

2024 Transportation Plan

An Implementing Component Plan of the 2022 Clarke County Comprehensive Plan

Adopted by the Board of Supervisors April 8, 2024

ACKNOWLEDGEMENTS

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I. INTRODUCTION

A. Executive Summary

The Clarke County Transportation Plan is an implementing component of the 2022 Clarke County Comprehensive Plan. This iteration is an update of the 2013 Transportation Plan which was the first standalone plan document. Prior to the 2013 version, transportation planning objectives and strategies were included as a chapter within the Comprehensive Plan.

The purpose of the Transportation Plan is to identify and prioritize short and long-term transportation network needs as they relate to the management of growth by the County and its incorporated towns. The Plan is designed to comply with the requirements of Code of Virginia §15.2-2223 which states the following:

As part of the comprehensive plan, each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that include the designation of new and expanded transportation facilities and that support the planned development of the territory covered by the plan and shall include, as appropriate, but not be limited to, roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, freight corridors, and public transportation facilities. The plan shall recognize and differentiate among a hierarchy of roads such as expressways, arterials, and collectors. In developing the plan, the locality shall take into consideration how to align transportation infrastructure and facilities with affordable, accessible housing and community services that are located within the territory in order to facilitate community integration of the elderly and persons with disabilities. The Virginia Department of Transportation shall, upon request, provide localities with technical assistance in preparing such transportation plan.

Transportation plans are required by State code to be consistent with the Commonwealth Transportation Board's Statewide Transportation Plan, the Six-Year Improvement Program, and the location of routes to be followed by roads comprising systems of state highways.

The 2022 Comprehensive Plan's Objective 12 on Transportation directs the specific recommendations that are provided by this Transportation Plan. The Objective includes the following policies:

Ensure that the County's transportation system provides safe and efficient means for all modes of travel for citizens and visitors through coordinated land use decision-making and judicious use of limited fiscal resources.

- 1. Maintain a transportation plan that includes an inventory of the County's existing transportation network, planning assumptions, needs assessment, and recommended future improvements.
- 2. Develop specific strategies for prioritizing transportation projects, responding to new State and Federal projects in the County, and identifying new projects to

improve safety or increase capacity of the public road system. Include policies on bicycle and pedestrian facilities and commuter facilities.

- 3. Maintain the existing primary road system at its present level and upgrade it only for safety purposes or planned traffic increases to the extent funds are provided by the Virginia Department of Transportation.
- 4. Establish specific transportation planning policies in the area plans for the County's designated growth areas including but not limited to policies on walkability, bicycle and pedestrian mobility, interconnected street networks, traffic calming, and other modern techniques that support high quality communities and neighborhoods.
- 5. Carefully assess the short- and long-range fiscal impacts of transportation improvements when land-use decisions and plans are made.
- 6. Continue to maintain a County bicycle and pedestrian plan.

The Transportation Plan should be used in concert with the Comprehensive Plan and relevant component plans to guide land use decisions and to prioritize investments in transportation infrastructure. Objectives and strategies found in the Plan's Chapter II provide specific guidance and recommendations on implementation. Chapter III contains a list of current County-wide project priorities including scoping and planning-level cost estimates. Policies and required transportation planning elements for the Town of Berryville are found in the Town's comprehensive plan and in the Berryville Area Plan for the designated annexation areas. Elements for the Town of Boyce may be found in the Boyce Comprehensive Plan.

B. Summary Statement of Transportation Philosophy

As described in the Comprehensive Plan, Clarke County's land use philosophy focuses residential and commercial development into designated growth areas where it can be best served by public infrastructure. These growth areas include the Towns of Berryville and Boyce and the business intersections of Waterloo and Double Tollgate, all of which are served by primary highways. This philosophy has successfully prevented sprawl and unplanned growth which causes congestion and reduces level of service within the transportation network.

