



COMMONWEALTH of VIRGINIA

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

Gregory A. Whirley
Commissioner

December 11, 2012

The Honorable Robert F. McDonnell
Members of the General Assembly

Dear Ladies and Gentlemen:

Chapters 36 and 152 of the 2011 Acts of Assembly request the Commissioner of Highways to submit an annual report to the Governor and General Assembly by November 30th. The legislation specifically asks for information to be provided on the following:

- The condition and performance of the existing transportation infrastructure, using an asset management methodology and generally accepted engineering principles and business practices to identify performance standards to be used to determine those needs, and funding required to meet those needs;
- The Department's strategies for improving safety and security, increasing efficiency in agency programs and projects, and collaborating with the private sector and local government in the delivery of services;
- The operating and financial activities of the Department; and
- Other such matters of importance to transportation in the Commonwealth.

To meet the requirements of the legislation, the attached report provides separate chapters on each of the topics mentioned above. If you have any questions or need additional information, please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregory A. Whirley, Sr.", written in a cursive style.

Gregory A. Whirley, Sr.

Attachment



ANNUAL REPORT

Pursuant to:

**Chapters 36 and 152 of the
2011 Acts of Assembly of the Virginia General Assembly**

Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219
November 30, 2012

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Executive Summary

Chapters 36 and 152 of the 2011 Acts of Assembly amended the *Code of Virginia* by adding § 33.1-13.03, which directs that by November 30 of each year the Commissioner of Highways is to deliver a report summarizing the condition and needs of the Commonwealth's highway system and the Virginia Department of Transportation's (VDOT's) strategies to improve safety and security, and increase efficiency in delivery of its programs. The statute also instructs VDOT to report on efforts to work with the private sector and local government in the delivery of services, and to report on the operating and financial activities of the Department. Finally, Virginia Code section 33.1-13.03 instructs that VDOT report on "other such matters of importance to transportation in the Commonwealth."

The 2012 VDOT Annual Report is published pursuant to section 33.1-13.03. The body of the Annual report is comprised of four chapters. Chapter I highlights the current condition and the FY 2014 - 2015 biennial needs of Virginia's highway system.

Chapter II summarizes VDOT's efforts to improve the safety of the motoring and non-motoring public. Chapter II also presents an overview of VDOT's security programs and protocols. This section is followed by an overview of VDOT's strategies to increase efficiency in delivery of its programs. VDOT's efforts in working with the private sector and local governments are presented in the two final sections of Chapter II.

Chapter III summarizes budget performance data on the operating and financial activities of VDOT for the reporting period FY 2012 (July 1, 2011 – June 30, 2012).

Chapter IV presents "Other Matters of Importance to Transportation in the Commonwealth." VDOT believes that agency activities, as they relate or contribute to multimodal systems warrant mention in this report, and Chapter IV summarizes VDOT's role in support of the development of effective multimodal systems. In the effort to take advantage of all available financial resources to aid in pursuit of the Commonwealth's transportation program, VDOT actively pursued and assisted other non-VDOT entities in pursuing several federal competitive grant opportunities in FY 2012. A summary of those efforts and the results are also presented in Chapter IV.

A new federal transportation program was enacted in July 2012, becoming effective on October 1, 2012. The new federal program, "Moving Ahead for Progress in the 21st Century Act" or "MAP-21" is a two year reauthorization. As the 2012 VDOT Annual Report is being written, the Federal Highway Administration has begun to release guidance to the states based on MAP-21 changes, and VDOT is reviewing and revising several of its programs and policies accordingly. It is too early to provide a comprehensive discussion of MAP-21's impact on VDOT programs and procedures; however, MAP-21 impacts are highlighted throughout the report while the final section of Chapter IV presents a summary comparison of the major elements of MAP-21 and the former federal program, the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

I.

Condition and Performance of the Existing Transportation Infrastructure

Chapter I provides an update on the condition and performance of the Virginia Department of Transportation (VDOT) maintained portion of the Commonwealth's transportation infrastructure. This 2012 report marks the second year that VDOT has submitted an annual report and the first time VDOT has reported on the condition and performance of the existing transportation infrastructure in two consecutive years. Prior to 2011, VDOT submitted a biennial report each odd numbered year. However, *Code of Virginia* § 33.1-13.03, now instructs VDOT to report annually on the condition, performance, and the maintenance and operational needs of the existing transportation infrastructure. In accordance with the legislative requirement, and to be consistent with the two year perspective used in previous reports, this report presents needs for FY 2014-2015, which includes an update of the FY 2014 needs reported last year.¹

The network of highways and roads maintained by VDOT is the third largest state maintained system in the United States. There are 126,715 lane miles of roadway, and 19,390 bridges and large culverts. Section I.1 summarizes pavement condition, performance and targets. Section I.2 presents a summary of bridge condition, performance and targets.

Section I.3 summarizes the funding needed to reach pavement and bridge performance targets and the funding gap based on the sum of the preliminary estimates of the FY 2014 - 2015 maintenance and operations allocation and the estimated contribution to funding needs provided by projects in the Six-Year Improvement Program.

There are a wide range of essential transportation assets and services that must be maintained and improved for which performance targets are not established in the manner targets are set for pavements and bridges. Section I.3 also presents funding needs and the funding gap for those assets and services. These include but are not limited to 7 tunnels, 43 safety rest areas, 11 welcome centers, and 7 ferries, in addition to assets such as sign assemblies, signalized intersections and thousands of other highway assets in the VDOT maintained network.

I.1 Pavement Condition and Performance Targets Summary

Pavement Condition and Performance

Each year, 100 percent of the interstate and primary system mileage and approximately 20 percent of the secondary system mileage is inspected and rated using digital data collection equipment. This annual pavement inspection generally takes place in the late winter or early spring. The data collected are interpreted according to the methods detailed in the VDOT

¹ The last biennial report was prepared in November, 2011.

Distress Identification Manual and are aggregated and summarized to produce the Critical Condition Index (CCI).

As shown below in Figure I.1, CCI values are grouped into five ranges corresponding to pavement condition categories: excellent, good, fair, poor and very poor. In general, pavement sections with a CCI value below 60 (poor and very poor) are considered ‘deficient’ and should be further evaluated for maintenance and rehabilitation actions. Pavement sections with a CCI value of at least 60 (fair or better) are considered ‘sufficient’.

Figure I.1 Pavement Condition Category Based on CCI

Pavement Condition	Index Scale (CCI)
Excellent	90 and above
Good	70-89
Fair	60-69
Poor	50-59
Very Poor	49 and below

Pavement roughness is generally defined as the aggregation of irregularities in the pavement surface, per linear mile, that adversely affect the ride quality of a vehicle (and thus the user). Roughness is an important pavement characteristic because it affects not only ride quality but also vehicle delay costs, fuel consumption and maintenance costs. Figure I.2 below shows the qualitative categories for pavement ride quality corresponding to quantitative International Roughness Index (IRI) values. VDOT uses these categories for its Interstate, Primary, and Secondary systems.

Figure I.2 Pavement Ride Quality Based on IRI

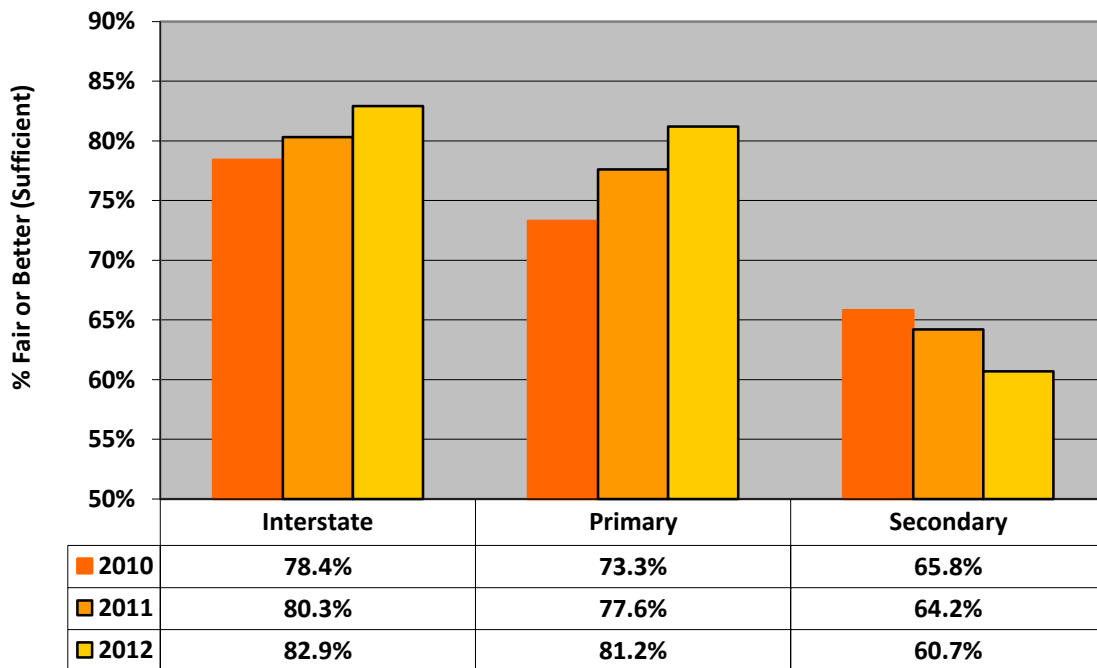
Ride Quality	IRI Rating (inch/mile)	
	Interstate & Primary	Secondary Roads
Excellent	< 60	< 95
Good	60 to 99	95 to 169
Fair	100 to 139	170 to 219
Poor	140 to 199	220 to 279
Very Poor	≥ 200	≥ 280

Ranges of IRI that correspond to qualitative descriptors of ride quality were built upon similar categories promulgated by FHWA and incorporated opinions from VDOT pavement experts regarding what thresholds represent acceptable roughness levels on Virginia highways. Interstate and Primary pavement sections with an average IRI of 140 or more or a Secondary pavement section with an average IRI of 220 or more are considered ‘deficient’ in terms of ride quality.

Figure I.3 displays the statewide percent of lane miles with sufficient (fair or better CCI) pavement condition for the interstate, primary and secondary systems. Pavement conditions have improved slightly from 80.3 percent of interstate and 77.6 percent of primary system

pavements in fair or better condition in 2011, to 82.9 percent of interstate and 81.2 percent of primary system pavements in fair or better condition in 2012. Secondary system pavement conditions deteriorated from 64.2 percent in fair or better condition in 2011 to 60.7 percent in 2012. The deterioration in secondary pavement conditions was due primarily to an agency focus on interstate and primary system paving over the last three years. As conditions on the interstate and primary systems worsened, allocations were increased to those systems, while allocations and spending on secondary pavements in FY 2011 and 2012 were one third to one quarter of what was needed to reach the target (when current conditions were at 64.2 percent deficient).

Figure I.3 Statewide Percent Sufficient Pavements by System



While Figure I.3 summarizes pavement condition statewide, Figures I.4 - I.6 show the FY 2012 percent of lane miles with sufficient pavement condition for the interstate, primary and secondary systems by district. Figures I.4 - I.6 also show the percent of lane miles with sufficient ride quality. As an example, reading Figure I.4 from left to right, the first blue bar displays district 1, Bristol District's, percent of Interstate roadway with sufficient pavement condition, 79.9 percent. The first red bar displays district 1, Bristol District's, percent of interstate roadway with sufficient ride quality, 98.4 percent. The second pair of bars displays percent sufficient pavement condition and percent sufficient ride quality for district 2, Salem District, and, so on. (Note: there is no Interstate roadway in district 3, Lynchburg District.)

The horizontal blue line in Figures I.4 – I.6 represent the sufficient pavement condition target. The red line represents the sufficient ride quality target.

