



COMMONWEALTH of VIRGINIA

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

Charles A. Kilpatrick, P.E.
Commissioner

October 31, 2014

The Honorable S. Chris Jones
Chairman, House Appropriations Committee
P.O. Box 5059
Suffolk, Virginia 23435-0059

The Honorable Walter A. Stosch
Co-Chairman, Senate Finance Committee
Innsbrook Centre
4551 Cox Road, Suite 110
Glen Allen, Virginia 23060-6740

The Honorable Charles J. Colgan
Co-Chairman, Senate Finance Committee
10660 Aviation Lane
Manassas, Virginia 20110-2701

The Honorable Thomas D. Rust
Chairman, House Transportation
730 Elden Street
Herndon, Virginia 20170

The Honorable Stephen D. Newman
Chairman, Senate Transportation
P.O. Box 480
Forest, Virginia 24551

Dear Gentlemen:

I am forwarding to you the first report required by Item 445 E. of Chapter 2 of the 2014 Acts of the Assembly (Special Session I) which directs the Virginia Department of Transportation (VDOT) (i) to utilize the data collected for its State of the Pavement Report to review the conditions of secondary pavements by county within the VDOT Richmond District; and (ii) by October 15, 2014, to report to the Chairmen of the House Appropriations, Senate Finance, and

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House and Senate Transportation Committees on the conditions of secondary pavements by county, and the expenditure of funds for secondary pavement maintenance in the Richmond District by county in fiscal year 2013. As directed by Item 445. E., VDOT will prepare and submit an update to this report, which will include an update on the availability of condition data on the secondary system and VDOT's progress at implementing the requirements of Chapter 290 of the 2013 Acts of Assembly, by October 15, 2015.

If you have any questions or need additional information, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Kilpatrick', written in a cursive style.

Charles A. Kilpatrick, P.E.
Commissioner of Highway

Attachment

cc: The Honorable Aubrey L. Layne, Jr.



Richmond District Secondary Pavement Report

Pursuant to:

Item 445. E of Chapter 2, 2014 Acts of the Assembly (Special Session I)

Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219
October 15, 2015

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Executive Summary

Pursuant to Item 445. E of Chapter 2 of the 2014 Acts of the Assembly (Special Session I) (“Item 445 E”), the Virginia Department of Transportation (VDOT) was directed to report to the Chairmen of the House Appropriations, Senate Finance, and House and Senate Transportation Committees on the conditions of secondary pavements, and the expenditure of funds for secondary pavement maintenance in the Richmond District, by county, in fiscal year 2013 and to determine if there were significant disparities in condition of secondary roads among counties within Richmond District. If so found, VDOT was directed to adjust funding for FY 2015 and FY 2016 to reduce the disparities to a minimum.

For the purpose of this study, VDOT gathered and analyzed the secondary pavement condition data from the State of The Pavement Report by county within Richmond District. VDOT also reviewed the expenditure of maintenance funds within Richmond District for FY 2013. It was observed that there were some disparities in condition of secondary roads by county in terms of percent deficient pavements. It was also observed that Richmond District, for FY2013, began allocating funds for the secondary paving program, in part, to address the deficiencies and to ensure that pavements in each locality received appropriate attention and that the limited resources that are available are utilized efficiently. Fiscal Year 2013 data reveals that expenditure of funds for pavement conditions by percentages was consistent with percentages of deficient pavements in each county. Further, for FY 2014 and 2015, allocations by the Richmond District for the secondary paving program have been based, for the most part, on the percentage of deficient pavements in each county. Thus, although there are some disparities between counties as to the percentage of deficient pavements, Richmond District has more

recently been allocating funds for the secondary paving program, by county, based on the percentage of deficient pavements, in order to alleviate these disparities.

It is therefore concluded that VDOT does not need to further adjust FY 2015 allocations since the current methodology utilized by the Richmond District takes into account the relative deficiencies of secondary pavements by county within the District. As further condition data becomes available from recent condition inspections, FY 2016 allocations may be adjusted slightly to continue effecting the desirable trend. Finally, as required by Item 444 E, VDOT will be providing an update to this report to the Chairmen of the House Appropriations, Senate Finance, and House and Senate Transportation Committees on or before October 15, 2015.

Introduction

The Virginia Department of Transportation (VDOT) is responsible for more than 126,000 lane miles of roadway. Virginia's current highway network is the result of more than 100 years of investment in infrastructure that provides safe, easy movement of people and goods and enhances the economy of the Commonwealth. Preserving this investment is a core function of VDOT. VDOT has established a performance target that 65% of the secondary pavement network statewide will have "sufficient" pavement rating.