Hand in hand with directing growth to designated areas is the preservation of rural areas for agriculture and open space. Tools such as sliding-scale zoning and the County's conservation easement program have ensured that rural areas have not become dotted with subdivisions and unplanned business areas. An expectation has been established over decades that residents and property owners in the County's rural areas will have a rural level of service for infrastructure including transportation. Increasing the capacity of roads and constructing new roads in rural areas is unnecessary and can facilitate development pressures.

The County's transportation philosophy can be summarized as follows:

- 1. The Commonwealth of Virginia, through the Virginia Department of Transportation (VDOT), is responsible for ensuring that Clarke County has a safe and efficient public road network through professional guidance and provision of funding opportunities.
- 2. The capacity of existing public roads outside of the Towns and designated business intersections, including the County's primary highways, should not be expanded even to accommodate growth generated by adjoining jurisdictions. The County's land use philosophy ensures that no unplanned growth will be generated in the county to require road capacity expansion in the rural areas.
- 3. The County will invest in road improvements to support existing towns and business intersection areas which are consistent with the Comprehensive Plan and applicable component plans. Road improvements in rural areas shall be limited to safety and functional improvements.
- 4. The County expects developers of public and private projects to mitigate all impacts that their projects may have on the County's transportation network.
- 5. Private roads shall be designed to ensure safe connectivity to the public road network and to minimize environmental impacts. Private roads are the sole responsibility of the landowners and easement holders that use them public funds shall not be used to maintain private roads or to upgrade them to public roads.

C. Scope of Current Revision

The Clarke County Planning Commission adopted a resolution on January 4, 2019 to initiate a review of the 2013 Transportation Plan. This resolution directed the review to include the following issues:

- 1. Integrate new transportation funding programs adopted or modified since 2014, including the Commonwealth of Virginia's "Smart Scale" program, into the Transportation Plan.
- 2. Evaluate each priority improvement project to determine whether the project remains relevant and would address current County needs, along with the likelihood of being funded through State and/or Federal programs such as "Smart Scale."
- 3. Evaluate whether to include new priority projects including the Town of Berryville's proposed southeastern collector road that may involve the extension of Jack Enders Boulevard to U.S. 340.
- 4. Determine whether to integrate recommendations from the 2014 Town of Berryville-Clarke County Bicycle and Pedestrian Plan into the Transportation Plan.
- 5. Determine whether to request the Virginia Department of Transportation to conduct new transportation studies, such as a crossover study of the County's four-lane divided primary highways, to aid in developing future project and funding priorities.

6. Coordinate any proposed changes to Comprehensive Plan Objective 12 (Transportation) with any revised recommendations in the Transportation Plan.

In addition to these issues, the 2013 Plan's strategies have been expanded into a more detailed objectives/strategies format. This revision also addresses changes and new information generated since 2013 including population and growth data from the 2020 Census.

D. Statistics and Growth Assumptions

As described in detail in the 2022 Clarke County Comprehensive Plan, the County's land use philosophy focuses residential and business growth into the incorporated towns of Berryville and Boyce and utilizes robust land use controls and programs to ensure preservation of open lands and agricultural operations in the unincorporated areas of the County. Subdivision of land outside of the incorporated towns is limited by the County's sliding-scale zoning system and regulations to ensure that large parcels are maintained. The County also has an active conservation easement purchase program and, together with the efforts of the Virginia Outdoors Foundation and other preservation organizations, have facilitated the placement of approximately 25% of the total land area of Clarke County in permanent conservation easement. This approach to growth management has resulted in the County experiencing a much lower growth rate over the past few decades compared to surrounding jurisdictions.