Figure I.4 Percent Sufficient by District – Interstate System

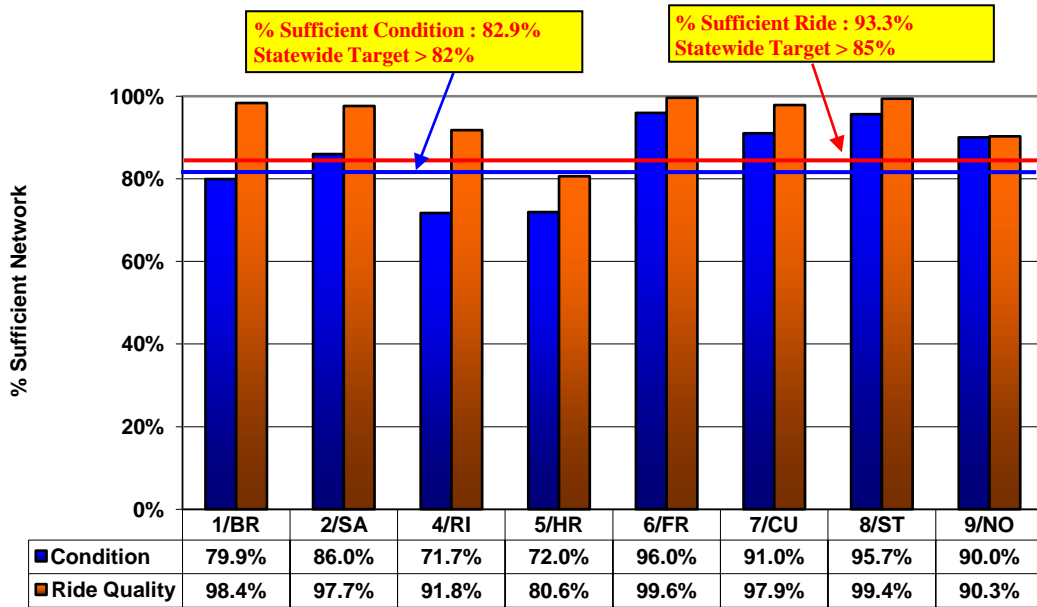


Figure I.5 Percent Sufficient by District - Primary System

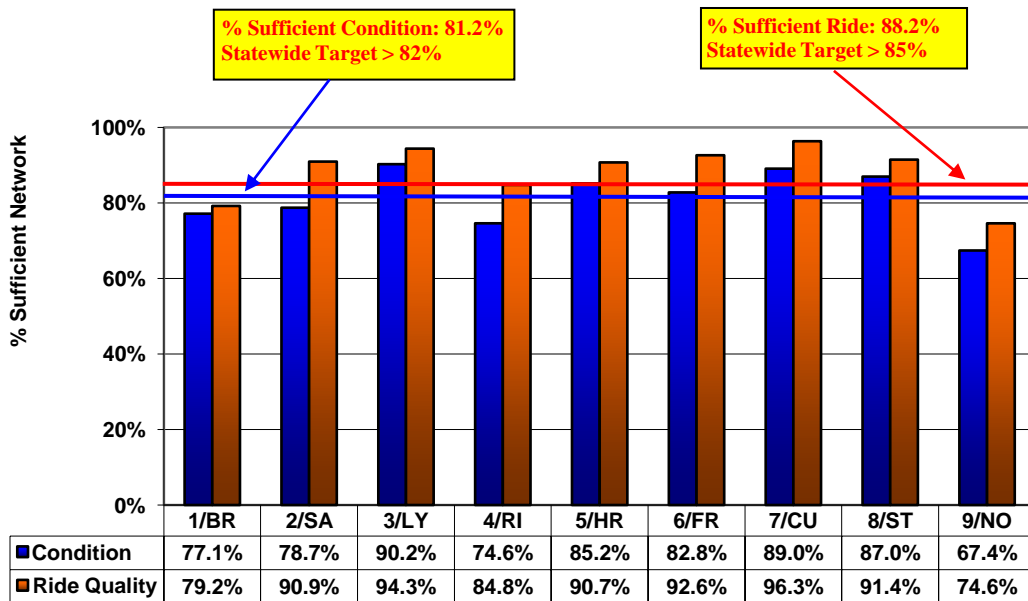
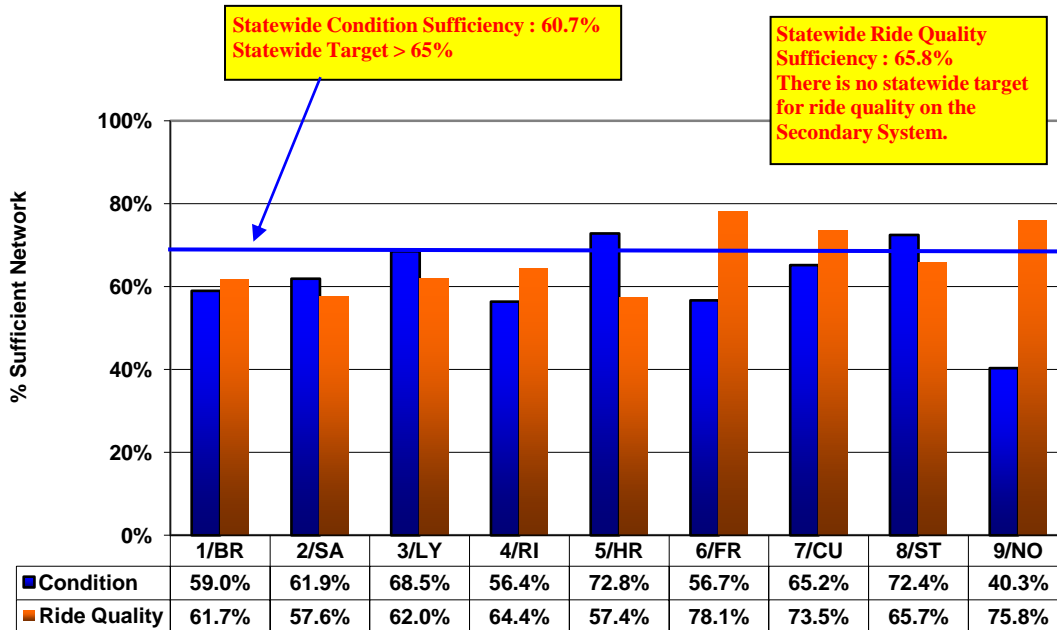


Figure I.6 Percent Sufficient by District - Secondary System



Pavement Performance Targets

VDOT uses a number of performance measures and targets to assess maintenance needs for pavements. The overarching performance goals are:

- 82 percent of interstate and primary system pavements in sufficient (fair or better) condition,
- 85 percent of interstate and primary system pavements with sufficient (fair or better) ride quality, and
- 65 percent of secondary system pavements in sufficient condition. (There is no statewide target for ride quality on the Secondary System.)

In addition to the target of having 82 percent of lane miles in sufficient condition, interstate and primary system pavement needs are based on the following additional measures and constraints:

- Hold any district with more than 82 percent of interstate and primary system lane miles in sufficient condition fixed at their current level.
- Allow no more than 10 percent of interstate and primary system lane miles to be in a state requiring reconstruction.
- Hold the average CCI for all interstate and primary system lane miles at the current level in each district.

The information summarized in Figures 1.3 - I.6 show that while statewide pavement performance targets have been met on the interstate, are very close on the primary system, and are well below the target on the secondary system, pavement conditions vary considerably from district to district.

The next pavement condition assessment (scheduled for early 2013) is expected to show that interstate pavement conditions will remain at or above 82 percent in fair or better condition. With ongoing and future paving work scheduled to be completed by the end of 2012, the 2013 condition assessment is expected to show that 82 percent of primary system pavements are in fair or better condition. It is expected that the secondary system target of 65% will not be achieved in the 2013 rating.

1.2 Bridge Condition and Performance Targets Summary

Bridge Condition and Performance

VDOT is responsible for the inventory and inspection of 20,988 structures (bridges and culverts) across all of the Commonwealth's roadway systems. Of these structures, 13,383 are part of the National Bridge Inventory (NBI). VDOT maintains 19,390 of these structures. Localities and private owners maintain 1,598 additional structures. At the end of FY 2012, an additional 80 structures (net) were added to the inventory. VDOT inspects over 10,000 structures annually at a cost of approximately \$18 million. Figure I.7 shows the number and distribution of bridges and culverts in Virginia.

VDOT inspects bridges and large culverts according to the requirements of the Federal Highway Administration using the National Bridge Inspection Program (NBI). The NBI rating system uses a scale from 0 to 9 to characterize the condition of the major structural components of bridges and culverts, which include the deck,² superstructure,³ and substructure.⁴ If any of these components receives a rating of four or less, the structure is said to be in poor condition, or structurally deficient. A structure with minimum rating of five or higher is said to be in fair or better condition.

Figure I.7 Statewide Distribution of Bridges and Large Culverts

DISTRICT	Number of Structures (Bridges and Culverts)				
	Interstate	Primary	Secondary	Urban	Total
Bristol	216	956	2,188	83	3,443
Salem	217	807	1,943	103	3,070
Lynchburg	0	665	1,394	59	2,118
Richmond	511	801	1,146	161	2,619
Hampton Roads	458	458	515	257	1,688
Fredericksburg	79	249	474	8	810
Culpeper	122	495	1,053	23	1,693
Staunton	429	827	2,140	100	3,496
NOVA	345	446	1,181	79	2,051
Grand Total	2,377	5,704	12,034	873	20,988

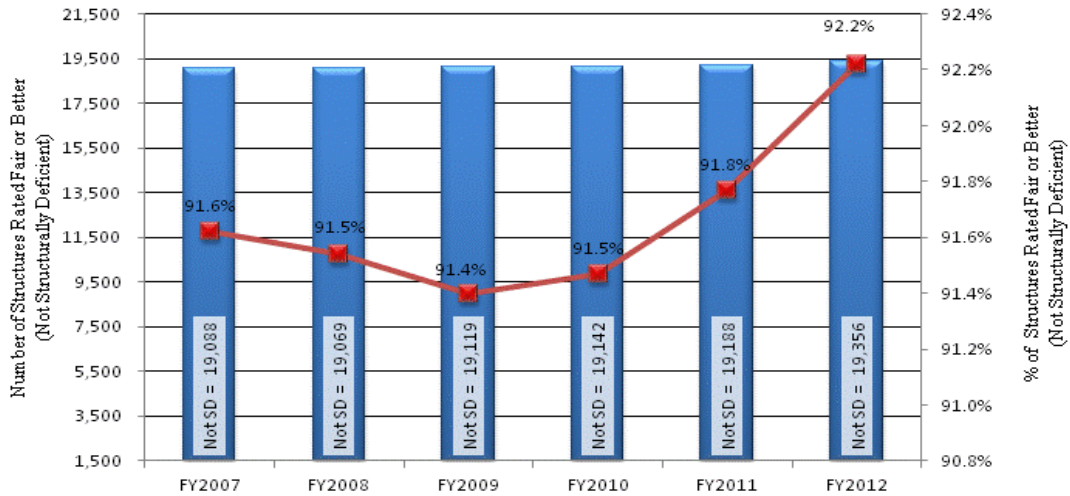
² A bridge deck is the riding surface.

³ A bridge superstructure encompasses the supports immediately beneath the driving surface.

⁴ A bridge substructure includes the foundation and supporting posts and piers.

Figure I.8 presents the recent trend in the percent of structures (bridges and culverts) in the Virginia inventory that are rated in fair or better condition. At the end of FY 2012 there were 19,356 (92.2%) rated in fair or better condition, which is a 0.5 percent improvement from the beginning of the fiscal year. The national average of structures in fair or better condition in the NBI is 88.8 percent. The NBI inventory only includes bridges and culverts with a length of 20 feet or greater.

Figure I.8 Statewide Percent of Structures Rated Fair or Better
(Not Structurally Deficient)



A further breakdown of the condition of bridges and culverts at the end of FY 2012 is as follows:

- Interstate - 96.9 percent in fair or better condition (not-structurally deficient)
- Primary - 94.6 percent in fair or better condition (not-structurally deficient)
- Secondary - 90.3 percent in fair or better condition (not-structurally deficient)

Figure I.9 shows the change in number of structurally deficient structures from FY 2011 to FY 2012 by district.

Figure I.9 Change in number of Structurally Deficient Structures from FY 2011 to FY 2012

DISTRICT	Structurally Deficient		
	End of FY2011	End of FY2012	Change
Bristol	341	363	6.5%
Salem	362	332	-8.3%
Lynchburg	156	122	-21.8%
Richmond	253	239	-5.5%
Hampton Roads	92	89	-3.3%
Fredericksburg	73	71	-2.7%
Culpeper	118	119	0.8%
Staunton	256	240	-6.3%
NOVA	69	57	-17.4%
Statewide	1,720	1,632	-5.1%

Bridge Performance Targets

The agency's performance measure and target for bridges and large culverts is for 92 percent of these structures to be in fair or better condition – (not structurally deficient). The term “structurally deficient” has been widely adopted in the bridge community and has a very specific, technical definition. A bridge can also be classified as structurally deficient if its load carrying capacity is significantly below current design standards or if a waterway below frequently overtops the bridge during floods.

The statewide performance target of 92 percent of bridges and large culverts in fair or better condition is based on sub-targets of 97 percent of the interstate structures, 94 percent of the primary structures and 89 percent of the secondary structures.

An assessment of ongoing work scheduled to be completed by the end of FY 2013 indicates bridges should maintain the performance target of 92 percent in fair or better condition through the end of FY 2013. The extent to which bridge replacement projects are identified and funded in the SYIP will determine whether VDOT is able to maintain this target.

For the first time the bridge assessment incorporates secondary performance measures designed to address the “wave” of structures in fair condition that will deteriorate and become structurally deficient. This two-tiered approach to performance measures avoids “worst first” and instead emphasizes a balanced maintenance approach focused on maintaining the quality of the bridge and culvert inventory over time. This is a more cost effective method because spending funds to perform preventative maintenance extends the asset's life at a much lower cost than allowing the asset to fall into disrepair. The secondary performance measures are as follows:

- Improve six percent of “Fair” structures annually. Fair structures have a General Condition Rating equal to 5.
- Improve two percent of “Good” structures with a minimum General Condition Rating equal to 6.
- Perform preventative maintenance on structures with a General Condition Rating equal to 7 or greater.

1.3 Summary of Funding Needs and Projected Funding Gap

Overview of Methods Used in Estimating Needs

Needs for assets and services have been updated where additional or updated data were available. Where no new information was available, or where it was estimated that needs would not change significantly from the level reported in 2011, needs were inflated based on the most recent inflation rates provided by the Virginia Department of Taxation. This needs assessment covers all maintenance and operations activities on existing assets.

Ninety-two percent of needs reported here are based on analytical models or analysis incorporating expert solicitation, known contracts, risk analysis, and/or investment planning. For example, the Pavement Management System and Bridge Management System utilize mathematical optimization algorithms to generate work recommendations and associated costs based on existing inventory, current and targeted future conditions, deterioration rates, repair decision trees, and unit costs.

Other models are simpler, using inventory, work activities, frequency of work, and unit costs to determine needed funding. Calculating funds needed for vegetation management, for example, is determined using this method.

Eight percent of the estimated needs are based on historic expenditures. Assets that represent small expenditures, such as bike lanes and parking lots, and programs such as management and direction, are examples.

Summary Needs and Projected Funding Gap

Pavement Needs and Projected Funding Gap

Pavement performance has improved on the interstate and primary systems. However, VDOT has revised its assessment procedure by including interstate and primary ramps as part of the assessment. Pavement needs for FY 2014 - 2015, across all maintenance categories (including major rehabilitation and reconstruction) have increased 1.9 percent (\$25.1 million) from the FY 2013 - 2014 needs. The increase is due to the continued deterioration of the secondary system and the inclusion of interstate and primary system ramp needs. Ramps now account for \$25.3 million of the pavement needs.

Interstate and secondary system pavement needs have increased by \$13.8 million (6.3 percent) and \$72.5 million (12.3 percent), respectively, while primary system pavement needs have gone down by \$61.2 million (12.0 percent) from the FY 2013 - 2014 needs.

Major rehabilitation and reconstruction needs for pavements for FY 2014 - 2015 have increased by 37.5 percent (\$66.5 million). Ordinary, preventative, corrective, and restorative maintenance needs for pavements for FY 2014 - 2015 have decreased 3.6 percent (\$41.4 million) over the same categories of maintenance needs reported for FY 2013 - 2014.

Pavement reconstruction is sometimes funded using construction program allocations in the Six Year Improvement Program (SYIP), but is more often funded by the maintenance and operations program allocation. Currently, the SYIP includes projects with construction allocation that will affect 240 lanes miles of existing pavement. These projects will address approximately \$68.6 million in pavement maintenance needs. However, there is a gap of \$175.0 million in pavement reconstruction funding in the SYIP needed to reach and maintain pavement performance targets.