Richmond District is one of nine (9) districts in the Commonwealth that provides services to localities and coordinates the construction and maintenance operations within its jurisdiction. It consists of four (4) Residency Offices that provide services to a total of fourteen (14) counties. The counties served by Richmond District are Brunswick, Lunenburg, Mecklenburg, Dinwiddie, Nottoway, Prince George, Amelia, Chesterfield, Powhatan, Charles City, Henrico, New Kent, Goochland and Hanover.

Item 445. E of Chapter 2 of the 2014 Acts of the Assembly (Special Session I) directs VDOT

to utilize the data collected for its State of the Pavement Report to review the conditions of secondary pavements by county within the VDOT Richmond District. By October 15, 2014 the Department shall report to the Chairmen of the House Appropriations, Senate Finance, and House and Senate Transportation Committees on the conditions of secondary pavements by county, and the expenditure of funds for secondary pavement maintenance in the Richmond District by county in fiscal year 2013. If the report indicates that there are significant disparities in the condition of secondary

pavements between counties in the Richmond District then the Department is hereby directed to ensure that the expenditure of funds for secondary pavements maintenance within the Richmond District in fiscal year 2015 and fiscal year 2016 shall be adjusted to achieve a minimal level of disparity between the pavement conditions in each county, provided that the Department take all steps necessary to ensure the safety of the driving public in the event of unforeseen events that may require the expenditure of funds to deviate from this directive. An update to the report, which shall include an update on the availability of condition data on the secondary system and the Department's progress at implementing the requirements of Chapter 290 of the 2013 Acts of Assembly shall be presented to the Chairmen of the House Appropriations, Senate Finance, and House and Senate Transportation Committees by October 15, 2015.

This report provides the information collected and analyzed by the Virginia Department of Transportation over the last few years to include FY 2013 expenditures by county within the Richmond District based on the secondary road inventory and deficient pavement criteria.

Methodology

The data utilized in this study comes from the VDOT State of the Pavement Report. The pavement condition data presented in this report were collected and processed by VDOT's contractor using continuous digital imaging and automated crack detection technology. The process and software utilized for the condition rating is a proven technology and well established within the pavement management community nationwide.

Data are collected by the above-mentioned method on the entire Interstate and Primary highway systems, and approximately 20% of Secondary system of highways, each year. For this report a 5 year average was utilized to obtain a 100% coverage of the secondary road system. The distresses of pavement, such as cracking and other surface deformations, are interpreted according to the methodology detailed in the VDOT Distress Identification Manual, processed,

and summarized in a pre-defined format. Quality Control (QC) of the data is provided by the contractor and Quality Assurance (QA) and Independent Validation and Verification (IV&V) is performed by a third party consultant. VDOT then accepts the data based on predefined acceptance criteria.

The data presented in this report uses the State of Pavement Report and the funding expenditures by county, within the Richmond District. Not all maintenance funding affects the pavement condition and therefore the expenditures used in this report are from secondary road paving projects that have a direct impact on improving or preventing deficiencies.

In order to provide a comprehensive investigation into conditions of secondary pavements using data from the State of the Pavement Report and associated funding distribution by county within the Richmond District, the following information was compiled:

- Richmond District Residency and County Organization by Lane Miles (Table 1)
- Percentage of Deficient Pavement by County (Chart 1)
- Percentage of Secondary Pavement Lane Miles by County in Richmond District (Chart 2)
- Percentage of Deficient Secondary Pavement vs. Percentage of Lane Miles vs. Percentage of Expenditures (Chart 3)
- Annual Funds for Secondary Resurfacing (Table 2)

Table 1 –Richmond District Residency and County Organization by lane miles

RESIDENCY	COUNTY	Secondary Lane Miles
South Hill	Brunswick	1026
	Lunenburg	727
	Mecklenburg	1206
Petersburg	Dinwiddie	988
	Nottoway	557
	Prince George	594
Chesterfield	Amelia	640
	Chesterfield	3489
	Powhatan	621
Ashland	Charles City	267
	Goochland	656
	Hanover	1674
	Henrico	NA
	New Kent	418