The County's land use policies also focus commercial growth into the incorporated towns and two designated business growth areas at intersections of primary highways -- Waterloo (U.S. 50/17 and U.S. 340) and Double Tollgate (U.S. 340 and U.S. 522). The County has been disciplined over the years in ensuring that commercial growth occurs predominantly in these locations and at a scale that can be managed with minimal upgrades to the County's infrastructure. Public water and sewer – the primary catalyst for commercial growth – is provided within the incorporated towns, the Waterloo intersection (U.S. 340 and U.S. 50/17), and the Village of Millwood. Public water is provided to the Village of White Post. Plans to extend public water and public sewer from Frederick County to the Double Tollgate intersection (U.S. 340/Va. 277 and US 522) are also underway. Focusing public water and sewer into designated growth areas helps to prevent haphazard commercial growth outside of these areas.

As depicted in the tables below, Clarke County's growth rate has been much slower and is expected to continue be slower in the future compared to our neighboring jurisdictions:

TABLE 1 – Population and Growth Rates, 1950-2020

Jurisdiction*	1950	1960	1970	1980	1990	2000	2010	2020
Clarke	7,074	7,942	8,102	9,965	12,101	12,652	14,034	14,783
		(12.2%)	(2.0%)	(23.0%)	(21.4%)	(4.5%)	(10.9%)	(5.3%)
Loudoun	21,147	24,549	37,150	57,427	86,129	169,599	312,311	420,959
		(16.1%)	(51.3%)	(54.6%)	(50.0%)	(96.9%)	(84.1%)	(34.8%)
Frederick/City of	31,378	37,051	48,322	54,367	67,686	82,794	104,508	119,539
Winchester		(18.1%)	(30.4%)	(12.5%)	(24.5%)	(22.3%)	(26.2%)	(14.4%)
Warren	14,801	14,655	15,301	21,200	26,142	31,584	37,575	40,727
		(-1.0%)	(4.4%)	(38.6%)	(23.3%)	(20.8%)	(19.0%)	(8.4%)
Fauquier	21,248	24,066	26,375	35,889	48,860	55,139	65,203	72,972
		(13.3%)	(10.0%)	(36.1%)	(36.1%)	(12.9%)	(18.3%)	(11.9%)
Fairfax	98,557	275,002	454,275	598,901	818,584	969,749	1,081,726	1,150,309
		(179.0%)	(65.2%)	(31.8%)	(36.7%)	(18.4%)	(11.5%)	(6.3%)
Berkeley, WV	30,359	33,791	36,356	46,775	59,253	75,905	104,169	122,076
		(11.3%)	(7.6%)	(28.7%)	(26.7%)	(28.1%)	(37.2%)	(17.2%)
Jefferson, WV	17,184	18,665	21,280	30,302	35,926	42,190	53,498	57,701
		(8.6%)	(14.0%)	(42.4%)	(18.6%)	(17.4%)	(26.8%)	(7.9%)

Source: US Census 2020

*County government unless otherwise specified

TABLE 2 – Population Projections, 2020-2045

Jurisdiction	2020*	2025**	Growth % 2020-2025	2035**	Growth % 2025-2035	2045**	Growth % 2035-2045
Clarke	14,783	14,894	.8%	15,560	4.5%	16,123	3.6%
Loudoun	420,959	492,696	17.0%	611,954	24.2%	726,245	18.7%
Frederick/City of Winchester	119,539	127,265	6.5%	142,917	12.3%	157,526	10.2%
Warren	40,727	42,108	3.4%	45,679	8.5%	48,930	7.1%
Fauquier	72,972	75,046	2.8%	81,775	9.0%	87,928	7.5%
Fairfax	1,150,309	1,203,264	4.6%	1,276,124	6.1%	1,340,323	5.0%
Berkeley Co., WV	122,076	128,196***	5.0%	144,886***	13.0%	No data	No data
Jefferson Co., WV	57,701	62,463***	8.3%	68,245***	9.3%	No data	No data

Sources:

The County expects to continue to strengthen this philosophy in the coming years so growth rates will continue to be well below those of our neighboring jurisdictions. As noted in Table 2 above, the County is projected to add approximately 1,340 new residents through the year 2045.

