSP, in August 2019, the RVTPO conducted a Roanoke Valley Regional Safety Study with crash locations and potential countermeasures. The Study identifies regional safety needs to guide improvements.

Federal legislation in 23 CFR §450.306(d)(2) requires the RVTPO to adopt or define five evidence-based safety performance measures and accompanying targets. The purpose of the targets is to help VDOT, and regional planning agencies, including the RVTPO, prioritize programs and projects that will reduce transportation-related fatalities and serious injuries. On January 25, 2018, the RVTPO adopted VDOT’s five-year performance targets for the following five performance measures:

RVTPO-Adopted Safety Performance Measures

Safety Performance Measures
Number of Fatalities
Rate of Fatalities per 100-Million Vehicle Miles Traveled
Number of Serious Injuries
Rate Serious Injury Million Vehicle Miles Traveled
Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries

Strategies to meet safety performance measure targets are built into funding programs that utilize federal funds. Such programs include the Highway Safety Improvement Program (HSIP), System Management and Allocation of Resources for Transportation Safety Congestion Accessibility Land Use Economic Development Environment (SMART SCALE), and the Regional Surface Transportation Program (RSTP). The RVTPO and its member localities coordinate with the VDOT Salem District to identify improvements eligible for funding through HSIP. This includes corridor-specific and district-wide investments to deploy roadway departure countermeasures (signs, flashers, lighting, rumble strips) and traffic signal upgrades.

Virginia’s SMART SCALE prioritization program awards points to projects for estimated reductions in fatality and serious injury crashes. When allocating STBG funds, the projects that are perceived to increase safety and security of the transportation system are ranked higher than others for that scoring criteria. In addition, the VDOT Construction Districts also have the flexibility to address safety considerations, such as rumble strips or striping in coordination with resurfacing projects.

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 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 VTrans 2040. 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 target and is consistent with Virginia's SHSP and the HSIP.

APPENDIX D: Highway System Performance Performance Measures

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. In September 2022, the Commonwealth Transportation Board (CTB) approved the State’s second set of statewide targets for January 1, 2022 through December 31, 2025 (see Tables 1 and 2), along with two-year targets to assess progress.

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 the below table.

National Highway System Travel Time Reliability Performance Measures and Targets

NHS Travel Time Reliability Performance	2023 Two Year Target	2025 Four Year Target
Percent of Person Miles Traveled on the Interstate That Are Reliable	85.0%	85.0%
Percent of Person Miles Traveled on the Non-Interstate NHS That Are Reliable	88.0%	88.0%

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 the below table.

Freight Reliability Performance Measures and Targets

Truck Travel Time Reliability Performance	2023 Two Year Target	2025 Four Year Target
Truck Travel Time Reliability Index	1.64	1.64

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 VTrans 2045.

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-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 VTrans 2045 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 metropolitan areas.
 - Reduce average daily trip lengths in metropolitan areas.
 - Increase the accessibility to jobs via transit, walking and driving in metropolitan areas.

Additionally, the Virginia Freight Element (VFE), a component of VTrans 2045, 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 VTrans2045 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 VTrans 2045, 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 is 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 VTrans 2045 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.

Pavement and Bridge Performance Measures: Performance Targets

In accordance with the requirements of MAP-21 and the FAST Act, Virginia established pavement and bridge condition performance targets as reported in Virginia’s Baseline Performance Period Report for 2018-2021. In September 2022, the Commonwealth Transportation Board (CTB) approved the State’s second set of statewide targets for January 1, 2022 through December 31, 2025, along with two-year targets to assess progress.

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 2022-2025 performance period are indicated in the table below.

Pavement Condition Measures and Performance Targets

Interstate Pavement Condition Measures ¹	2023	2025
	Two-Year Target	Four-Year Target
Percentage of Pavements in Good Condition	45.0%	45.0%
Percentage of Pavements in Poor Condition	3.0%	3.0%
Non-Interstate NHS Pavement Condition Measures ²	2023	2025
	Two-Year Target	Four-Year Target
Percentage of Non-Interstate Pavements in Good Condition	25.0%	25.0%
Percentage of Non-Interstate Pavements in Poor Condition	5.0%	5.0%

Bridge condition measures and established performance targets for the 2018-2021 performance period are indicated in the following table.