Bridge Needs and Projected Funding Gap

Bridge needs for FY 2014 - 2015, across all maintenance categories (including rehabilitation and replacement), have decreased 22.0 percent (\$310.5 million) from needs reported for FY 2013 - 2014, primarily due to the overall improvement in bridge conditions following recently completed bridge work and a slight decrease in the unit cost of bridge maintenance. Interstate, primary, and secondary bridge needs decreased 26.1 percent (\$132.9 million), 11.1 percent (\$62.6 million), and 34.3 percent (\$115.0 million), respectively.

Major rehabilitation and replacement needs for bridges for FY 2014 - 2015 have decreased by 24.6 percent (\$225.7 million) compared to the FY 2013 - 2014 needs. The change is primarily a result of effective investment in bridge maintenance and the slight decrease in the unit cost of bridge maintenance.

Ordinary, preventative, corrective, and restorative maintenance needs for bridges for FY 2014 - 2015 have decreased 17.1 percent (\$84.8 million) compared with FY 2013 - 2014 needs. The decrease is due partially to the introduction of new performance measures aimed at slowing bridge deterioration.

Currently, the SYIP includes projects with construction allocation that will affect 157 existing structures. These projects will address approximately \$240.3 million in existing bridge needs. However, there is a gap of \$438.2 million in bridge reconstruction in the SYIP needed to reach and maintain bridge performance targets.

Tunnel Needs

Tunnel needs are \$61.4 million for FY 2014 - 2015. This is a \$32.9 million or 34.9 percent decrease compared with FY 2013 - 2014 tunnel needs. The decrease is primarily the result of separating tunnel improvement needs from normal maintenance and operations needs in this year's report, which was not done in last year's report. Tunnel improvement needs are more appropriately funded through the construction program. If including tunnel improvement needs, overall tunnel needs would be \$120.7 million – a \$26.4 million or 28 percent increase compared with FY 2013 - 2014 tunnel needs. The increase is mostly the result of work identified through the tunnel baseline assessment and risk analysis.

Examples of mountain tunnel projects include ventilation system replacement, SCADA⁵ system replacement, and drainage system repairs. Examples of river tunnels projects include power system upgrades, installation of a driver emergency communications system, and installation of emergency egress signage. In many cases, these projects span multiple years.

VDOT transferred responsibility for the maintenance and operation of the Elizabeth River Tunnels (Midtown and Downtown), to the Elizabeth River Consortium on July 13, 2012, in a

⁵ Supervisory Control and Data Acquisition

Public Private Transportation Act project. Therefore, the needs for those tunnel facilities are no longer included in the report.⁶

Emergency and Incident Management Needs

Funds needed to provide emergency and incident management services remain essentially unchanged from the FY 2013 - 2014 needs. These needs include safety service patrols, incident response, traffic operations centers, snow and ice removal, and maintenance of technology assets. Funds needed for incident response management increased slightly (0.6 percent), while snow and ice removal needs increased 2.8 percent from FY 2013 - 2014 needs. These changes are primarily inflation adjustments.

Funding needed for transportation technology, which includes maintenance and operations needs for traffic sensors, cameras, Transportation Operations Centers (TOCs) operating systems, and overhead and portable message boards is \$175.8 million - a 3.5 percent (\$6.3 million) decrease compared with FY 2013 - 2014 needs. The decrease is partly due to decreases in the unit costs of some maintenance activities. Additionally, there is a \$12.6 million new ITS deployment need identified in this needs cycle to be funded through the construction program. Accounting for the new ITS deployment need, the overall needs for transportation technology would be \$188.5 million, which is a 3.5 percent (\$6.3 million) increase compared with the FY2013 - 2014 level.

In September 2011, VDOT awarded a five-year contract to Iteris, Inc. for the design, development and operation of a new enhanced phone and web-based 511 Virginia traffic and travel information system. The contract also authorizes Iteris to establish sponsorships for VDOT assets associated with 511 Virginia, including 511 road signs, traffic video feeds and website. The 511 sponsorships may offset some of the technology needs in next year's assessment (FY 2015 and FY 2016), but no estimates of future revenue from those sponsorships was available for use in this year's needs assessment.

Roadside Needs

Funds needed to provide roadside services, including drainage management, vegetation management, and sound barrier management increased \$35.2 million or 9.9 percent compared to FY 2013 - 2014 needs. Drainage needs increased 14.3 percent while vegetation management needs increased 4.2 percent from FY 2013 - 2014 needs. Sound barrier needs increased by 3.8 percent over the FY 2013 - 2014 needs. The increase in drainage and sound wall needs is the result of an update in inventory data indicating more drainage assets and sound walls on the

⁶ Even though the needs for those tunnel facilities are not reported in this report, there are technical requirements and contractual provisions within the Elizabeth River Consortium (ERC) Comprehensive Agreement (CA). Those requirements and provisions are monitored by VDOT as part of the performance compliance requirements and compliance points system, which is an exhibit to the CA.

Under this compliance points system ERC will be monitored for compliance and assessed points if required performance provisions are not met. If a certain level of points is assessed, then additional oversight may be required, a remedial action plan and, possibly, default of the contract.

secondary system than previously recorded. The small increase in vegetation management needs is due primarily to an increase in tree removal needs.

Traffic and Safety Needs

Needs for traffic and safety assets, including signs, signals, guardrail, pavement marking, and lighting increased \$69.1 million or 8.9 percent compared with FY 2013 - 2014 needs. Guardrail needs increased \$16.2 million, pavement marking/markers/message needs increased \$4.5 million, lighting needs increased \$1.0 million, signal needs increased \$20.8 million, sign needs increased \$28.0 million, and traffic and safety service needs decreased \$1.5 million. Newly identified needs for cantilever structural repairs for signals and overhead signs contributed to \$39.0 million of the \$49.2 million combined increase in signal and sign needs for FY 2014 - 2015. The remainder of the increase is associated with an improvement in secondary system inventory data.

Facility and Other Needs

Funds needed to provide facility and other services, including equipment management, ferry management, rest area and wayside management, sidewalk and trail management, permitting, and management and direction increased \$46.0 million or 11.1 percent compared to FY 2013 - 2014 needs. The increase in equipment management needs is largely to replace older fleet vehicles. Management and direction needs increased as salaries were legislatively increased to offset increased employee contributions to the Virginia Retirement System.

The increase in Miscellaneous Facility and Other needs is attributable to \$2.5 million per year in research funding. Needs in the research area were decreased significantly in the FY 2011-2012 assessment, mainly resulting from budget cuts at that time. The increase in the current assessment represents a return of funding to operations and maintenance research at the Virginia Center for Transportation Innovation and Research to pre-FY 2011 levels.

The increase in permitting needs is due to an increase in the cost of providing permitting services (permitting needs are based on historic expenditures).

Figure I.10 FY 2014 and 2015 VDOT Needs For Existing Infrastructure by Category

(Dollars Millions)

		FY 14-15 M&O Needs ¹	Prelim-Proposed FY 14-15 M&O Allocation	Difference between FY14-15 M&O Prelim-Proposed Allocation and Need	FY 14-15 Reconst/Rehab/Enhance Need ²	FY 14-15 Contribution of SYIP to M&O Needs ³	Difference between FY 14-15 Reconst/Rehab SYIP Contribution and Need
Roads	Interstate	\$157.7	\$154.3	(\$3.4)	\$76.6	\$25.2	(\$51.4)
	Primary	281.8	275.8	(6.0)	166.9	21.8	(145.2)
	Secondary	663.1	449.1	(214.0)	-	21.6	21.6
	Sub-Total	1,102.6	879.2	(223.4)	243.6	68.6	(175.0)
Bridges	Interstate	149.0	138.4	(10.5)	227.6	56.2	(171.4)
	Primary	152.7	140.9	(11.8)	349.4	152.0	(197.5)
	Secondary	106.9	97.2	(9.8)	113.7	44.4	(69.3)
	Operations	4.0	-	(4.0)	-	-	-
	Sub-Total	412.6	376.4	(36.2)	690.7	252.5	(438.2)
Tunnels	61.4	61.4	-	59.3	-	(59.3)	
Traffic and Safety	846.0	472.2	(373.7)	-	-	-	
Emergency and Incident Management	513.1	485.1	(28.0)	12.6	10.0	(2.6)	
Roadside	391.6	329.8	(61.8)	-	-	-	
Facility and Other	462.1	363.8	(98.3)	-	-	-	
Grand Total		\$3,789.4	\$2,968.1	(\$821.4)	\$1,006.2	\$331.1	(\$675.1)

Totals may not match sum of parts due to rounding.

¹ - M&O Needs include ordinary, preventative, corrective, and restorative maintenance activities.

² - Reconst/Rehab/Enhance needs include major rehabilitation and reconstruction activities for pavements, bridges and tunnels as well as corridor wide installation of ITS assets.

³ - The contribution of projects in the SYIP to pavement and bridge reconstruction/rehabilitation needs is estimated.

⁴ - "Roads" includes hard surface pavements, un-paved roads, paved and unpaved shoulders, bike lanes, and rumble strips.

Figure I.10 presents the FY 2014-2015 needs for the existing VDOT maintained infrastructure. Maintenance and operations funding needs are shown separately from funding needs for pavement and bridges reconstruction and rehabilitation, which are presented under the column labeled "FY 14-15 Reconst/ Rehab/ Enhance Needs."

The sum of "FY 14-15 M&O Needs" and "FY 14-15 Reconst/Rehab/Enhance Needs" in Figure I.10 is \$4,795.6 million. This is the total funding needed to meet performance targets statewide and to maintain and operate the existing infrastructure over the next two fiscal years (FY 2014 -

2015). However, in order for each district to reach and maintain the performance targets, an additional \$264.6 million would be needed. This includes \$74.9 million for pavements and \$189.7 million for bridges.

The SYIP allocates \$2,968.1 million over FY 2014 - 2015 to VDOT's maintenance and operations program. This is \$821.4 million less than the \$3,789.4 million for ordinary, preventative, corrective, and restorative maintenance and operations needed to meet performance targets and continue providing operations services at current levels.

Overall, after accounting for both the maintenance and operations program allocation and benefits of the construction program to maintenance and operations needs, there is a funding gap of \$1,496.4 million (31.2 percent) to meet all performance targets and service goals for FY 2014 and 2015.

Maintenance Payments to Localities

Maintenance payments to localities for FY 2012 totaled \$366.6 million. The Code of Virginia section 33.1-41.1 establishes the method to be used to compute these payments, which are allocated on a per lane mile amount, based on the number of eligible miles in each locality. In FY 2013, the total allocation for these payments is \$376.2 million. Maintenance payments to localities are projected to be \$387.8 in FY 2014 and \$399.3 in FY 2015. The assessment conducted for this report does not include needs for locally maintained roads.

Summary

Funding needed over the next two fiscal years (FY 2014 - 2015) to meet statewide performance targets and to cover all categories of maintenance and operation on the existing infrastructure is \$4,795.6 million. This is \$93.5 million (1.9 percent) less than the total needed funding reported for FY 2013 - 2014 and is 31.2 percent (\$1,496.4 million) less than the combined anticipated funding from VDOT's maintenance and operations program and the construction program for FY 2014 and FY 2015. The gap in maintenance and operations program funding is \$821.4 million, and the gap in construction program funding is \$675.1 million. In addition, in order for each district to reach and maintain the performance targets an additional \$264.6 million would be needed. This includes \$74.9 million for pavements and \$189.7 million for bridges.

Pavement needs overall have increased \$25.1 million across all systems. Primary system pavement needs have diminished while interstate and secondary system pavement needs have increased. Overall bridge needs have decreased. The bridge program is focusing more attention on slowing the deterioration of the aging bridge inventory. Tunnel needs overall have increased \$26.4 million, with a focus on addressing items identified during a risk analysis. Overall TOC and Technology needs have increased 3.5 percent primarily due to new ITS deployment needs.

Changes in maintenance and operations needs across all categories of assets and services range from a 9.2 percent decrease to an 11.1 percent increase. The decrease associated with the Roadway category is attributed to change in bridge and tunnel needs. The bridge decrease is attributed to introduction of new performance measures. The tunnel decrease is primarily the

result of separating tunnel improvement needs from normal maintenance and operations needs in this year's report, which was not done in last year's report. Tunnel improvement needs are more appropriately funded through the construction program. The primary factors behind the increases in all other categories of assets and services are updated asset inventories (e.g., traffic signs, guardrails, and drainage assets) and structure repair needs for ancillary structures such as overhead sign structures and signal mast arms.

VDOT has placed a high priority on funding interstate and primary system pavement and bridge needs. Other assets and services continue to struggle to perform adequately due to limited resources. The improving conditions for interstate and primary pavements demonstrate that the PMS and asset management approach to setting priorities and funding them is having a positive effect on pavement conditions with both interstate and primary pavements reaching their targets or staying at their 82 percent sufficiency rate over the upcoming biennium. Infusions of federal funds over and above available maintenance funding have made meeting performance targets possible. Bonus obligation authority of \$49 million went to paving projects in September 2011, and \$57 million of bonus obligation authority and released earmarked federal funding went to interstate paving projects in September 2012.

II. Safety, Security and Collaborating with the Private Sector and Local Government

Chapter II summarizes VDOT's efforts to improve the safety of both the motoring and non-motoring public, provides an overview of VDOT's security programs and protocols and discusses VDOT's efforts in working with the private sector and local governments.

Section II.1, Safety, summarizes VDOT's progress in fulfilling Goal 7 of the *Virginia Department of Transportation Business Plan, FY13 – FY14* (Business Plan): Improve safety across all modes of transportation by reducing transportation related injuries, fatalities and crashes. VDOT has made substantial progress towards implementing the action items developed in pursuit of that goal. In addition, VDOT utilizes the latest in data driven analysis and benefit-cost project evaluation techniques to develop projects that provide the greatest safety benefits for users of the highway system. At the same time, the Department recognizes that there are highway system users for whom accident incident data do not meet the needed thresholds to be recognized by those techniques, yet whose safety issues are no less important. Bike and pedestrian travelers are examples. To overcome the bias in the analysis techniques VDOT has developed protocols and programs to ensure that bike and pedestrian safety issues are sufficiently recognized and addressed.