The County's growth rate and land use approach translates into a conservative philosophy in regards to transportation planning. As a matter of practice, the County focuses its limited transportation funds on projects that provide substantial safety improvements or improve gravel-surface roads as opposed to projects that expand the capacity of the public road network. The

^{*} US Census (2020)

^{**} University of Virginia's Weldon-Cooper Center (projections)

^{***} West Virginia University's Bureau of Business and Economic Research unpublished data, published by the WV Solid Waste Management Board

County supports efforts by the incorporated Towns to expand the safety and efficiency of their internal road networks as the County's designated growth areas. The County also supports capacity and safety improvements to support new business growth at the intersections of Waterloo and Double Tollgate in partnership with developers, landowners, and VDOT.

One of the major challenges in the future will be to balance the County's transportation and land use philosophies with increasing impacts generated by neighboring localities. The County is generally opposed to expanding the capacity of its public road network including the State and Federal primary highways as these projects could attract additional growth that would be inconsistent with the County's land use philosophies. Alternatives to adding capacity, including expansion of commuting opportunities, should be pursued.

E. Existing Transportation Network

Clarke County is a rural, agricultural county with an area of 178 square miles and is located in the Northern Shenandoah Valley. It is bordered by Frederick County to the west, Warren County to the south, Loudoun and Fauquier Counties to the east, and Jefferson County, West Virginia to the north. The County is bisected by the Shenandoah River and the eastern portion of the County falls within the Blue Ridge Mountains. Population is centered in the two incorporated towns of Berryville and Boyce along with the unincorporated villages of Millwood, White Post, and Pine Grove. Business growth areas are designated at the intersections of Waterloo and Double Tollgate.

Clarke County is not included in any metropolitan planning organization (MPO) study area but is bordered by the Winchester-Frederick MPO to the west and the National Capital Region Transportation Planning Board (TPB) area to the east.

1. Public Road System¹

The Virginia Department of Transportation (VDOT) maintains all public roads within the County with the exception of secondary streets within the Town of Berryville, which are maintained by the Town. Public roads are classified by VDOT using the following terms:

- Other principal arterials Roads that serve corridor movements of substantial statewide or interstate travel and provide an integrated network without stub connections (dead ends).
- <u>Minor arterials</u> Roads that provide service for trips of moderate length, serve geographic areas that are smaller than their higher arterial counterparts, and offer connectivity to the higher arterial system. Minor arterials in rural areas link cities and large towns, along with other major traffic generators, and form an integrated network providing interstate and inter-county service.

¹ Source for functional classification is the Virginia Department of Transportation (VDOT) 2005 Functional Classification map.

- Major collectors Roads that provide service to any county seat not on an arterial system and to larger towns not directly served by arterial systems. Major collectors link these places to nearby larger towns and cities or with arterial routes and serve the most important intra-county travel corridors. Compared to minor collectors, major collectors have lower connecting driveway densities, higher speed limits, are spaced at greater intervals, have higher annual average traffic volumes, and may have more travel lanes.
- <u>Minor collectors</u> Roads that collect traffic from local roads and bring all developed areas within a reasonable distance of a collector roads. Minor collectors provide service to the remaining smaller communities and link local traffic generators with rural areas. They are typically spaced at intervals consistent with population density.
- <u>Local roads</u> Roads that serve primarily as direct access to adjacent land. They provide service to travel over relatively short distance as compared to collectors or other higher systems. All roads not classified as an arterial or collector is classified as a local road.