Chart 1

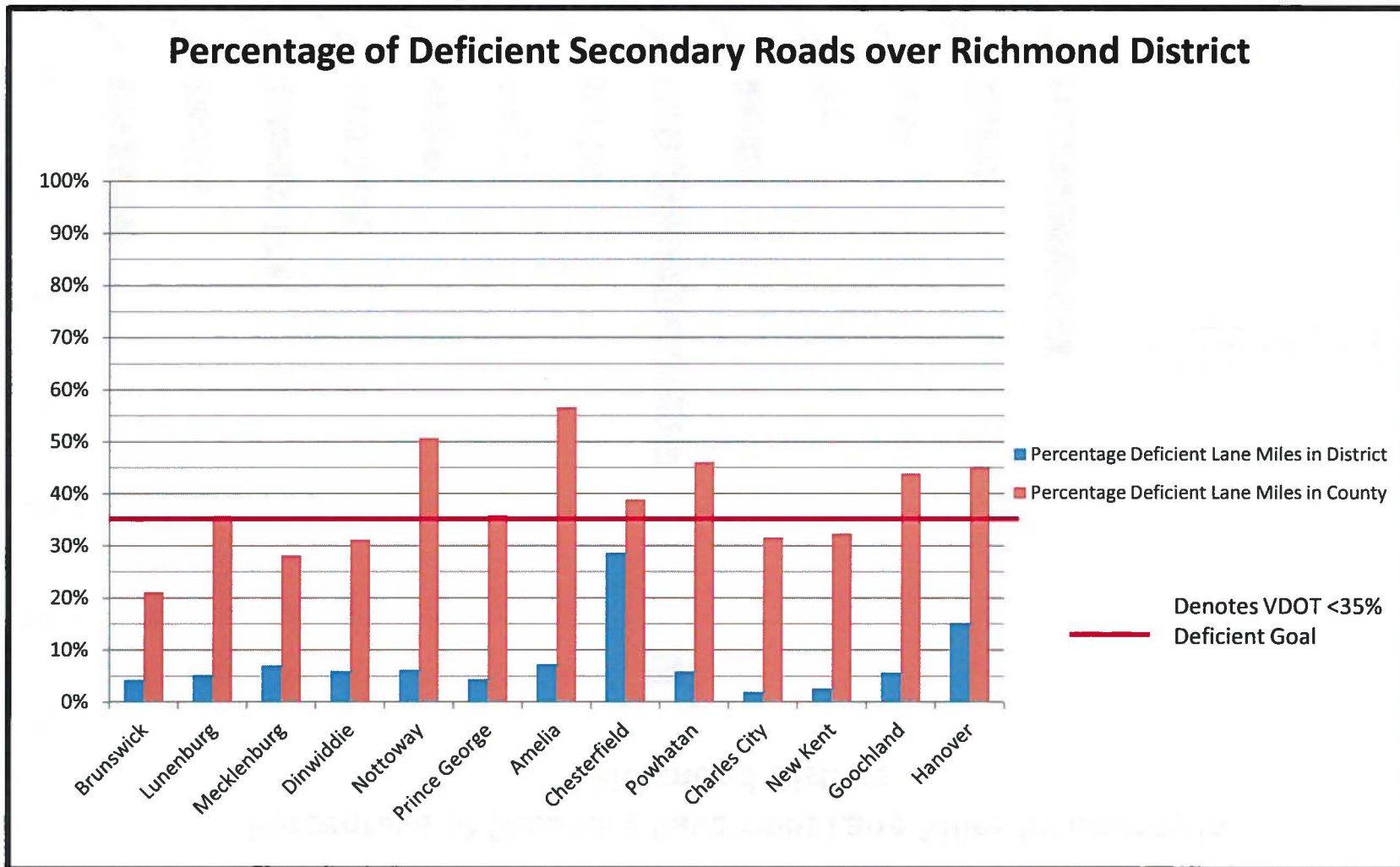