Implementing a comprehensive strategy to protect against a wide range of natural disasters and constantly evolving man-made security threats requires constant review and training. Section II.2 of this chapter presents an overview of the Transportation Critical Infrastructure program area, VDOT's programming area responsible for developing and implementing policies and procedures to ensure the security of its personnel and the Commonwealth's transportation assets. For obvious reasons, there are restrictions on what can be reported in a public document, but the security section in this report provides an overview of the diverse range of VDOT security programs, protocols and projects.

Section II.3 presents an overview of VDOT's strategies to increase efficiency in delivery of its programs.

Section II.4 reviews VDOT's ongoing efforts to more effectively work with the private sector. VDOT's spending with private sector vendors rose in FY 2012 when compared to FY 2011, increasing from 65% to 69% as a share of all VDOT spending. The dollar value expended with the private sector increased also, rising from \$2.33 billion in FY 2011 to \$2.84 billion in FY 2012. In its efforts to make more effective use of the public's funds, VDOT continues to utilize innovative financing arrangements. Goal 4 in VDOT's Business Plan is to "Establish sustainable and stable financial support" through the pursuit of objectives such as maximizing the use of private financial resources. Led by the efforts of the Office of Transportation Public-Private Partnerships, VDOT has several projects in development with private partners.

The final section in Chapter II reviews VDOT's wide range of local government programs. VDOT works closely with its local partners on project development and funding. In addition, VDOT has established several educational and training programs to assist local governments in assuming greater responsibility for their transportation programs and accessing state and federal funding. In FY 2012 VDOT's Local Assistance Division (LAD) led two new initiatives that should provide substantial benefit to local governments. One of the initiatives was in response to adoption of a new financial management system, the Cardinal Financial Management System (Cardinal). With the advent of Cardinal, LAD implemented changes to several VDOT billing and project management procedures and forms that are used when working with local governments in pursuit of their transportation programs. The second initiative reconvened the Local Government Working Group in partnership with the Virginia Municipal League and the Virginia First Cities Coalition to advance the collection and analysis of condition and performance data on locally maintained roads.

II.1 Safety

Safety - Overview

Safety is VDOT's highest priority when developing and implementing any transportation project or program. This section of the Annual Report describes VDOT's efforts to reduce deaths and injuries from crashes on the Commonwealth's highways and streets.

The VDOT Business Plan affirms safety as one of VDOT's overarching Department goals.

Goal 7: Improve safety across all modes of transportation by reducing transportation related injuries, fatalities, and crashes.⁷

The Safety section begins with a summary of VDOT's progress in fulfilling action items associated with this goal.

VDOT's core safety strategies are implemented through the Highway Safety Improvement Program (HSIP). A requirement of the program is to develop a Strategic Highway Safety Plan (SHSP) with stakeholders and partners. A description of VDOT's initiatives and accomplishments under HSIP and SHSP completes the Safety section.

Status of the VDOT Safety Action Items identified in the Business Plan

The following safety goal objective is reprinted from VDOT's Business Plan: To improve highway facility safety features.⁸ Three Action Items have been developed to address this objective. The following summary presents those Action Items and their current status:

Action Item 1. Implement the [2012-2016] *Strategic Highway Safety Plan* (SHSP) starting July 1, 2012.

Status: The new SHSP was drafted and reviewed by partner agencies for concurrence. Adoption by the administration and approval from FHWA is expected in the fall of 2012.

Action Item 2. Develop a plan to improve road signs in Corridors of Statewide Significance using clear fonts and new reflective materials, while reducing lighting on signs where feasible by July 1, 2013.

Status: The new federal transportation authorization, MAP-21, amended 23 USC 148, adding specific HSIP provisions to support this action. The implementation effort is underway, beginning with I-295, then moving to I-95, I-64 and others. Unnecessary lighting will be removed.

⁷ *Virginia Department of Transportation Business Plan for FY13 – FY14*, p19.

⁸ *Ibid.*

Action Item 3. Direct HSIP funds to invest in pavement marking, markers and other safety features (ongoing).

Status: HSIP funds have been committed to this effort for FY 2012 and FY 2013, and projects are being implemented.

The Strategic Highway Safety Plan

Engineering, Education, Enforcement and Emergency Response, the 4-E Approach

Virginia has updated the SHSP through a cooperative and coordinated multi-agency and inter-disciplinary, engineering, education, enforcement and emergency response (4-E) approach to improving highway safety. The Virginia [2012-2016] SHSP, developed under VDOT's leadership, will be used to drive investment decisions to improve safety and reduce deaths and severe injuries. It details all safety partner efforts to improve traffic safety in Virginia.

The SHSP has strategically focused on correcting poor driver behavior and improving roadway elements and traffic control to reduce crashes and their consequences. The SHSP establishes the goal of reducing deaths and severe injuries from traffic crashes by 50 percent by 2030. This goal equates to about a three percent annual reduction statewide. Within the five year SHSP horizon strategies and action are defined across three areas:

1. Human Factors - strategies developed to impact driver behavior such as speeding, young driver behavior, occupant protection and impaired driving.
2. Environmental Locations - strategies developed to impact intersection safety and roadway departures.
3. Data Collection, Management and Analysis - strategies to identify Virginia's safety needs and focus on defining VDOT's safety performance.

The Highway Safety Improvement Program

While all maintenance and construction projects improve the safety of our transportation systems, the use of Federal Highway Administration (FHWA) funds for the Commonwealth's HSIP facilitates implementation of specific infrastructure strategies to reduce crashes and their consequences.

VDOT's HSIP is comprised of the following subprograms utilizing the federal funding sources:

- Highway Safety Projects (HSP): 23 USC Section 148
- Bicycle and Pedestrian Safety (BPS) Projects: 23 USC Section 148
- Open Container (OC) - Penalty Transfer Projects: 23 USC Section 154
- High Risk Rural Roads (HRRR) Projects: 23 USC Section 148
- Highway-Rail Grade Crossing (H-RGC) Projects: 23 USC Section 130

HSP, BPS and OC are programs which address safety issues on all roads. As their titles suggest, projects under HRRR and H-RGC are much more targeted.

The resulting distribution of HSIP funding for FY 2007 to FY 2013 is shown in Table II.1. Under MAP-21 HSIP funding increases in FY 2013 and 2014. (The additional FY 2013 HSIP funding is not shown in the table.)

Table II.1 Virginia’s HSIP SAFETEA-LU Allocation of Funds

(Dollars Thousands)

Year	HSIP-Highway			Penalty Transfer - HSIP		HSIP-Rail	Total
	HSP	HRRR	BPS	HSP	BPS	H-RGC	
FY 2006-07	\$43,901	\$2,000	\$5,100	\$1,638	\$5,556	\$5,029	\$63,224
FY 2007-08	\$33,817	\$2,000	\$3,582	\$336	\$8,306	\$4,526	\$52,567
FY 2008-09	\$26,478	\$2,000	\$2,942	\$0	\$8,837	\$4,526	\$44,783
FY 2009-10	\$24,734	\$2,000	\$2,748	\$0	\$8,800	\$4,487	\$42,769
FY 2010-11 (1)	\$42,794	\$2,000	\$2,746	\$8,080	\$1,500	\$4,487	\$61,607
FY 2011-12	\$32,312	\$2,000	\$3,590	\$9,882		\$4,249	\$52,033
FY 2012-13	\$39,143	\$2,000	\$4,349	(2)		\$4,202	\$49,694
Total	\$243,179	\$14,000	\$25,057	\$19,936	\$32,999	\$31,506	\$366,677

Notes:

- (1) HSP: an additional \$18 million was received from FHWA after the initial FY 2011 SYIP was developed
- (2) FY13 OC-Penalty Transfer apportionments are presently unknown

In addition to HSIP projects, maintenance paving projects that are federally funded are reviewed for potential safety improvements such as upgraded signing and guardrails.

Highway Safety Projects

VDOT has developed a safety project economic evaluation methodology to assess the benefits of proposed safety improvements. All guidelines, project submittal forms, and benefit-cost spreadsheets are provided at http://www.virginiadot.org/business/ted_app_pro.asp. The program’s policy and procedures are being updated to reflect the MAP-21 requirements and eligibility. In FY 2013 a portion of the HSP funding is used to start the construction phase of safety projects that were programmed in FY 2011 and 2012. This leaves approximately \$25 million in HSP funding that will be used primarily to program roadway alignment and shoulder projects for roadway departure treatments, and two intersection improvements. An allocation was also made to a six year \$30 million interstate Intelligent Transportation System (ITS) project that will expand the coverage of devices and related software in the Richmond metro region to support the Transportation Operations Center management of traffic, special events and incidents.

To assess HSIP effectiveness, VDOT conducts a before and after crash reduction analysis of each completed safety project. The crash analysis period for these projects covers the 36 months prior to submission for funding and the same period after the completion year of the safety improvement. Significant reductions have been realized from the projects. For example, the

four highway safety projects completed in 2007 resulted in an 86 percent reduction in related crashes during the after period.

Bicycle and Pedestrian Safety Projects

VDOT is one of the few state agencies in the nation with a safety program that improves conditions for bicycle and pedestrian users, especially around schools.

The VDOT program preceded the Safe Routes to School⁹ program established in 2005 as part of SAFETEA-LU.

Using the traditional benefit-cost crash reduction based procedures, BPS improvements are typically not prioritized and programmed due to the lack of multiple crashes at a specific location. In addition, the effectiveness (crash reduction) of related countermeasures for individual locations is often unknown.

Despite these difficulties VDOT recognizes that a high potential for risk exists for non-motorized travelers and that some people may not bike or walk because of safety concerns. Consequently, starting in FY 2004 VDOT began to set aside 10% of HSIP funds for the non-motorized safety program.

VDOT uses a ranking system for evaluating BPS project proposals. The system ranks the proposals by assigning scores to a series of questions that cover 4 main areas:

1. How clearly does the proposal identify the problem?
2. How well does the proposal identify the solution?
3. The project cost.
4. Local support for the project.

Typically, multiple project proposals, valued between \$10 and \$15 million, are submitted each year. For FY 2012 thirty-eight BPS proposals were submitted, valued at approximately \$13 million. VDOT funded and programmed 18 (47%) of these submittals, accounting for \$6.2 million programmed over FYs 2012 and 2013.

Finally, the following three bicycle safety recommendations were included in the state Bicycle Policy Plan, released on October 24th, 2011:

- VDOT should participate in roadway safety assessments for schools that are located on the state highway system, as requested. Where possible, school zone safety assessments should address bicycle access to schools, including street crossings and paved shoulders.
- VDOT should encourage biking and walking to school and provide opportunities for students to have access to bicycle safety education.

⁹ MAP-21 continues the activities of the Safe Routes to School Program under the Transportation Alternatives program, (P.L. 112-141) 23 USC 213(b)(3).

- VDOT should encourage college and universities to provide safety education classes similar to League of American Bicyclist education classes.

Virginia's Bicycle Policy Plan can be found at

http://www.virginiadot.org/programs/bicycling_and_walking/bicycle_policy_plan.asp.

Open Container-Penalty Transfer Projects

Similar to the Open Container (OC) - Penalty Transfer procedure in SAFETEA-LU, under MAP-21, Virginia is penalized for its existing OC law by having 2.5% of Virginia's apportioned highway funds transferred from FHWA to the National Highway Traffic Safety Administration.¹⁰ These funds are required to be used in Virginia's safety program. About 53% of the total penalty amount is transferred to HSIP eligible improvements as grants. The remaining OC-Penalty Transfer funds are allocated to the Virginia Office of Highway Safety at the Department of Motor Vehicles.

VDOT has received approximately \$53 million between FY 2007 and FY 2012 under the OC-Penalty Transfer statute. More than 60% of VDOT's OC-Penalty Transfer funding has been used for BPS improvements in those six years such as trails, bike lanes, sidewalks and intersection accessibility improvements. The remaining funds have been used for other HSIP projects such as improving roadway alignment and upgrading corridor signing.

At the beginning of FY 2012 there were unallocated FY 2011 OC- Penalty Transfer funds. These funds were added to the FY 2012 OC-Penalty Transfer allocation to program the following projects:

- Statewide installation and upgrade of Reference Location Signs¹¹ (\$3 million).
- Upgrading I-295 signs (\$9.5 million)
- Approximately \$2.6 million remains unallocated on projects. Additional preliminary engineering is being conducted in order to use these funds for planned ITS improvements.

High Risk Rural Road Program

The HRRR Program was established under SAFETEA-LU to reduce the frequency and severity of collisions on roads classified either as rural major collectors, rural minor collectors or rural local roads. The program continues under MAP-21 with an important difference. MAP-21 eliminates the requirement under SAFETEA-LU that every state set aside funds for HRRR.

¹⁰ The transfer was three percent under SAFETEA-LU. Also, under SAFETEA-LU these funds were transferred from apportionments under the National Highway System (NHS) program, the Surface Transportation program (STP), and the Interstate Maintenance (IM) program. MAP-21 absorbs the NHS program and IM into the National Highway Performance Program. MAP-21 continues and expands the STP program. A more detailed comparison between SAFETEA-LU and MAP-21 is presented in Chapter IV.

¹¹ Reference Location Signs are signs that show a numerical distance point along a highway.

However, MAP-21 does require a state to obligate funds for this purpose if the fatality rate on such roads increases. In general, the federal share is ninety percent.¹²

Including the state match, over \$13 million have been made available for eligible HRRR projects through 2012. However, because of the MAP-21 changes, the FY 2013 allocation is presently unknown.

VDOT administers the HRRR program centrally with input and concurrence on recommended projects from district traffic engineering staff and funding allocated to each construction district based on the proportion of fatal and incapacitating injuries.

Since VDOT maintains all rural roads (except for Federal Lands facilities), data are available to conduct comprehensive safety planning for the HRRR program. VDOT has developed a procedure for using this data to locate sites with potential for safety improvement. To maximize benefits from the limited HRRR funds, VDOT has focused on identification of the HRRR intersections and segments which had highly concentrated fatal and incapacitating injury crashes.

In FY 2012, VDOT focused on developing segment improvements, especially at locations with large numbers of road departure crashes. In addition, to minimize preliminary engineering and unit costs, VDOT continued to develop and implement district-wide improvements for guardrail and delineators, skid resistance, pavement and edge drop off, sight distance, and sign and marking improvements.