NHS Bridge Condition Measures and Performance Targets

NHS Bridge Condition Measures	2023 Two-Year Target	2025 Four-Year Target
Percentage of Deck Area of NBI Bridges on the NHS in Good Condition	27.2%	25.1%
Percentage of Deck Area of NBI Bridges on the NHS in Poor Condition	3.3%	3.6%

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

¹ Interstate condition measures are based on four distresses: International Roughness Index (IRI), cracking, rutting, and faulting.

² 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.

maximize asset life given available funding. Condition information is also important for communicating with external stakeholders, including the general public.

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 VTrans 2045.

Performance management, specifically as it relates to pavements and bridges, is included in the VTrans 2045 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 VTrans 2045 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 to 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 VTrans 2045. 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.

APPENDIX E: Transit Asset Management Performance Measures

The National Transit Asset Management System Final Rule (49 U.S.C 625) specifies four performance measures, which apply to four TAM asset categories: equipment, rolling stock, infrastructure, and facilities. The table that follows describes each of these measures.

Transit Asset Management Performance Measures by Asset Category

Asset Category	Relevant Assets	Measure	Measure Type	Desired Direction
Equipment	Service support, maintenance, and other non-revenue vehicles	Percentage of vehicles that have met or exceeded their ULB	Age-based	Minimize percentage
Rolling Stock	Buses, vans, and sedans; light and heavy rail cars; commuter rail cars and locomotives; ferry boats	Percentage of revenue vehicles that have met or exceeded their ULB	Age-based	Minimize percentage
Infrastructure	Fixed guideway track	Percentage of track segments with performance (speed) restrictions, by mode	Performance-based	Minimize percentage
Facilities	Passenger stations, parking facilities, administration and maintenance facilities	Percentage of assets with condition rating lower than 3.0 on FTA TERM Scale	Condition-based	Minimize percentage

FTA = Federal Transit Administration. TAM = Transit Asset Management. TERM = Transit Economic Requirements Model. ULB = Useful Life Benchmark.

Two definitions apply to these performance measures:

- **Useful Life Benchmark (ULB)**—“The expected lifecycle of a capital asset for a particular transit provider’s operating environment, or the acceptable period of use in service for a particular transit provider’s operating environment.” For example, FTA’s default ULB of a bus is 14 years.
- **FTA Transit Economic Requirements Model (TERM) Scale**—A rating system used in FTA’s TERM to describe asset conditions. The scale values are 1 (poor), 2 (marginal), 3 (adequate), 4 (good), and 5 (excellent).

The National Transit Asset Management System Final Rule (49 U.S.C. 625) requires that all transit agencies that receive federal financial assistance under 49 U.S.C. Chapter 53 and own, operate, or manage capital assets used in the provision of public transportation create a TAM plan. Agencies are required to fulfill this requirement through an individual or group plan. The TAM rule provides two tiers of requirements for transit agencies based on size and operating characteristics:

- 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) is the sponsor for the Statewide Tier II Group Plan. The Roanoke Valley Transportation Planning Organization programs federal transportation funds for the Greater Roanoke Transit Company (Valley Metro), Unified Human Services Transportation Systems, Inc. (RADAR), and Lutheran Family Services of Virginia. Greater Roanoke Transit Company/Valley Metro is a Tier II agency participating in the DRPT sponsored group TAM Plan. The MPO has integrated the goals, measures, and targets described in the [Federal Fiscal Year 2022-2025 Virginia Group Tier II Transit Asset Management Plan](#) into the MPO’s planning and programming process. Performance targets for the Tier II Group TAM Plan are included in the table below.