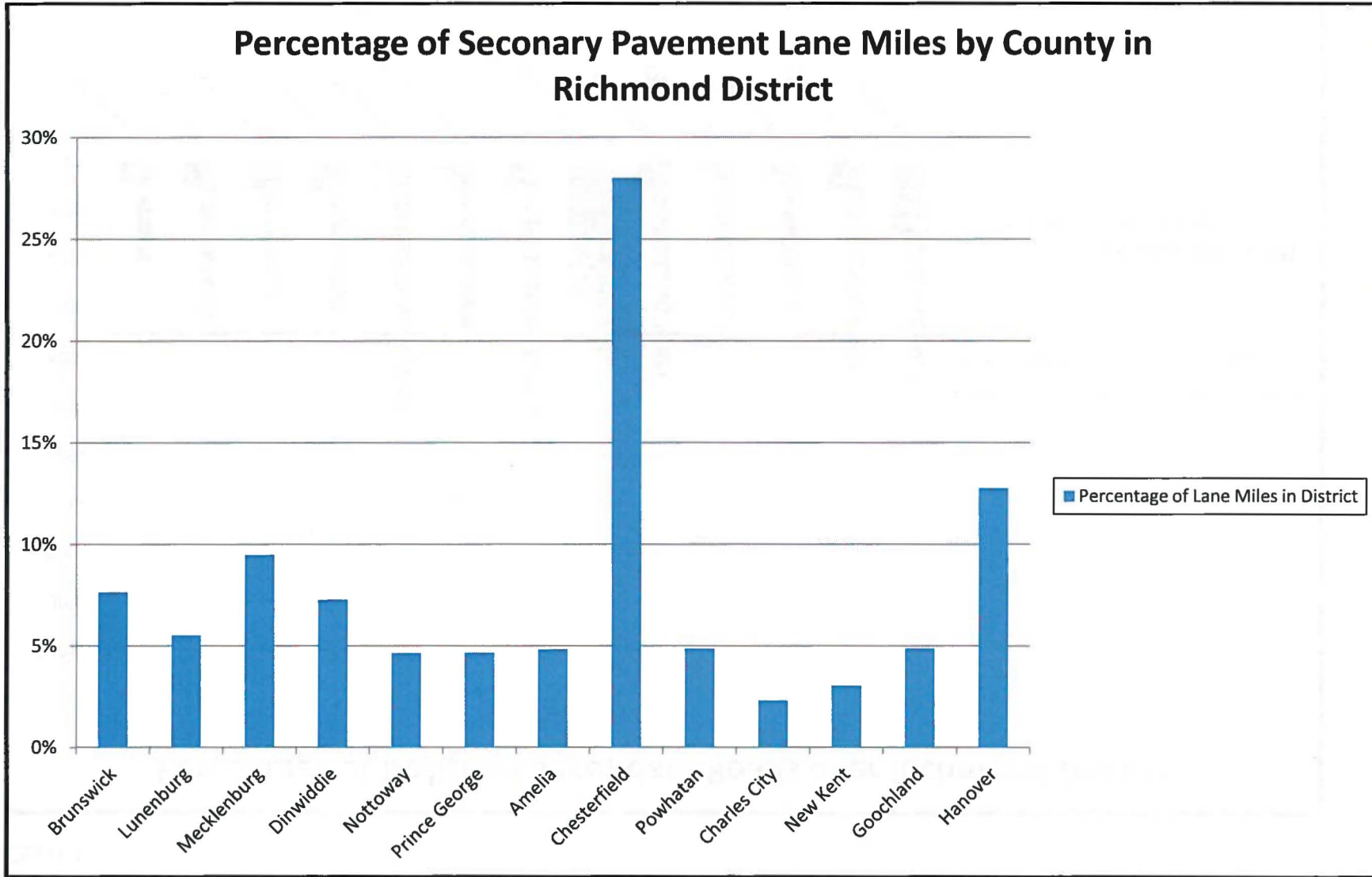