Highway - Rail Grade Crossing Program

MAP-21 continues SAFETEA-LU's funding for safety improvements at highway/rail intersections through the H-RGC Program. In general, the federal share is 90 percent. However, certain projects as described in 23 USC section 120(c) (1) may be 100 percent. The H-RGC program was implemented to reduce risk at public highway-rail grade crossings. Improvements have been initiated across several areas: upgrading gates; traffic control devices; and crossing surfaces.

Greater Use of Rail Crossing Safety Equipment

There are two Class I railroad companies operating in Virginia, with more than 3,500 miles of track and over 1,886 public at grade highway/railroad crossings.

Since the inception of the H-RGC program, VDOT has evaluated and upgraded 1,495 (representing 80%) of these crossings with active warning devices. The remaining 386 crossings remain passive.

All crossings are continuously evaluated for possible upgrades, permanent closure or grade separation.

¹² Projects under 23 USC 120(c) and 130 are eligible for a greater federal share. An example is a rail-highway crossing closure project.

Using Information in order to More Effectively Use Scarce Resources

VDOT uses the Federal Railway Administration crash risk prediction methodology as a mathematical procedure to develop a prioritized ranking of grade crossing locations statewide. The priority listing is revised annually based on predicted risk. VDOT furnishes the listing to localities and railroads and includes the following information for each highway/rail crossing:

1. Physical location;
2. Current warning device type;
3. Roadway Average Annual Daily Traffic;
4. Number of tracks, train movements and speed;
5. School bus movements;
6. Expected number of crashes.

Although crash risk is used to prioritize crossings, VDOT monitors crash severity to evaluate the program.

Proactive Upgrades to Improve Safety and Operations

In an effort to improve safety on the roadways (and railways), VDOT also completed projects at crossings with no previous crash history after conducting engineering reviews, receiving input from safety partners concerning “near misses” and evaluating the existing geometric and traffic control conditions.

H-RGC Project Funding

VDOT has received about \$4.5 million each year since 2005 for rail grade crossing improvements and has funded between 20-40 H-RGC projects each year.

VDOT received 75 project proposals, totaling \$14.1 million dollars for FY 2013 and programmed 28 projects, valued at \$4.5 million. Projects valued at \$3.2 million were programmed for VDOT maintained roads, and projects valued at \$1.3 million were programmed for urban roads.

Twelve of the 28 programmed projects added gates and flashing lights to provide active warning devices, seven projects upgraded existing lights, and the remaining projects upgraded the crossing surface or signal preemption equipment.

II.2. Security

Security Overview

VDOT’s Transportation Critical Infrastructure is generally defined as systems and assets, whether physical or virtual, so vital to VDOT’s mission that the incapacity or destruction of any

such system or asset would have a debilitating impact on mobility, security, economic security, public health or safety, or any combination of those matters.

VDOT provides security program oversight for VDOT's Critical Infrastructure within the Commonwealth. Security strategies and initiatives to protect VDOT's Critical Infrastructure are supported within the Department by the Operations and Security Division's (OSD) Transportation Critical Infrastructure (TCI) program area. This program area oversees VDOT's Critical Infrastructure security mission and other initiatives for VDOT's protection and resiliency efforts by identifying, prioritizing and assessing Critical Infrastructure on a statewide and regional/district basis. In addition, staff also assess and maintain physical security programs and equipment, evaluate mitigation strategies, prioritize security projects and develop security standards.

The following section presents an overview of several of the programs and demonstrates the breadth of personnel and infrastructure security issues covered within this program area. This is followed by a summary highlighting the measures VDOT is taking to progress security efforts. The goal is to maintain current levels of support and align the program with industry standards and best practices to reduce operating costs and enhance security capabilities.

Program Areas and Initiatives

VDOT Infrastructure Physical Security Enhancement Program

The VDOT Infrastructure Physical Security Enhancement Program (VIPSEP) is the procurement mechanism utilized by VDOT to enhance the delivery of VDOT's Critical Infrastructure protection projects and initiatives. The VIPSEP contract is utilized to conduct physical security installation or enhancement projects at bridge/tunnel facilities, Transportation Operations Centers, other Critical Infrastructure sites, and for security projects at non-designated facilities and structures. Enhancements include: access control systems, surveillance equipment, motorized gates, fencing, security lighting, and other physical security equipment or protective measures.

Critical Infrastructure Protection Plan Program

VDOT developed and annually updates Critical Infrastructure Protection (CIP) plans for the four underwater tunnels located in Hampton Roads and is in the final stages of developing CIP plans for the two mountain tunnels located in VDOT's Bristol District. A CIP plan is a comprehensive document that focuses on preparing Critical Infrastructure facilities for potential hazards resulting from natural or manmade emergency events. The CIP plan program includes a tabletop exercise component, which allows tunnel staff to become familiar with the CIP plan and to implement updates on a regular basis.

Training Program

VDOT routinely coordinates and facilitates training for Critical Infrastructure staff in an effort to maintain awareness of the latest security topics and practices. Courses include Terrorism

Security Awareness Orientation, Incident Response to Terrorist Bombing, Surveillance Detection, Soft Target Awareness, and Improvised Explosive Device awareness and screening.

Foreign Visitor Clearance Coordination Program

In accordance with the Federal Highway Administration Office of International Programs, VDOT confirms the suitability of foreign visitors and delegations, who are visiting VDOT assets, to ensure the visit does not contravene US restrictions on interaction with officials from a particular country.

Continuity of Operations

VDOT maintains the agency's Continuity of Operations (COOP) program in compliance with Commonwealth of Virginia, Office of the Governor, Executive Order 41 (2011). The *Continuing Preparedness Initiatives in State Government and Affirmation of the Commonwealth of Virginia Emergency Operations Plan* requires all agencies to have and maintain a COOP plan. This COOP provides the framework to continue or rapidly restore essential functions in the event of an emergency that effects operations. The program addresses three types of extended disruptions that could occur individually or in any combination: loss of access to a facility, loss of services due to equipment or system failure and loss of service due to a reduced workforce. The plan is a living document that is maintained and updated on an ongoing basis.

Continuing Efforts and Initiatives

VDOT is actively managing Critical Infrastructure protection initiatives by incorporating modern technology into its current and future security systems and initiatives. In FY 2011, the concept of using Light Emitting Diode (LED) lights to enhance security in secured areas was piloted at two Critical Infrastructure sites. This LED concept was expanded in FY 2012 to include two additional Critical Infrastructure sites. In addition to enhancing security, the use of LED lights supports "Going Green" initiatives by reducing energy consumption, maintenance costs and environmental impacts.

The conversion from using legacy Digital Video Recorder (DVR) based operating platforms to manage security camera systems at Critical Infrastructure sites is currently underway. Critical Infrastructure sites are being retrofitted with the current industry standard Video Management System (VMS) based operating platforms, which offer several operational benefits to VDOT, including the option for external multi-agency imagery sharing for emergency, security or incident management purposes.

II.3. Increasing Efficiency in Delivery of Agency Programs

VDOT has implemented several strategies in recent years that are designed to increase efficiency. In FY 2012, managed competition was introduced into the Turnkey Asset Maintenance Services (TAMS) contract solicitations. Managed competition provides VDOT the opportunity to compare itself to the market for improved service delivery and pricing of services

by allowing both public and private entities to compete for the delivery of services. VDOT plans to continue this practice. The results of this new initiative are presented in the TAMS subsection under section II.4.

In another example, VDOT worked with a major utility provider to switch monthly billing from paper to electronic (EDI). This eliminated a manually intensive process of calculating and keying bills, and is estimated to save the department over \$400,000 annually.

To improve the project development and construction process, a two tiered approach to project development was adopted to streamline the process for simple, low risk projects. Tier 1 projects, which are valued at less than \$5 million and are considered to be the smaller, less complicated projects that have fewer risks, are developed by the districts using a streamlined process. Tier 2 projects are those valued over \$5 million or require federal oversight, are higher risk, and therefore follow a traditional development path, which includes Central Office reviews and approvals in several stages of the project development process. This change has enabled VDOT to accelerate development on approximately 80% of its projects.

VDOT regularly reviews for improvement of key business processes based on an acceptable level of risk. Under a recent initiative, VDOT has taken steps to inventory and prioritize the agency's top 10 processes requiring improvements. The "top 10" processes represent the outcome from input solicited from over 200 leaders at VDOT's 2012 Garver Leadership Conference. VDOT introduces its Business Plan to agency managers and leaders at these annual conferences, where strategic initiatives, issues, and desired outcomes are discussed. The ten processes reflect the ordinal outcome of a multi-voting process, where each conference participant was able to provide input on over 50 candidate processes relative to the Business Plan. The chosen processes impact core business areas ranging from maintenance spending and programming to administrative functions within the agency's field maintenance units (i.e., area headquarters and residences).

VDOT plans to evaluate, re-engineer and implement the top five processes identified by July 1, 2013 and the remaining five processes identified by December 2013. When complete, these re-engineering efforts will streamline processes, and clarify roles and responsibilities for those involved in carrying out these processes, which will facilitate better accountability throughout the organization.

II.4. Collaborating with the Private Sector

Collaborating with the Private Sector – Overview

VDOT continues to expand outsourcing, privatizing, or downsizing where supported by good business practices. In fact, 69% of VDOT's FY 2012 spending was with private sector vendors.

This section summarizes VDOT's spending with the private sector and its ongoing efforts to be more efficient by working with the private sector while maintaining management oversight to

help ensure effective delivery of services. This section also provides a summary of revenue generated from asset sales and leases.

VDOT Spending with the Private Sector

In FY 2012, VDOT spent \$2.84 billion of its \$4.09 billion in expenditures with private sector vendors. This represents 69% of VDOT's FY 2012 expenditures and is an increase both in the share of spending with the private sector, which was 65% in 2011, and in the dollar value of spending with the private sector, which was \$2.33 billion in FY 2011. Included in the \$2.84 billion of private sector spending was the outsourcing of over \$404 million in interstate maintenance.

Ongoing Efforts to be More Efficient and Work with the Private Sector

Turnkey Asset Maintenance Services

TAMS contracts provide for ordinary and preventive maintenance services, including activities such as repair and replacement of right-of-way assets, and services such as emergency response, severe weather operations and management, and disposal of hazardous materials.

In FY 2012, VDOT awarded the management and maintenance of six new TAMS contracts for \$166 million to include Williamsburg, Staunton South, Richmond North-Richmond District (De-bundled Services Contracts), Richmond South, Bristol-Bristol District (De-bundled Services Contracts), and Salem.

Four of the TAMS contracts were solicited under managed competition for the first time in FY 2012.¹³ The managed competition process increases the opportunity to award the work to the lowest responsible bidder and provides VDOT the opportunity to compare itself to the market. VDOT proved to be the low bid for two of the four contracts solicited under managed competition. VDOT did not award those two TAMS contracts and will manage the subcontractors performing work under the TAMS contract in Richmond North-Richmond District and Bristol-Bristol District.

In FY 2013, VDOT will initiate new TAMS contracts valued in excess of \$52 million in Staunton North and Hampton Roads Districts to replace contracts which are scheduled to end in May 2013. The current value of the 13 TAMS contracts is \$324 million.

Safety Rest Areas and Welcome Centers

VDOT continues to administer property management contracts for the 24 hour, seven days a week staffing, preventative maintenance and repair of 43 Safety Rest Areas, and Welcome Centers (SRA/WC). In FY 2012, VDOT privatized the sale of on-site advertising, sponsorship of SRA/WC assets, and vending sales under the nation's first Sponsorship, Advertising, and Vending Enhancement (SAVE) contract.

¹³ Two of the six new contracts were awarded before introduction of managed competition.

Project Delivery Utilizing Transportation Public Private Partnerships

VDOT has identified advancing public private partnerships as an important component in pursuing the Department's Business Plan Goal 2: Ensure the transportation system promotes and supports economic opportunity.¹⁴ In FY 2011 the Office of Transportation Public-Private Partnerships (OTPP) was created to facilitate the Commonwealth's Public-Private Transportation Act (PPTA) program across all modes of transportation. OTPP is currently working with our private sector partners to advance several on-going and proposed PPTA projects, including:

- I-495 Express Lanes - Working with private sector partners Transurban/Fluor, this project closed in July 2008 and opened to traffic on November 17, 2012 on-time and on-budget. The I-495 Express Lanes are two new high occupancy toll lanes in each direction of the Capital Beltway from the Springfield Interchange to just north of the Dulles Toll Road (approximately 14 miles). State contribution of \$409 million leveraged a total project valued at \$1.7 billion (state contribution, 24% of total cost).
- Midtown Tunnel/Downtown Tunnel/MLK Extension – Working with private sector partners Elizabeth River Crossings, this project reached financial close in April 2012. Construction is scheduled for completion in 2018. State contribution of \$420.5 million leveraged a total project valued at \$2.1 billion (state contribution, 20% of total cost).
- I-95 Express Lanes – Working with private sector partners Transurban/Fluor, this project reached commercial/financial close in July 2012. Construction is underway and completion is scheduled in 2014. State contribution of \$71 million leveraged a total project valued at \$925 million (state contribution, 8% of total cost).
- Coalfields Expressway – Working with private sector partners Alpha Natural Resources and Rapoca, this project closed in September 2002. Segments of Hawks Nest, Pound Connector and Doe Branch are currently underway. Total project valued at \$2.1 billion using coal synergy and large-scale earth-moving techniques; this represents a savings of approximately 50% over traditional construction methods (estimated at \$4.2 billion).
- Route 58 – Working with private sector partners Branch Highways, Inc., this project closed in December 2003. Phase 1 completed in 2006; Phase 2 completed in 2011; Phase 3 underway and scheduled for completion in 2015.
- US Route 460 Corridor Improvements – A two-year procurement process was successfully completed in October 2012 with award to US 460 Mobility Partners for best value for the lowest public subsidy. Private sector partners will design and build the project at a fixed cost with a fixed date of completion. A non-profit corporation called the Route 460 Corridor Funding Corporation of Virginia will issue tax-exempt bonds to finance the project; the corporation will collect tolls, adjust toll rates and manage the toll collection system. State contribution of \$930 million leveraged a total project valued at \$1.396 billion (state contribution, 67% of total cost). Design and right-of-way acquisition will start in 2013, with construction following in 2014.
- Route 28 – Working with private sector partners Clark/Shirley, this project closed in 2002. VDOT contributes state highway funds and revenue bonds backed by proceeds from the Route 28 Tax District created in 1988. Since 2002, high-capacity interchanges

¹⁴ Virginia Department of Transportation Business Plan for FY13 – FY14, p9.

and widening projects have been constructed in Fairfax and Loudoun Counties valued at \$351 million. The partnership continues to plan, develop and construct improvements in the corridor.

