

**RICHMOND AREA  
METROPOLITAN PLANNING ORGANIZATION  
2031 LONG-RANGE TRANSPORTATION PLAN**

**PART 4**

**2031 FINANCIALLY CONSTRAINED PLAN PROJECTS**



# Chapter 12 - Financial Resources

## Overview

According to metropolitan planning requirements, the LRTP must include a financial plan that estimates how much funding will be needed to implement recommended improvements, as well as operate and maintain the system as a whole, over the life of the plan. This includes information on how the MPO reasonably expects to fund the projects included in the plan, including anticipated revenues from FHWA and FTA, state government, regional or local sources, the private sector, and user charges. The LRTP must demonstrate that there is a balance between the expected revenue sources for transportation investments and the estimated costs of the projects and programs described in the plan. In other words, the LRTP must be fiscally (or financially) constrained.

Federal metropolitan planning rules require that the RAMPO, VDOT, and the GRTC transit agency cooperatively develop revenue forecasts. These forecasts help agencies determine how much funding is likely to be available for transportation projects in their respective areas. Forecasts are based on trends from existing and potential funding sources such as the gas tax or bond measures. Regardless of how financial assumptions and forecasts are developed, all forecasts in the financial plan must be shown in "year of expenditure" dollars based on reasonable inflation factors.

It is important to remember that the federal and state funds shown in the LRTP may not be available in exactly the same amounts or within the same funding sources indicated in the Plan. The actual funding amounts depend on the federal and state budget process for any given fiscal year. Given the long-term nature of the LRTP, and the degree of uncertainty in the estimation of both costs and revenues, a precise accounting is not required. Near term documents, such as the Transportation Improvement Program (TIP), which covers four years, must demonstrate stricter fiscal constraint, ensuring that as costs and revenues forecasts become more precise, and projects move towards implementation, fiscal accountability is maintained.

## Background

VDOT has the responsibility for maintaining and constructing the state's interstate, primary and secondary systems. VDOT has jurisdiction over these systems in the Richmond region except for Henrico County, the City of Richmond, and the Town of Ashland. Henrico County has jurisdiction over the maintenance and construction of its secondary roadway system. Except for interstates, the City of Richmond and the Town of Ashland are responsible for roads within the city/town limits and receive maintenance funding from VDOT for streets that meet state standards.

## Funding Sources

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) is the current federal legislation authorizing funding for state transportation

programs. SAFETEA-LU continues the concept of a minimum guaranteed funding for each state, keyed to Highway Trust Fund (Highway Account) receipts.

SAFETEA-LU has a range of distinct funding categories, however, only a few provide the vast majority of federal funds for transportation projects in the Richmond area. These are the National Highway System (NHS) funds, Surface Transportation Program (STP) funds, Congestion Mitigation Air Quality funds, and Transit Capital funds. SAFETEA-LU for the first time also establishes the Highway Safety Improvement Program (HSIP) as a separately funded core program. With regard to transit capital, the Federal Transit Administration (FTA) oversees the allocation of federal transit funds, which generally fall into two major categories: capital grants for transit operators that are apportioned to areas by national formula, and transit capital investment grants that are awarded on a "discretionary" basis, as determined by FTA on the basis of a series of evaluation criteria.

Most SAFETEA-LU funding programs require that selected transportation projects have a 20 percent match to the federal dollars provided for the project. This 80-20 split provides a strong incentive to states and MPOs to use federal dollars for highway construction. It also requires compliance with many federal requirements including planning for a balanced multi-modal transportation system that provides for the safe and efficient movement of people and goods. The various sources of funding are discussed in more detail below:

#### The National Highway System

The National Highway System (NHS) funds are intended for an interconnected system of routes which will serve major population centers, border crossings, ports, airports, public transportation facilities, other intermodal transportation facilities, meet defense requirements, and serve interstate and interregional travel. Federal participation is 80 percent. When NHS funds are used for interstate projects, including high occupancy vehicle (HOV) and auxiliary lane projects, but not any other lanes, the federal share may be 90 percent.

Eligible projects include:

- Construction, reconstruction, resurfacing, restoration and rehabilitation of segments identified as part of the NHS
- Operational improvements for segments of the NHS
- Construction and operational improvements for roads and transit projects not on the NHS provided that the project is in the same corridor and in close proximity to the NHS route, improves the level of service on the NHS route, and is more cost-effective than work on the NHS route to provide the same benefits
- Safety improvements for the NHS
- Transportation planning
- Highway research and planning
- Highway related technology transfer activities
- Capital and operating costs for traffic monitoring, management, and control facilities and programs
- Fringe and corridor parking facilities

- Carpool and vanpool projects
- Bicycle transportation and pedestrian walkways
- Development and maintenance of management systems
- Natural habitat and wetlands mitigation efforts
- Publicly-owned bus terminals
- Infrastructure-based intelligent transportation system capital improvements

### Surface Transportation Program

Surface Transportation Program funds (STP) is the largest and most flexible funding program under SAFETEA-LU and provides broad discretion for states and MPOs to fund a variety of activities. These include:

- Construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements for roads and bridges, including any such construction or reconstruction necessary to accommodate other transportation modes
- Capital costs for transit projects including vehicles and facilities used to provide intercity passenger service by bus
- Carpool projects, fringe and corridor parking facilities and programs, bicycle and pedestrian facilities on any public road and the modification of sidewalks to comply with the Americans With Disabilities Act
- Highway and transit safety infrastructure improvements and programs, hazard eliminations, projects to mitigate hazards caused by wildlife, and railway-highway grade crossings
- Highway and transit research and development and technology transfer programs
- Capital and operating costs for traffic monitoring, management, and control facilities and programs
- Surface transportation planning programs
- Transportation enhancement activities (see enhancement section)
- Transportation control measures (see Clean Air Act section)
- Development and establishment of management systems
- Infrastructure-based intelligent transportation system capital improvements
- Habitat and wetland mitigation efforts
- Environmental restoration and pollution abatement
- Control of terrestrial and aquatic noxious weeds and establishment of native species

Each state must set aside a portion of their STP funds (10 percent or the amount set aside in 2005, whichever is greater) for transportation enhancement activities. The set-aside of 10 percent previously required for safety construction activities has been eliminated as these activities are funded separately under the new Highway Safety Improvement Program. The Regional Surface Transportation Program (RSTP) fund is a percentage of the STP fund distributed by Census defined urbanized area population, which is targeted for areas with population of 200,000 or more, also called Transportation Management Areas (TMAs). This fund is flexible and can be used for roadway or transit projects (eligible activities same as STP noted above).

## Congestion Mitigation Air Quality Improvement Program (CMAQ)

As the name implies, Congestion Mitigation and Air Quality (CMAQ) funds are targeted for projects designed to reduce congestion and improve air quality in areas designated as non-attainment and maintenance under the Clean Air Act. Most of the Richmond area is currently classified as a maintenance area for ozone air quality standards and therefore, eligible for CMAQ funding. Federal participation is 80 percent (80%) unless used on interstate facilities in which case the federal share is 90 percent (90%). Some projects and programs (e.g., rideshare match programs) require no state or local match funds. Transportation control measures programmed in the SIP receive priority for CMAQ funds. Projects are selected by the MPO to receive CMAQ funds. Eligible projects are:

- Transportation activities in an approved State Implementation Plan (SIP)
- Transportation control measures as defined in the Clean Air Act (see Clean Air Act section)
- Pedestrian and bicycle facilities
- Management and monitoring systems
- Traffic management/monitoring/congestion relief strategies
- Transit expansion
- Alternative fuel projects
- Public/private partnerships
- Inspection and maintenance programs
- Intermodal freight
- Telecommunications travel demand management strategies
- Project development activities for new services or programs that have air quality benefits
- Public education and outreach activities
- Rideshare programs
- Establishing/contracting with transportation management associations and organizations
- Fare/fee subsidy programs
- Experimental pilot projects with air quality benefits

Note that construction of projects which add new capacity for single-occupant vehicles are not eligible. All projects proposed for CMAQ funding must include an analysis of the air quality benefits (i.e., the amount of reduction in emissions).

## Enhancement Funds

Enhancements funds are intended to integrate the transportation network with the community or to mitigate visual or environmental impacts of the transportation facilities. Considered a special set-aside from STP funds, the federal share is 80 percent (80%). Eligible projects include:

- Provision of facilities for pedestrians and bicycles
- Provision of safety and educational activities for pedestrians and bicyclists
- Acquisition of scenic easements and scenic or historic sites

- Scenic or historic highway programs including tourist and welcome center facilities
- Landscaping and other scenic beautification
- Historic preservation
- Rehabilitation of historic transportation buildings, structures, or facilities
- Preservation of abandoned rail corridors (including conversion for bicycle and pedestrian facilities)
- Control and removal of outdoor advertising
- Archaeological planning and research
- Environmental mitigation to address water pollution due to highway run-off or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity
- Establishment of transportation museums

### Highway Safety Improvement Program (HSIP)

SAFETEA-LU establishes a new core Highway Safety Improvement Program (HSIP) that is structured and funded to make significant progress in reducing highway fatalities and injuries. A considerable increase in funding is provided that is almost double the amount under TEA-21. States are required to develop and implement an effective, integrated and coordinated Strategic Highway Safety Plan (SHSP) that involves a comprehensive, data driven approach to highway safety. The Highway-Rail Grade Crossing Safety Program is continued, with dedicated set-aside funding, as part of the HSIP.

The Virginia Department of Transportation (VDOT) has developed a HSIP that involves the identification of problem safety areas, an analysis of problems and countermeasures, and the prioritization and scheduling of improvement projects. VDOT's HSIP program consists of the following programs: Highway Safety Program (HSP), Highway-Rail Grade Crossing Safety Program (H-RGCP), and Bicycle and Pedestrian Safety Program (BPSP).