Roanoke Valley Transportation Plan
 Transportation Improvement Program FFY 2024-2027



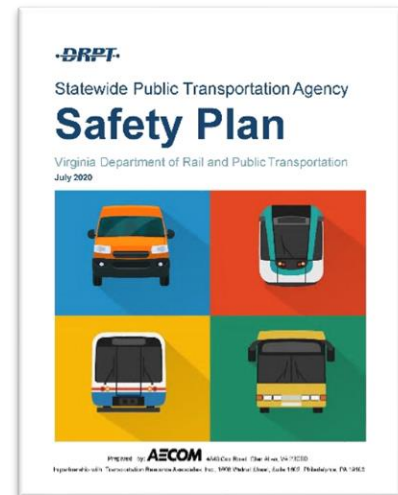
TAM Targets for rolling stock and facilities: Percentage of Revenue Vehicles that have met or exceeded their ULB by Asset

Type Asset Category - Performance Measure		
Revenue Vehicles	Asset Class	FFY2022
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	AB - Articulated Bus	5%
	BU - Bus	15%
	CU - Cutaway	10%
	MV - Minivan	20%
	BR - Over-the-Road Bus	15%
	VN - Van	20%
Equipment		
Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Non-Revenue/Service Automobile	30%
	Trucks and other Rubber Tire Vehicles	30%
Facilities		
Condition - % of facilities with a condition rating below 3.0 on the FTA TERM Scale	Administrative and Maintenance Facility	10%
	Maintenance Facility	10%
	Passenger Facilities	15%
	Parking Facilities	10%

APPENDIX F: Public Transit Agency Safety Plan

The Public Transportation Agency Safety Plan (PTASP) final rule (49 C.F.R. Part 673) intends to improve public transportation safety by guiding transit agencies to more effectively and proactively manage safety risks in their systems. It requires certain recipients and sub-recipients of Federal Transit Administration (FTA) grants that operate public transportation to develop and implement safety plans that, establish processes and procedures to support the implementation of Safety Management Systems (SMS).

The rule applies to all operators of public transportation systems that are recipients and sub-recipients of FTA grant funds. Specifically, recipients or sub-recipients who operate public transportation and are a recipient or sub-recipient of Urbanized Area Formula Grant Program funds under the Section 5307 Grant Program.



The Virginia Department of Rail and Public Transportation (DRPT) adopted a PTASP on behalf of small Tier II transportation providers, of which Valley Metro belongs, on August 11, 2020. Tier II transit agencies must set their safety targets in the safety plan for each fixed-route and paratransit mode for the following performance measures:

1. Fatalities (total number of reportable fatalities per year)
2. Fatalities (rate per total vehicle revenue miles by mode)
3. Injuries (total number of reportable injuries per year)
4. Injuries (rate per total vehicle revenue miles by mode)
5. Safety events (total number of safety events per year)
6. Safety events (rate per total vehicle revenue miles by mode)
7. System Reliability: Distance between Major Failures
8. System Reliability: Distance between Minor Failures

All MPOs with transit agencies participating in the Tier II PTASP must reference performance targets and plans within their Transportation Improvement Program (TIP) and Long-Range Plan. The Safety performance targets and performance-based plans should inform a transit agency's investment priorities, and those investment priorities should be carried forward within the MPO's and State DOT's planning processes.

The performance measures and their targets, by mode, were transmitted to staff by DRPT and are in the following table:

Tier II Transit Agency PTASP Performance Targets by Mode

Performance Measures	Targets by Mode	
	Fixed Route	Paratransit/ Demand Response
Fatalities (total number of reportable fatalities per year)	0	0
Fatalities (rate per total vehicle revenue miles by mode)	0	0
Injuries (total number of reportable injuries per year)	9	3
Injuries (rate per total vehicle revenue miles by mode)	Less than .5 injuries per 100,000 vehicle revenue miles	Less than .5 injuries per 100,000 vehicle revenue miles
Safety events (total number of safety events per year)	17	8
Safety events (rate per total vehicle revenue miles by mode)	Less than 1 reportable event per 100,000 vehicle revenue miles	Less than 1 reportable event per 100,000 vehicle revenue miles
System Reliability: Distance between Major Failures	10,000 miles	3,200 miles
System Reliability: Distance between Minor Failures	10 000 miles	3,200 miles