In June 2012, the OTP3 released the “PPTA Pipeline” document, http://www.vappta.org/ppta_pipeline.asp, containing identified candidate PPTA projects as well as conceptual projects. Eight candidate PPTA projects were identified such as Patriot’s Crossing, I-64 Peninsula Improvements, as well as the Port of Virginia. Fourteen conceptual projects were also identified for further scope development, including Dulles Metro Rail Air Rights opportunities, parking privatization opportunities, and a Route 460/58 Connector.

The OTP3 sought private sector participation in the development of the “PPTA Pipeline” document to ensure the viability and desirability from a market standpoint. Private sector participation will remain an important focus as the candidate projects are evaluated during 2012 - 2013 for PPTA procurement opportunities.

Revenue Generation from VDOT Assets

VDOT generates revenue from the Department’s assets where prudent, and where consistent with the VDOT mission. In FY 2012 revenues generated from VDOT assets exceeded \$6.79 million. This revenue was derived from four main sources:

1. Right-of-Way Land Sales
2. Tenant Revenues on Right-of-Way Property
3. Cell Tower Leases at VDOT Sites
4. Sponsorship, Advertising, and Vending Enhancement (SAVE)

Right-of-Way Land Sales

VDOT offers highway right-of-way properties for sale that were previously purchased but are no longer needed. VDOT offers any properties suitable for independent development to the public via the VDOT web site and by advertising locally. Properties not suitable for independent development are offered for sale to owners of adjoining land. In FY 2012, VDOT executed 68 deeds comprising 48.3 acres and received \$1.24 million.

Tenant Revenues on Right-of-Way Property

When VDOT determines that property purchased for highway right-of-way will be needed in the future, but not the near future, VDOT leases such land and improvements. For example, if funding for a highway construction project is delayed, VDOT will seek tenants for any houses on the associated right-of-way properties. In FY 2012, VDOT collected \$910,000 from the lease of right-of-way land and improvements.

Cell Tower Leases at VDOT Sites

VDOT leases sites for cell towers at the request of telecommunications companies where alternatives are not commercially available. Cell tower revenue in FY 2012 was \$4.6 million; the FY 2013 projection is \$4.7 million.

Sponsorship, Advertising, and Vending Enhancement

In September 2011 VDOT awarded the nation's first SRA/WC Sponsorship, Advertising, and Vending Enhancement (SAVE) contract. The SAVE contract privatized the sale of on-site advertising, sponsorship of SRA/WC assets, and vending sales in exchange for a guaranteed \$2 million annual rights fee and a percentage of gross revenue from sales.

VDOT's revenue from the SAVE contract will be used to fulfill VDOT's memorandum of agreement between the Virginia Department for the Blind and Vision Impaired (DBVI) where fifty percent of VDOT's vending sales revenue will be paid to DBVI. VDOT's SAVE contract revenue will also be used to fulfill a commitment to the Virginia Tourism Corporation (VTC), where VDOT must pay a minimum of \$400,000 annually to the VTC.

This is the first year of the SAVE contract, which currently runs from September to September. Due to the timing of the SAVE contract year and the contract structure, there was not sufficient time to estimate SAVE's net contribution to VDOT's FY 2012 revenue.

II.5. Collaborating with Local Government

Role of the Local Assistance Division

VDOT's Local Assistance Division (LAD) develops and interprets policy dealing with local roads and serves as liaison with local government organizations. LAD also manages several special funding programs, manages urban system changes, prepares local assistance payments, provides oversight for locally administered projects and facilitates the delivery of the statewide urban program.

Communications, Partnering and Performance

LAD maintains regular communications with local government and citizens of the Commonwealth in order to provide general information, updates, and changes about locally administered projects and other items affecting local programs. LAD distributes a newsletter at least three times annually to provide information to VDOT's partners and the public on a variety of local programs. Furthermore, LAD has partnered with the University of Virginia Transportation Training Academy to provide regular training opportunities for local governments. In addition to producing special publications and seminars to educate the Commonwealth about various transportation programs, LAD also maintains a public website that is regularly updated, <http://www.virginiadot.org/business/local-assistance.asp>.

LAD produces a biennial report on local performance measurements for bridges and pavements. This report was last prepared in 2011 and is included as the last chapter in the *Biennial Report On the Condition of and Investment Needed to Maintain and Operate the Existing Surface Transportation Infrastructure for FY 2011 and FY 2012*, [http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD2382009/\\$file/RD238.pdf](http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD2382009/$file/RD238.pdf).

LAD continues to report local bridge condition (from the VDOT Dashboard) on a quarterly basis through “Virginia Performs,” <http://vaperforms.virginia.gov/indicators/transportation/infrastructure.php> (the link to the VDOT Dashboard is located on the right hand side of the webpage). As of June 30, 2012, 96.51% of the bridges on the county maintained system and 90.76% of the bridges on the city/town maintained system were rated in “fair or better” condition.

Targeted Funding to Achieve Safety and Efficiency in the Local Road System and to Assist in Local Economic Development

VDOT administers several programs, both federal and state, to assist localities with funding for their road programs. The goal is to help localities implement projects that are safe, enhance community quality of life and to encourage local economic development. Projects approved under each of these programs must meet VDOT and federal standards.

The Transportation Enhancement (TE) Program

The TE Program provides federal funding for non-motorized transportation facilities, including trails and sidewalks, rehabilitation of historic transportation facilities, landscaping, and other similar activities.

In FY 2013, VDOT’s applicant outreach efforts resulted in the submittal of 114 applications from localities or other sponsors, from which the Commonwealth Transportation Board (CTB) selected 77 projects for funding. The CTB allocated approx \$26 million to Enhancement projects this year.

Changes to TE in MAP-21

The new federal transportation authorization, MAP-21 establishes a new program, “Transportation Alternatives,” which continues eligibilities for most of the TE activities but combines those TE eligibilities with some of the elements of the Safe Routes to School program and the Recreational Trails program (as those two programs existed under SAFETEA-LU). MAP-21 also changes how funding is allocated for these activities, specifying that 50% of each state’s funding for the Transportation Alternatives Program shall be sub-allocated by population. The full impact of the new federal legislation on the existing Transportation Enhancement Program activities is still being evaluated. VDOT will be working with the Metropolitan Planning Organizations and the FHWA on updating the program guidance.

The National Scenic Byways Program

The National Scenic Byways (NSB) grant program is administered by the FHWA and provides funding for projects that benefit travelers on designated National Scenic Byways, All-American Roads and Virginia Byways. This program allows designation of distinctive routes having relatively high aesthetic or cultural value, leading to or within areas of historical, natural or recreational significance. LAD provides ongoing technical assistance to organizations across the Commonwealth who are considering applying for NSB designation.

In FY 2012, LAD assisted in submitting three NSB grant applications, requesting approximately \$8.9 million, total. Virginia was awarded one FY 2012 NSB grant, totaling \$638,400 for the Scott County EDA's Daniel Boone Wilderness Trail Interpretive Center Exhibits.

The NSB program continues under MAP-21. However, the future status of the NSB program is unclear as FHWA evaluates resources available to continue administering the program.

Revenue Sharing

Under the Revenue Sharing program the Commonwealth Transportation Board may match state highway funds dollar-for-dollar with local funds for improvement, reconstruction, construction or maintenance¹⁵ projects on highway systems within the locality. For improvement, reconstruction, or construction projects, the maximum matching allocation per locality is \$10 million, where up to \$5 million may be used for maintenance. Application for program funding must be made by local jurisdiction resolution.

The FY 2012 Revenue Sharing Program was approved for 173 projects with \$50 million in state allocations and an additional \$53 million programmed for FY 2013.

Access Programs

VDOT administers three local Access programs.

1. The Airport Access Roads Program provides for the construction, improvement, or maintenance of roads serving new or expanding airports.
2. The Economic Development Access Roads program provides for roads serving new or expanding economic development sites.
3. The Recreational Access program provides funding for roads and bicycle facilities to new or expanding non-federal public parks.

In FY 2012, VDOT allocated \$601,000 to assist localities with projects to access two recreational areas, \$450,000 to improve access to one airport and \$4.1 million for projects to access seven economic development sites.

¹⁵ Legislation enacted during the 2012 General Assembly revised the Revenue Sharing program to make maintenance an eligible use of revenue sharing funds.

The Rural Rustic Roads Program

The concept for the Rural Rustic Roads Program began with legislation passed during the 2002 General Assembly. The program attempts to ensure responsible environmental and financial stewardship while providing basic paved access to more of the Commonwealth's rural countryside.

Since the program was established VDOT has completed 710 rural rustic road projects, which includes 34 rural rustic road projects completed in FY 2012. These projects have been completed at an estimated cost savings of approximately \$227 million when compared to the cost of traditional construction methods.

The Rural Rustic Program Manual was revised July 2012 to update guidance and put forward minor administrative changes. It can be found at http://www.virginiadot.org/business/resources/local_assistance/Rural_Rustic_Road_Program_Manual_2012_-_Final_Draft_with_Clean_July12.pdf.

The program continues to be very popular with rural counties though its use has been impacted by a loss of funding for the unpaved road program.

VDOT's Efforts to Assist Localities in Administering their Local Road Program

The Urban Construction Initiative

The Urban Construction Initiative (UCI) program provides that a municipality may decide to assume the responsibility for their construction program by notifying the CTB. Municipalities express their intent to join the initiative by resolution.

This year, the City of Danville executed the programmatic agreement, effective July 1, 2012, and now has joined the cities of Virginia Beach, Hampton, Richmond, Charlottesville, Harrisonburg, Lynchburg, Colonial Heights, Newport News and Chesapeake, and the towns of Blacksburg, Bridgewater, Purcellville, and Dumfries in the program. This represents a total of 14 localities that under UCI agreement administer their entire construction program.

The UCI Certification Program, approved by the Federal Highway Administration for implementation in 2009, is an opportunity for qualified UCI participating localities to proceed with delegated authority by VDOT for project administration and development. The certified locality operates with streamlined VDOT oversight on federal and state funded projects, similar to FHWA's oversight of VDOT. In November 2011 the City of Virginia Beach successfully demonstrated their ability to deliver state and federally funded projects and became the first locality to qualify under the certification process.

Locally Administered Projects

A total of 263 Locally Administered Projects (LAP) Agreements were executed in FY 2012. In addition, 91 supplemental agreements were completed.

At the end of FY 2012, 11% of VDOT's construction program dollars were dedicated to LAPs. Further, 35% of all active VDOT projects are locally administered.

Together, the UCI and LAP programs have represented about 1/3 of VDOT's 36 month advertisement schedule for the past several years. Any change in manpower associated with these programs was addressed through the organizational changes in the Blueprint.¹⁶

Performance Tracking – Improving Efficiency and Effectiveness

This year VDOT initiated several measures to report on the performance of LAPs. The purpose of the reports is to establish measures, track progress, and provide consistent and meaningful tools to District and local staff. These new measures include an enhanced Request to Administer process, a one-time advertisement report and a federal strategy obligation report.

VDOT's Efforts to Ensure Local Compliance

LAD initiated reviews of six locally administered projects during FY 2012. These reviews are being conducted in accordance with the compliance assessment program outlined in Chapter 7 of the Locally Administered Projects Manual.

In addition, a Locally Administered Projects Compliance Assessments database has been developed to track project specific information, and to review comments and findings found during project assessments. Reports generated from this information will aid project coordinators and managers in identifying trends and noncompliance issues.

LAP Agreement Revisions

In December 2011 VDOT implemented a new financial management system, Cardinal, that required changes in several billing processes and forms used by the Local Assistance Division when implementing LAP agreements and administering urban system projects that require a 2% local match.

LAD's accomplishments in support of the Cardinal implementation included modifying a large number of project agreements in order to collect the required local match. In addition, VDOT's billing procedure was revised so that the locality is no longer billed for its share of project costs. Under the revised procedure the locality share is deducted directly from the locality's reimbursement.

¹⁶ The "Blueprint" was a Comprehensive Plan developed and implemented by VDOT, pursuant to Item 462.05 of Chapter 781 of the 2009 Acts of Assembly (Appropriation Act), to address reductions in appropriations. By July 2010, VDOT had reduced staffing to fewer than 7,500, a substantial decrease when compared to over 10,000 in 2002.

Revisions were made to the form used to define the financial responsibilities of the agreement so that it can be used for all LAP agreements, simplifying the process for all parties and increasing efficiency by eliminating the varying forms that had been used for different LAPs prior to the revisions.

Finally, for all VDOT administered Urban System projects that require a 2% local match, new agreements were created, which also included the revised financial responsibilities form.

Urban Construction and Maintenance Program

LAD provides assistance to District staff and local governments in establishing priorities for potential funding under the Urban Six Year Improvement Program. LAD also provides the Districts with assessments of the urban program on a biannual basis – comparing allocations to project estimates and current expenditures. LAD continues to work with the VDOT Steering and Technical Committees for the development and implementation of the new Roadway Network System.¹⁷

Collection of Pavement Condition Data on the Local System

The CTB, at their December 2011 meeting, adopted a resolution to reconvene the Local Government Working Group in partnership with the Virginia Municipal League and the Virginia First Cities Coalition to advance the collection and analysis of system condition and performance data on the locally maintained system.

After several meetings of the Local Government Workgroup, the group concluded and recommended to the June 20th, 2012 CTB Workshop the following:

- Maintenance activities in localities that maintain their own systems are substantially different than that on rural county roads;
- Performance measures must be developed with these differences in mind when implementing statewide standards;
- Utilize the VDOT Pavement Data Collection Contract to collect/analyze pavement conditions for arterial routes within localities that maintain their own systems (would provide a consistent standard/protocol that would be used statewide).