The County's major public road infrastructure consists of the following:

Federal Primary Highways			
U.S. 50/17 – John Mosby Hwy	Frederick County line to Fauquier County line		
	Four-lane divided minor arterial		
U.S. 340 – Lord Fairfax Hwy	Four-lane divided other principal arterial from West		
	Virginia state line to Va. Rt. 7 (Harry Byrd Highway)		
	Two-lane minor arterial from Va. Rt. 7 to U.S. 522		
	(Stonewall Jackson Highway)		
	Four-lane minor arterial from U.S. 522 to Warren		
	County line (runs concurrently with U.S. 522)		
U.S. 522 – Stonewall Jackson Hwy	Four-lane minor arterial from Warren County line to		
	Frederick County line (runs concurrently with U.S. 340		
	from Warren County line to Double Tollgate		
	intersection)		

State Primary Highways				
Route # and Name Segment, design, and classification				
Va. 7 – Harry Byrd Hwy Frederick County line to Loudoun County line				
	Four-lane divided other principal arterial			
Va. 7 Business – West Main St and	Two-lane major collector			
East Main St (Town of Berryville)				
Va. 255 – Bishop Meade Rd	Lord Fairfax Hwy (U.S. 340) to John Mosby Hwy			
	(U.S. 50/17)			
	Two-lane major collector			

	Classified Secondary Roads – Major Collectors				
#	Name	Segment From/To			
611	Summit Point Rd	Lord Fairfax Hwy (U.S. 340) to West Virginia state line			
612	Shepherds Mill Rd	Lord Fairfax Hwy (U.S. 340) to Harry Byrd Hwy (Va. 7)			
615	First St	East Main St (Va. Business 7) to Liberty St			
616	South Church St	South Buckmarsh St (U.S. 340) to East Main St (Va. Business			
		7)			
616	North Church St	East Main St (Va. Business 7) to Liberty St (Rt 1005)			
620	Browntown Rd	Lord Fairfax Hwy (U.S. 340) to Bishop Meade Rd (Va. 255)			
628	Berrys Ferry Rd	Lord Fairfax Hwy (U.S. 340) White Post Rd (Rt 658)			
632	Crums Church Rd	Old Charles Town Rd (Rt 761) to Harry Byrd Hwy (Va. 7)			
632	Triple J Rd	Harry Byrd Hwy (Va. 7) to Senseny Rd (Rt 657)			
636	Westwood Rd	West Main St (Va. Business 7) to Senseny Rd (Rt 657)			
638	Howellsville Rd	John Mosby Hwy (U.S.50/17) to Warren County line			
657	Senseny Rd	Lord Fairfax Hwy (U.S. 340) to Frederick County line			
658	White Post Rd	Lord Fairfax Hwy (U.S. 340) to Carters Line Rd (Rt 627)			
723	Old Winchester Rd	North Greenway Ave (U.S. 340) to Frederick County line			
723	Millwood Rd	Bishop Meade Rd (Va 255) to John Mosby Hwy (U.S. 50/17)			
761	Old Charles Town Rd	Frederick County line to West Virginia state line			
1005	Liberty St	First St (Rt 615) to N. Church St (Rt 616)			
1035	Mosby Blvd	N. Buckmarsh St (U.S. 340) and West Main St (Va. Business			
		7)			
1041	Jackson St	Mosby Blvd (Rt 1035) to West Main St (Va. Business 7)			

	Classified Secondary Roads – Minor Collectors				
#	Name	Segment From/To			
601	Blue Ridge Mountain Rd	Harry Byrd Hwy (Va. 7) to John Mosby Hwy (U.S. 50/17)			
601	Raven Rocks Rd	Harry Byrd Hwy (Va. 7) to West Virginia state line			
606	River Rd	Harry Byrd Hwy (Va. 7) to Frogtown Rd (Rt 649)			
606	Mt. Carmel Rd	John Mosby Hwy (U.S. 50/17) to Frogtown Rd (Rt 649)			
608	Wickliffe Rd	Harry Byrd Hwy (Va. 7) to West Virginia state line			
613	Springsbury Rd	Jack Enders Blvd (Rt 700) to Possum Hollow Rd (Rt 647)			
615	First St	Liberty St (Rt 1005) to East Fairfax St (Rt T-1015)			
616	North Church St	Liberty St (Rt 1005) to Bundy St (Rt 616)			
616	Bundy St	North Church St (Rt 616) to North Buckmarsh St (U.S.			
		340)			
617	Briggs Rd	Bishop Meade Rd (Va. 255) to Lockes Mill Rd (Rt 618)			
624	Red Gate Rd	John Mosby Hwy (U.S. 50/17) to Warren County line			
644	Gun Barrel Rd	John Mosby Hwy (U.S. 50/17) to Lord Fairfax Hwy (U.S.			
		340)			
649	Frogtown Rd	River Rd (Rt 606) to Mt. Carmel Rd (Rt 606)			
653	Kimble Rd	Harry Byrd Hwy (Va. 7) to Stringtown Rd (Rt 654)			