Chart shows the deficient lane miles in the county expressed as a percentage of total deficient lane miles in the district as compared to the percentage of total lane miles in the county. For example, Brunswick County has 4.1% of the entire district's deficient lane miles while 20.1% of all secondary lane miles in Brunswick County are deficient.

Chart 2



See Table 2 for lane miles within the district

Chart 3

Percentage of Deficient Secondary Pavement in District vs. Percentage of Lane Miles Based on 2013 Data

- Percentage Deficient By District
- Percentage Lane Miles in District
- Percentage of Expenditures

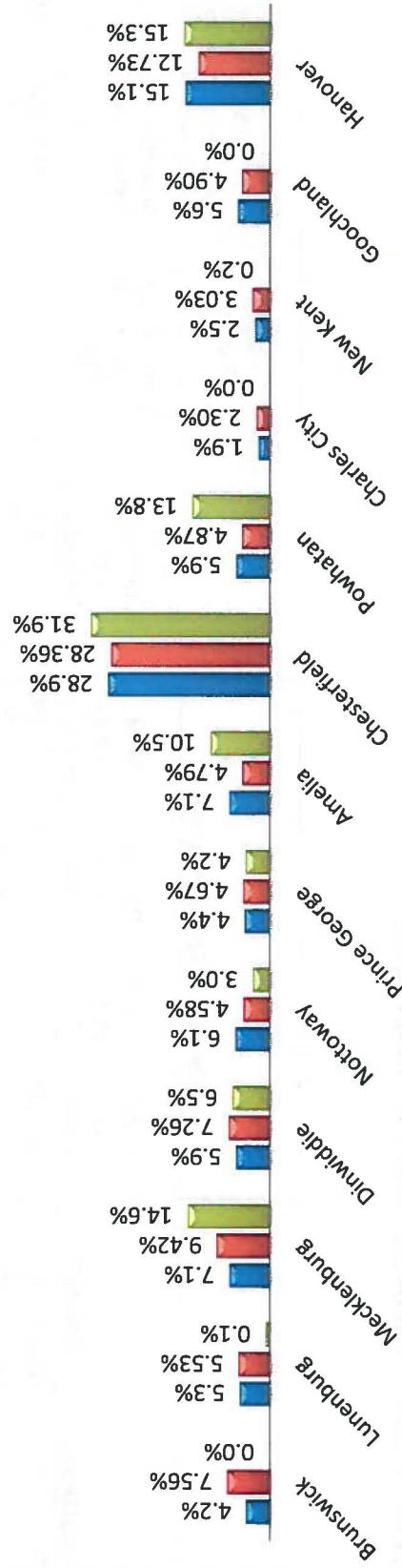


Table 2 - Annual Funds for Secondary Resurfacing

RESIDENCY	COUNTY	2009 - 2013 Totals/Averages				2013 % of District Total Deficient	FY 2013 Funds	Unadjusted FY 2015 Allocations	Adjusted FY 2015 Allocations	Adjusted FY 2015 Allocations by %
		Lane Miles Rated	% of District Total	Deficient Lane Miles	% of Locality Deficient					
South Hill	Brunswick	922.466		193.6	21.0%	4.2%	1,270	789,362	1,036,067	5.5%
	Lunenburg	675.35		247.75	36.7%	5.3%	10,266	1,010,147	736,274	3.9%
	Mecklenburg	1149.139		331.826	28.9%	7.1%	2,198,497	1,352,949	1,334,332	7.0%
		2746.955	23%	773.176	28.1%	16.6%	2,210,033	3,152,459		
Petersburg	Dinwiddie	886.164		275.71	31.1%	5.9%	981,190	1,124,148	2,153,681	11.3%
	Nottoway	558.832		283.358	50.7%	6.1%	447,118	1,155,331	521,525	2.7%
	Prince George	569.219		203.559	35.8%	4.4%	631,122	829,968	437,243	2.3%
		2014.215	17%	762.627	37.9%	16.4%	2,059,430	3,109,447		
Chesterfield	Amelia	584.309		331.86	56.8%	7.1%	1,573,638	1,353,088	1,174,853	6.2%
	Chesterfield	3460.301		1345.396	38.9%	28.9%	4,804,754	5,485,563	4,848,375	25.5%
	Powhatan	593.791		273.602	46.1%	5.9%	2,071,672	1,115,553	2,010,600	10.6%
		4638.401	38%	1950.858	42.1%	41.9%	8,450,064	7,954,204		
Ashland S	Charles City	281.118		88.922	31.6%	1.9%	0	362,560	249,957	1.3%
	Henrico	0		0	0.0%	0.0%	0	0	0	0%
	New Kent	369.45		118.77	32.1%	2.5%	25,427	484,259	513,187	2.7%
		650.568	5%	207.692	31.9%	4.5%	25,427	846,819		
Ashland N	Goochland	597.82		262.888	44.0%	5.6%	559	1,071,869	1,382,574	7.3%
	Hanover	1553.803		702.723	45.2%	15.1%	2,300,256	2,865,202	2,609,688	13.7%
		2151.623	18%	965.611	44.9%	20.7%	2,300,815	3,937,071		
		12201.76		4659.964	38.2%	100.0%	15,045,769	19,000,000	19,008,356	100.0%

Target is less than 35% deficient

Conclusion

VDOT currently uses, and has used for several years, a needs based budgeting approach to ensure that all deficiencies are noted and adequate funding is requested to support a systematic approach to maintaining and preserving the highway systems throughout the Commonwealth. Although there are some disparities between counties as to the percentage of deficient pavements, Richmond District has more recently been allocating funds for the secondary paving program to the Residencies, by county, based on the percentage of deficient pavements in order to alleviate these disparities. The Residencies may make adjustments to these allocations based on the observed field conditions and severity of the deficiencies which have occurred since the last data collection, as pavements go through one winter cycle between the time the most recent data was collected and the allocation process. This process ensures that all localities receive appropriate attention and limited available resources are used effectively and efficiently.

It is therefore concluded that VDOT does not need to further adjust FY 2015 allocations for secondary pavement in the counties in Richmond District since the current methodology utilized by the District takes into account the deficiencies of secondary pavements by county within the District. As further condition data becomes available from recent condition inspections, FY 2016 allocations may be adjusted slightly to continue effecting the desirable trend. Finally, as required by Item 444 E, VDOT will be providing an update to this report to the Chairmen of the House Appropriations, Senate Finance, and House and Senate Transportation Committees on or before October 15, 2015.