*(Note: the CTB Workshop presentation is available at:
<http://www.ctb.virginia.gov/meetings.asp>.)*

Based on these recommendations, VDOT has begun collecting data on all arterial routes with analysis of the data to be completed in the winter of 2013. Results will be provided to the respective localities. Additional information on the Local Government Workgroup and data

¹⁷ The VDOT Steering and Technical Committees are composed of VDOT representatives from throughout the agency, in addition to members from VITA and the consultant community. This group oversees the development and implementation of the Roadway Network System (RNS) Program, which consists of multiple projects developed to replace the legacy mainframe, Highway and Traffic Records Information System (HTRIS), while also enhancing and geo-enabling core business data.

collection process is available on the LAD webpage under Urban Highways at <http://www.viriniadot.org/business/local-assistance.asp>.

III.

Operating and Financial Activities

The information included in this chapter provides budget performance data on the operating and financial activities of the Virginia Department of Transportation for the reporting period FY 2012 (July 1, 2011 – June 30, 2012).

Section III.1 begins with a summary of the state revenue collections to the Commonwealth Transportation Fund (CTF). The Highway Maintenance & Operating Fund and the Transportation Trust Fund are two of the main subfunds under the CTF. This is followed by an overview of the FY 2012 VDOT federal revenue.

Chapter III also reports on VDOT allocations and expenditures. VDOT spent \$4.09 billion in FY 2012. This represents an overall expenditure increase of 14 percent or \$515.6 million in FY 2012 compared to the prior year.

Highway maintenance, which, under Code of Virginia § 33.1-23.1, is the Department's highest spending priority for funds allocated by the CTB for highway purposes, accounted for the largest single spending category, totaling \$1.77 billion. Construction spending totaled \$1.39 billion in FY 2012. This amount includes \$152 million in spending on federal stimulus projects, pursuant to the American Recovery and Reinvestment Act of 2009.

Section III.3 presents fiscal year end cash balances for the major fund categories.

III.1 State and Federal Revenue Collections

Commonwealth Transportation Fund State Revenue Collections

Table III.1 displays Commonwealth Transportation Fund revenue for FY 2012 and FY 2011. FY 2012 CTF revenues were 2.9 percent greater than the prior year, ahead of the forecasted growth rate of 2.2 percent.

- Motor Vehicle Sales and Use tax collections were significantly greater in FY 2012 than in FY 2011. The revenue source grew by 9.1 percent, exceeding the 4.2 percent forecasted growth rate for FY 2012.
- Motor Fuels tax collections were down 1.3 percent from the previous year, slightly ahead of the anticipated 1.4 percent decrease.
- State Sales and Use tax collections were 5.4 percent greater than the prior year, slightly behind the forecast of 5.8 percent.

**Table III.1 Commonwealth Transportation Fund
(Highway Maintenance & Operating Fund and Transportation Trust Fund Revenues)**

(Dollars in Thousands)

Revenue	FY 2012 Estimate	Year-to-Date - June		% Change	% Annual Growth Required by Estimate
		FY 2012	FY 2011		
Motor Fuel Taxes	\$ 832,900	\$ 833,200	\$ 844,377	(1.3)	(1.4)
Priority Transportation Fund (PTF)	157,300	157,297	150,327	4.6	4.6
Motor Vehicle Sales and Use Tax	554,600	580,526	532,178	9.1	4.2
State Sales and Use Tax	504,800	503,070	477,329	5.4	5.8
Motor Vehicle License Fees	239,200	235,604	237,860	(0.9)	0.6
International Registration Plan	62,000	62,566	61,053	2.5	1.6
Recordation Tax	38,400	39,140	34,984	11.9	9.8
Interest Earnings	19,400	13,982	18,268	(23.5)	6.2
Misc. Taxes, Fees and Revenues	12,800	12,349	12,892	(4.2)	(0.7)
Total State Taxes and Fees	\$ 2,421,400	\$ 2,437,734	\$ 2,369,268	2.9	2.2

Note: The columns labeled "FY 2012" and "FY 2011" in Table III.1 show Fiscal Year 2012 and 2011 totals.

VDOT Federal Revenue

Table III.2 presents a summary of federal revenue collections by VDOT Program. The line item listed as “Other Programs” includes Financial Assistance to Localities (Metro Planning) and Administrative and Support Services (Training and Civil Rights Grants).

- VDOT’s federal revenue collections through June 2012 were \$32 million greater than in FY 2011.
- The increase was driven by a 17 percent growth in the revenues generated by maintenance program activity.

Table III.2 Federal Revenue Collections

(Dollars in Thousands)

Program	FY 2012		FY 2011		Difference
	Revenue	% of Total Revenue	Revenue	% of Total Revenue	
Construction	\$ 652,847.7	56.9%	\$ 645,903.3	57.9%	\$ 6,944.4
Maintenance	274,955.7	24.0%	235,274.7	21.1%	39,681.0
ARRA	151,488.1	13.2%	200,497.7	18.0%	(49,009.6)
Planning & Research	17,303.6	1.5%	14,429.4	1.3%	2,874.2
Debt Service	8,280.1	0.7%	8,062.4	0.7%	217.6
Other Programs	42,010.4	3.7%	10,812.9	1.0%	31,197.5
Total VDOT Programs	\$ 1,146,885.6	100.0%	\$ 1,114,980.4	100.0%	\$ 31,905.2

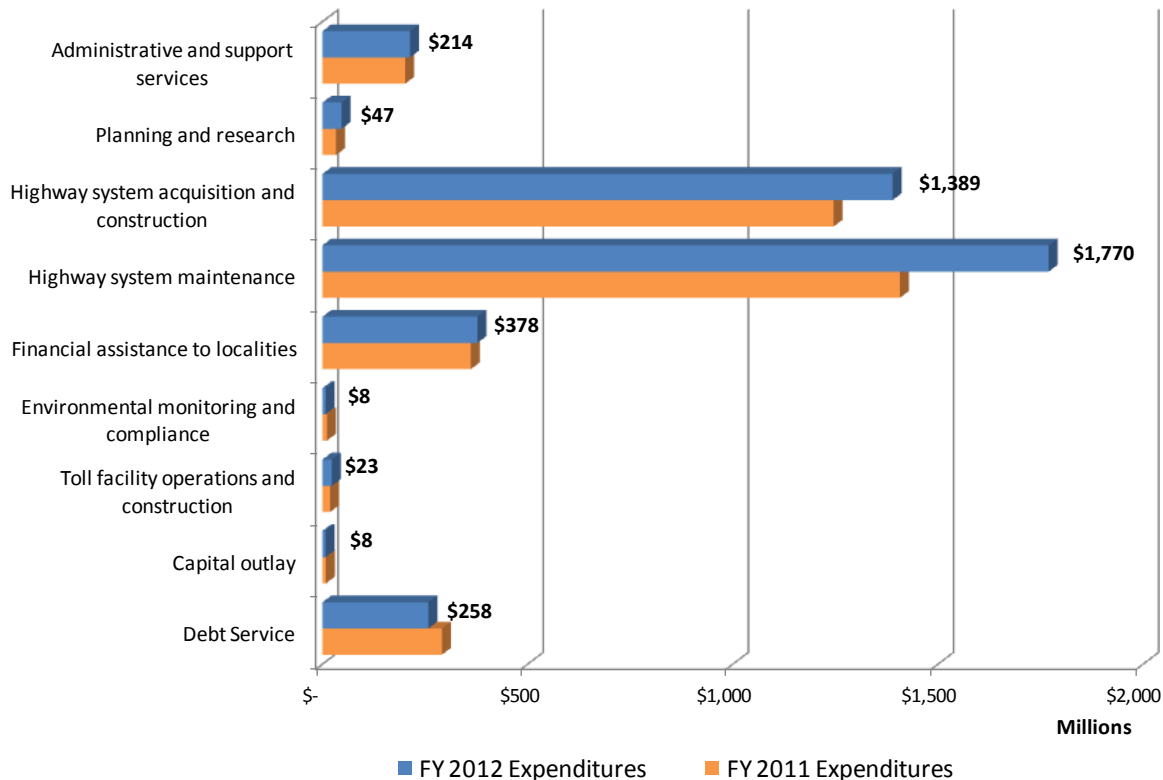
III.2 Allocations and Expenditures

FY 2011 Spending

Figure III.1 displays expenditures by program for FYs 2012 and 2011. Maintenance spending continues to dominate overall performance. The reported Highway System Acquisition and Construction spending includes expenditures from American Recovery and Reinvestment Act of 2009 (ARRA) projects.

- Across all programs, VDOT expended \$4.09 billion in FY 2012, \$516 million more than the previous year.
- Approximately 43 percent of VDOT spending was related to maintenance. This percentage is increased to 52 percent when maintenance payments to localities are included.
- Construction spending, including ARRA projects, accounted for approximately 35 percent of expenditures.

Figure III.1 FY 2012 Expenditures by Program



Maintenance Program

Table III.3 displays a comparison of allocations and expenditures within the Maintenance Program for FYs 2012 and 2011. The Maintenance Program expenditures were higher than in the previous fiscal year, resulting in 91 percent of allocations being spent. It is important to note that, at year-end close, contract paving work was in full production and has continued through the summer months.

- Maintenance program expenditures in FY 2012 totaled \$1.77 billion, a 26 percent increase, or \$362 million, over the previous year.
- Actual spending for FY 2012 was within \$22.4 million of the anticipated spending forecast of \$1.79 billion.
- FY 2012 resulted in a \$177 million allocation balance¹⁸ which is a significant reduction from the \$485 million FY 2011 balance.

Table III.3 Maintenance Program Comparison by Service Area

(Dollars in millions)

Service Area	FY 2012			FY 2011			Difference
	Allocations	Expenditures to Date	% Expended	Allocations	Expenditures to Date	% Expended	
Interstate Maintenance	\$ 590.1	\$ 419.6	71%	\$ 560.8	\$ 295.3	53%	\$ 124.4
Primary Maintenance	684.6	574.1	84%	689.4	476.4	69%	97.7
Secondary Maintenance	447.5	493.2	110%	423.4	422.5	100%	70.7
Transportation Operations Services	140.9	206.6	147%	144.1	142.6	99%	64.0
Program Management & Direction	83.7	76.5	91%	76.0	70.6	93%	5.9
TOTAL	\$ 1,946.9	\$ 1,770.1	90.9%	\$ 1,893.8	\$ 1,407.5	74.3%	\$ 362.7
Anticipated Spending Year to Date		\$ 1,792.5					
Variance		\$ (22.4)					

Note: The data under the columns labeled FY 2012 Expenditures to Date and FY 2011 Expenditures to Date show FY 2012 total expenditures and FY 2011 total expenditures, respectively. The column labeled Difference displays the difference between FY 2012 Expenditures to Date and FY 2011 Expenditures to Date.

¹⁸ Allocation Balance is calculated as Total Allocations minus Total Expenditures to Date.

Construction Program Spending

Table III.4 shows construction spending by Construction Program Service Area.

- Total construction spending was \$1.4 billion in FY 2012, an increase of 11.5 percent over the prior year. The construction spending total includes \$18.8 million in construction management (Program Management & Direction).
- Actual spending was less than one million dollars more than the forecast.
- Year-end expenditures for ARRA projects were \$152 million, a decrease of \$49 million in ARRA construction spending compared to FY 2011. The decrease was due to ARRA projects being completed.

Table III.4 Construction Program Comparison by Service Area

	(Dollars in millions)						
	FY 2012		FY 2011		Difference		
	Expenditures		Expenditures		Amount	Percentage	
	to Date		to Date				
ARRA	\$	151.5	\$	200.5	\$	(49.0)	-24.4%
Dedicated & Statewide Construction		321.4		214.5		106.8	49.8%
Interstate Construction		368.2		372.7		(4.6)	-1.2%
Primary Construction		245.9		168.3		77.7	46.2%
Secondary Construction		104.5		103.0		1.5	1.5%
Urban Construction		179.3		154.7		24.6	15.9%
Total Systems Construction		1,370.7		1,213.7		157.0	12.9%
Program Management & Direction		18.8		32.3		(13.6)	-42.0%
Total	\$	1,389.5	\$	1,246.0	\$	143.5	11.5%
Anticipated Spending Year to Date	\$	1,388.7					
Variance	\$	0.8					

Note: The data under the columns labeled FY 2012 Expenditures to Date and FY 2011 Expenditures to Date show FY 2012 total expenditures and FY 2011 total expenditures, respectively.

FY 2012 Anticipated Spending

Table III.5 shows the anticipated spend plan by program for all of VDOT's programs. This graph displays a comparison between the forecasted spend plan and year-end expenditures for FY 2012.

- Fiscal year-to-date expenditures for most programs were in line with the forecasted spend plan.
- Maintenance expenditures of \$1.77 billion reached an all-time high in FY 2012. The previous high was in FY 2011, with expenditures totaling approximately \$1.41 billion.
- Most of the difference between the VDOT Current Operating Budget total of \$5.2 billion and the FY 2012 Expenditures total of \$4.1 billion can be attributed to "Bond financed projects." The use of GARVEE bond proceeds, in terms of expenditure, has been spread beyond FY 2012. Additionally, Capital Projects Revenue bonds allocated to projects are also being spent in subsequent fiscal years.

Table III.5 Anticipated Spending

(Dollars in millions)

Program	Current Operating Budget	Original Forecasted Annual Spending	Adjusted Forecasted Annual spending	Forecasted Spending to Date	FY 2012 Expenditures	Variance
Administrative and support services	\$ 225.2	\$ 215.7	\$ 225.2	\$ 225.2	\$ 213.7	\$ (11.5)
Planning and research	69.6	65.4	66.2	66.2	46.7	(19.5)
Highway system acquisition and construction						
Construction Funding	1,124.8	838.9	1,252.2	1,252.2	1,250.9	(1.2)
Bond-financed projects	1,137.2	272.8	136.5	136.5	138.6	2.0
Highway system maintenance	1,946.9	1,792.5	1,792.5	1,792.5	1,770.1	(22.4)
Financial assistance to localities	379.7	379.7	379.7	379.7	377.6	(2.1)
Environmental monitoring and compliance	12.6	11.8	12.6	12.6	8.0	(4.6)
Toll facility operations and construction	42.7	23.4	23.4	23.4	20.0	(3.5)
Capital outlay	2.5	17.5	17.5	17.5	7.8	(9.7)
Debt Service	297.9	314.8	261.5	261.5	261.5	-
PTF Debt Service Reserve	6.9	N/A	N/A	N/A	-	N/A
Total Expenditures	\$ 5,246.0	\$ 3,932.6	\$ 4,167.4	\$ 4,167.4	\$ 4,094.9	\$ (72.5)

Notes:

- The Original and Adjusted Forecasted annual spending does include PPTA arrangements. Anticipated spending for Design-Build Projects is not included.
- "Current Operating Budget" displays the Operating Budget for FY 2012.