The VDOT Traffic Engineering Division (TED) serves as the focal point for administration of the Federal and State categorical safety programs (HSIP) within the Commonwealth of Virginia. VDOT continues to implement a competitive application process for prioritizing and funding safety projects within the Commonwealth. Local governments, railroad companies, and VDOT Districts and Residencies submit applications for locations they recommend for improvement. The applications are evaluated on a statewide basis rather than on a local or district basis, to ensure that locations in need of improvement have a better opportunity to be selected and funded. The candidate projects compete against their respective counterparts for funding, based on a benefit/cost analysis for motorized highway improvements and on risk assessments for non-motorized and highway-rail grade crossing improvements.

### Other SAFETEA-LU Funding Programs

The following funding programs also play a vital role in the development and provision of a safe and efficient multi-modal transportation system:

- Interstate Maintenance Program
- Transit Capital Funding

- Transit Capital and Operating Assistance
- Bridge Repair and Replacement

When reviewing the 2031 LRTP project list, the public, non-local funding categories are: Interstate, Bridge, Primary, Secondary, and Urban Systems, CMAQ, Regional STP (RSTP), Enhancements, Safety, and Transit Capital. Toll revenues also were estimated.

## Funding Projections & Cost Estimates

The amounts of the various public, non-local funding sources available to the Richmond area on an annual basis were estimated by VDOT, based on the most recent federal and state legislation in regard to transportation allocations. The transit capital funding source was estimated by MPO staff in conjunction with GRTC based on trends in federal funds designated for transit capital. Using these two procedures, projected revenues from these funding categories totaled \$9,162,635,000. The totals for all public non-local funding sources are provided in Figure 12-1.

**Figure 12-1: Estimated Available Funds for Richmond Area Transportation Projects (\$000)**

<i>Funding Source</i>	<i>Estimated Funds</i>
Maintenance	\$6,519,674
Interstate	\$973,125
Bridge	\$75,181
Primary System	\$190,388
Secondary System	\$163,902
Urban System	\$97,286
CMAQ	\$154,336
RSTP (Regional STP)	\$242,368
Tolls	\$74,193
Enhancements	\$38,745
Safety	\$77,644
Transit Capital	\$555,793
<b>TOTAL</b>	<b>\$9,162,635</b>

The cost estimates for the constrained 2031 LRTP projects are summarized in Figure 12-2. The initial cost estimates for the projects were provided by VDOT in conjunction with the local jurisdictions. Individual project details are provided in the following chapter of the LRTP, Chapter 13, which also describes how projects were selected for inclusion in the constrained list and how year-of-expenditure factors were applied to determine final project cost estimates.

**Figure 12-2: Estimated Available Funds Versus Estimated Project Costs (\$000)**

<i>Funding Source</i>	<i>Estimated Funds</i>	<i>Estimated Project Costs</i>	<i>Balance</i>
Maintenance	\$6,519,674	\$6,519,674	\$0
Interstate	\$973,125	\$971,843	\$1,282
Bridge	\$75,181	\$47,111	\$28,070
Primary System	\$190,388	\$190,388	\$0
Secondary System	\$163,902	\$163,902	\$0
Urban System	\$97,286	\$97,286	\$0
CMAQ	\$154,336	\$154,313	\$23
RSTP (Regional STP)	\$242,368	\$241,256	\$1,112
Tolls	\$74,193	\$0	\$74,193
Enhancements	\$38,745	\$38,098	\$647
Safety	\$77,644	\$50,008	\$27,636
Transit Capital	\$555,793	\$555,793	\$0
<b>TOTAL</b>	<b>\$9,162,635</b>	<b>\$9,029,672</b>	<b>\$132,963</b>

Figure 12-2 shows the estimated expenditures and ending balances for public, non-local funding sources. As shown, maintenance, primary, secondary, urban, and transit capital funding sources have zero balances. Primary, secondary and urban projects benefited from the flexibility of RSTP funds; otherwise far fewer of these projects could be accomplished within the initial forecast for funds in those specific categories.

Figure 12-2 shows that seven of the funding categories have a surplus. The total of approximately \$133 million in estimated surplus funds can provide for future amendments to the LRTP. It should be noted that the largest of these – toll revenues – can only be used for improvements to toll facilities that are the source of these revenues, and at this time, there were no specific projects identified for improvements on the area’s toll facilities.

Balances remaining for interstate and bridge projects occurred because these projects normally are quite substantial and require tremendous funding amounts; there simply was not enough funds to accomplish any of the remaining candidate projects in these two categories.

CMAQ, enhancements, and safety funded projects generally are of relatively lesser cost, cannot all be foreseen in the 20-year horizon, and except for CMAQ funded projects, generally do not have an impact on air quality conformity. Federal regulations do not require minor projects to be individually listed in the LRTP. Federal regulations do require, however, that the LRTP specifically list all projects that are “regionally significant” (i.e., projects on a facility that serves regional needs and would normally be included in the modeling of the area’s transportation network, such as new roads, additional lanes, and interchanges. At a minimum, all roads functionally classified as principal arterial or higher, and all fixed guideway transit facilities that offer a significant alternative to regional highway travel are considered regionally significant). Therefore, the surpluses shown were not used in constraining the LRTP and are assumed to be available for these types of minor, non-regional improvement projects.