III.3 Major Fund Cash Balances - June 30, 2012

At the end of FY 2012, the increase in the overall cash balance from FY 2011 was primarily due to Capital Project Revenue bond sales and Grant Anticipation Revenue Vehicle (also called GARVEE) bond sales. Additionally, \$250 million from the Transportation Trust Fund was transferred to the Virginia Transportation Infrastructure Bank (VTIB) for the VTIB's initial capitalization.

The year-end cash balance in the Highway Maintenance & Operating Fund and Construction Fund represents 30 to 60 days of daily expenditures.

Table III.6 Major Fund Cash Balances

Fund	(Dollars in millions)		
	FY 2012	FY 2011 Year End Balance	Difference
Highway Maintenance and Operating *	\$ 210.0	\$ 462.1	\$ (252.1)
Tran Partnership Opportunity Fund	61.3	19.2	42.1
Concession Fund	16.1	35.7	(19.6)
Transportation Trust Funds			
Construction	\$ 162.8	\$ 601.0	\$ (438.2)
Priority Transportation	99.2	89.2	10.0
Federal Reimb. Anticipation Notes	0.1	0.1	0.0
Toll Facility Revolving	145.6	145.1	0.5
Virginia Transportation Infrastructure Bank (VTIB)	315.3	32.7	282.6
Total Transportation Trust Fund	723.0	868.1	(145.1)
ARRA	8.8	11.6	(2.8)
CPR Bonds Fund (Cash and Securities Held by Outside Trustee)	929.5	449.6	479.9
GARVEE Bonds Fund (Cash and Securities Held by Outside Trustee)	289.4	-	289.4
Grand Total	\$ 2,238.1	\$ 1,846.3	\$ 391.8

IV. Other Matters of Importance to Transportation in the Commonwealth

Section 33.1-13.03, subdivision iv, directs the Commissioner of Highways to also report on other matters of importance to transportation in the Commonwealth. Although not specifically identified as reportable in the legislation, VDOT believes that agency activities, as they relate or contribute to multimodal systems warrant mention in this report and are discussed in this chapter. In addition, Chapter IV presents VDOT's success in securing transportation revenue through the U.S. Department of Transportation competitive Discretionary grant program. The final section of Chapter IV presents an overview of the new federal transportation authorization, the Moving Ahead for Progress in the 21st Century Act (MAP-21).

IV.1 Multimodal Systems

A multimodal approach is critical to modern day transportation systems. The importance of a multimodal approach to transportation in the Commonwealth is reflected in the VDOT Business Plan, which reads:

Goal 1: Establish a seamless multimodal system that moves people and freight.¹⁹

In furtherance of this Goal, VDOT strives to develop a Six-Year Improvement Program (SYIP) that supports a multimodal network to move people and freight efficiently and effectively and to accelerate project delivery for construction projects. In developing the SYIP, VDOT has focused and will continue to focus on programming 10 to 15 percent of the annual construction program for new preliminary engineering phase starts each fiscal year, based on candidate projects identified through the planning process and on identifying projects that align with the CTB guidelines and the 2035 Surface Transportation Plan (STP).²⁰

The 2035 Virginia Surface Transportation Plan is undergoing an update and will incorporate changes from the Statewide Rail Plan, Statewide Highway Plan, and Statewide Transit & Transportation Demand Management Plan. Updates such as public meeting dates, draft reports, or links to the individual plan updates (including the Statewide Highway Plan) can be found at http://vtrans.org/2035_virginia_surface_transportation_plan_update.asp. That website also contains a link for online public comment.

¹⁹ *Virginia Department of Transportation Business Plan for FY13 – FY14*, p7.

²⁰ VDOT worked with DRPT to develop the 2035 Surface Transportation Plan which represents the first time VDOT and DRPT organized multimodal proposals into a single plan.

IV.2 VDOT Efforts in Securing U.S. Department of Transportation Grants

Under the direction of the Commissioner of Highways and the Chief of Planning and Programming, VDOT aggressively pursued several competitive grant opportunities sponsored by the U.S. Department of Transportation (US DOT) during FY 2012. Congress initially authorized US DOT's competitive "Discretionary" grant program with passage of the American Recovery and Reinvestment Act of 2009.

More recently, the US DOT sponsored three grant programs starting in August 2011. Applications were solicited for a variety of transportation projects across all modes with the exception of aviation. VDOT submitted applications in response to each of the three recent grant solicitations. Generally, the grants required a 20 percent non-federal match.

In addition to state DOTs, eligible project sponsors included local governments, transit authorities and others. VDOT actively provided assistance in developing non-VDOT grant applications. These efforts resulted in awards to 11 Virginia projects, totaling over \$28 million dollars. VDOT won grants totaling \$21.6 million, while other Virginia project sponsors were awarded \$6.6 million. These grant awards will assist in funding projects as diverse as repairs to ferry boat docks and replacement of ferry boats to constructing the I-95 High Occupancy Toll Lanes.

Table IV.1 summarizes the Virginia awards (VDOT and non-VDOT).

**Table IV.1
US DOT TIGER and Discretionary Grant Awards to Virginia in FY 2012**

Project	Project Sponsor	Funding Amount
I-95 High Occupancy Toll Lanes	VDOT/Office of Transportation Public Private Partnership	\$20,000,000
Merry Point Ferry Dock and Traveler Information Improvements	VDOT - Fredericksburg District	\$140,000
Sunnybank Ferry Dock and Traveler Information Improvements	VDOT - Fredericksburg District	\$140,000
Elizabeth River Ferry Improvements in Portsmouth	Hampton Roads Transit	\$1,797,600
Staffordboro Blvd. Park and Ride Access in Stafford County	VDOT: Fredericksburg District	\$1,320,000
Rehabilitation of Bob White Covered Bridge in Patrick County	Patrick County	\$312,000
Daniel Boone Wilderness Trail Exhibits	Scott County	\$638,400
Design for Army Navy Drive Complete Street	Arlington County	\$496,000
Route 1/Fuller Heights Road and Fuller Road Relocation	Prince William County	\$1,000,000
Walk to Downtown Vienna Initiative	Town of Vienna/Vienna Public Works	\$800,000
Luray Main Street Bridge Rehabilitation and Repair	Town of Luray	\$1,620,341

IV.3 Moving Ahead for Progress in the 21st Century Act, the Federal Transportation Reauthorization

In July 2012 Congress enacted the Moving Ahead for Progress in the 21st Century Act (MAP-21, P.L. 112-141), the new long-term highway authorization. MAP-21 replaced SAFETEA-LU, which had been extended several times after expiring in 2009.

MAP-21 is a two year authorization, funding surface transportation programs at over \$105 billion for federal fiscal years (FFYs) 2013 and 2014, and though it represents a substantial change in the federal transportation program, it builds on and refines many of the prior highway, transit, bike, and pedestrian programs and policies.

The FHWA has developed a web site with links to fact sheets, webinars and other useful information describing MAP-21, <http://www.fhwa.dot.gov/map21>. The following overview highlights several of MAP-21's key components and the differences when compared to SAFETEA-LU.

Consolidation of Core Programs and Changes to Discretionary Programs

MAP-21 substantially consolidates the complex array of programs established or extended by SAFETEA-LU into the following new core formula programs:

- National Highway Performance Program (NHPP)
- Surface Transportation Program (STP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Highway Safety Improvement Program (HSIP)
- Railway-Highway Crossings (set-aside from HSIP)
- Metropolitan Planning

MAP-21 also creates two new formula programs:

- Construction of Ferry Boats and Ferry Terminal Facilities – replaces a similarly purposed discretionary program.²¹
- Transportation Alternatives (TA) – a new program, with funding derived from the NHPP, STP, HSIP, CMAQ and Metropolitan Planning programs, encompassing most activities

²¹Discretionary programs are special funding categories under which FHWA solicits candidate projects and selects projects for funding based on pre-established criteria. Each program has its own eligibility and selection criteria that are established by law, by regulation, or administratively. Web citation: Federal highway Administration 2012 Discretionary Grant Programs, <http://www.fhwa.dot.gov/discretionary/>

previously funded under the Transportation Enhancements, Recreational Trails, and Safe Routes to School programs under SAFETEA-LU.

Though many of the previous smaller programs are eliminated, including most discretionary programs, the eligibilities are generally continued under the MAP-21 core programs. In addition, MAP-21 creates a new discretionary program – Tribal High Priority Projects (THPP) – and continues the following prior discretionary programs:

- Projects of National and Regional Significance (PNRS)
- On-the-Job Training Supportive Services
- Disadvantaged Business Enterprise (DBE) Supportive Services
- Highway Use Tax Evasion (Intergovernmental enforcement projects)
- Work Zone Safety Grants

The Planning Process and Performance Management

In MAP-21, the metropolitan and statewide transportation planning processes are continued and enhanced to incorporate performance goals, measures, and targets into the process of identifying needed transportation improvements and project selection.

Indeed, the cornerstone of MAP-21's highway program transformation is the transition to a performance and outcome-based program. National goals will be established and states will invest resources in projects to achieve individual targets (to be set by the state) that collectively will make progress toward the national goals.

Public involvement remains a hallmark of the planning process.

Accelerating Project Delivery and Streamlining the Environmental Review Process

Several changes in MAP-21 are designed to accelerate project delivery and streamline the environmental review process. As an example, under MAP-21 states may exercise the option to use the construction manager/general contractor (CMGC, also referred to as Construction Manager-at Risk [CMR]) method of contracting. Prior to passage of MAP-21, a state was required to request approval from the FHWA to use CMGC contracting on a project by project basis. CMGC contracting is also designed to expedite project delivery.

To encourage the use and development of innovative techniques and methods, MAP-21 provides for increased federal share (up to 100 percent) for some projects where the U.S. DOT Secretary has determined the project utilizes innovative techniques and methods.

In an effort to streamline the environmental review process, MAP-21 allows the Final Environmental Impact Statement (FEIS) and the Record of Decision (ROD)²² to be combined under certain conditions, eliminating the normal 30 day waiting period between submission of the FEIS and return of the ROD by the FHWA.

²² The Record of Decision signals formal federal approval of an Environmental Impact Statement or Environmental Assessment concerning a proposed highway project.

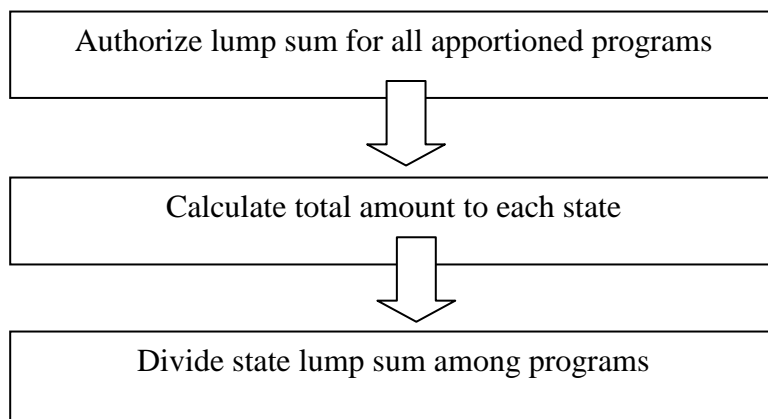
Other environmental streamlining changes include giving the state the ability to seek approval of a programmatic mitigation plan, rather than requiring approval of mitigation strategies project by project. MAP-21 also provides expanded authority for categorical exclusions (CE). For example, a CE can be shared by several agencies working on a multi-modal project.

Funding

MAP-21 authorizes a total combined amount of \$37.5 billion in FFY 2013 in contract authority to fund the core formula programs, slightly lower than the FFY 2012 total apportionment of \$37.6 billion. MAP-21 authorizes contract authority of \$37.8 billion in FFY 2014.

Virginia's total FFY 2013 apportionment is \$983.3 million, a decrease when compared to Virginia's FFY 2012 apportionment of \$985.9 million. In FFY 2014, the estimated apportionment is \$994.1 million.²³

Prior to MAP-21, each apportioned program had its own formula for distribution, and each state's total was the sum of the amount it received for each program. MAP-21's new approach to distribution of formula funds is now based on the amount of formula funds each state received under SAFETEA-LU. The FHWA uses the following flow chart to summarize the new approach.



There are no earmarks in MAP-21 and the size of the safety program is doubled.²⁴

²³ Data Source: Federal Highway Administration. The FFY 2012 apportionments are from <http://www.fhwa.dot.gov/legregs/directives/notices/n4510758/n4510758t1.htm>. The FFY 2013 and 2014 web reference is <http://www.fhwa.dot.gov/map21/apportionment.cfm> - use "Funding Tables" link.

²⁴ Even though all states will realize an increase, the safety program apportionment will not necessarily double for every state compared to their 2012 apportionment under SAFETEA-LU.

Appendix

Chapters 36 and 152 of the 2011 Acts of Assembly

This report is submitted in response to Chapters 36 and 152 of the 2011 Acts of Assembly, which among other things, amended the *Code of Virginia* by adding § 33.1-13.03, requiring the Commissioner of Highways to submit a written annual report to the Governor and General Assembly. The code section reads:

§ 33.1-13.03 Code of Virginia

The Commissioner of Highways shall annually report in writing to the Governor and General Assembly, no later than November 30 each year, on (i) the condition and performance of the existing transportation infrastructure, using an asset management methodology and generally accepted engineering principles and business practices to identify and prioritize maintenance and operations needs and to identify performance standards to be used to determine those needs, and funding required to meet those needs, (ii) the Department's strategies for improving safety and security, increasing efficiency in agency programs and projects, and collaborating with the private sector and local government in the delivery of services, (iii) the operating and financial activities of the Department including, but not limited to, the construction and maintenance programs, transportation costs and revenue, and federal allocations, and (iv) other such matters of importance to transportation in the Commonwealth.