658	Sugar Hill Rd	White Post Rd (Rt 658) to Warren County line
661	Brucetown Rd	Swimley Rd (Rt 672) to Frederick County line
672	Swimley Rd	Brucetown Rd (Rt 661) to Old Charles Town Rd (Rt 761)
700	Jack Enders Blvd	East Main St (Va. Business 7) to Springsbury Rd (Rt 613)

A complete road classification table is located in Appendix B.

The County also has 24 unpaved public roads or road segments that are maintained by VDOT totaling approximately 24.84 miles. Most of these roads have gravel surfaces with limited or nonexistent shoulders and drainage areas. Below is a breakdown of the general location and characteristics of these unpaved public roads. A full list is included in Appendix D.

- East of the Shenandoah River 5 roads, approximately 6.85 miles
- West of the Shenandoah River 19 roads, approximately 18 miles
- Unpaved segments of paved roads 8 roads, approximately 10 miles
- Through roads (connects two paved public roads) 11 roads, approximately 18.66 miles
- Dead end roads 13 roads, approximately 6.18 miles

VDOT's Rural Rustic Roads program provides funding to hard surface unpaved public roads which meet the following criteria:

- Must currently be in the State Secondary System of public roads
- Maximum traffic of 1,500 vehicles per day
- Must be used predominately for local traffic
- Must have minimal anticipated traffic growth
- Board of Supervisors must pass a resolution designating the road as a Rural Rustic Road

Funding for the Rural Rustic Roads program can come from the locality's annual six-year secondary road construction budget or via direct application for funding, the latter of which requires a public involvement process. Roads approved for funding would be paved with a compacted or impervious surface with reestablishment of existing associated ditches and shoulders. Trees, vegetation, side slopes, and open drainage along the roadway are typically left undisturbed. Project costs are minimized by not requiring project engineering or acquiring right-of-way from property owners.

2. Private Roads

There are over 300 private roads in the County that are recognized with an official County road name by virtue of serving three or more addressable structures. Private roads are maintained solely by the property owners that access the road or by an organized homeowners association. As a long standing policy, the County does not expend public funds to maintain and repair private roads or to accept private roads into the public road system. The County Subdivision Ordinance requires all new subdivisions that will be served by private roads to include a note on the plat indicating that the private road will never be maintained by Clarke County or the Virginia Department of Transportation.

A complete list of private roads is located in Appendix C.

3. Bicycle and Pedestrian Facilities

In 2014, the Town of Berryville and Clarke County accepted a joint Bicycle and Pedestrian Plan which was produced by the Northern Shenandoah Valley Regional Commission (NSVRC). NSVRC staff developed the Plan under the guidance of a steering committee consisting of Town and County staff members, the Town's chief of police, and a representative from the County Planning Commission. The Plan contains a comprehensive overview of the existing transportation network, recommendations for bicycle and pedestrian enhancements, and outdoor recreational opportunities in the Town and County. It also contains an analysis of the interconnectivity among on-street bicycle accommodations, pedestrian facilities, trails, parks, and other points of interest or tourist destinations. The goal of the Plan is to inform future planning efforts and tourism, marketing, and economic development initiatives. The Plan has not been reviewed or updated since its 2014 completion.

The County currently does not have any Federal or state-designated bicycle routes.

Pedestrian facilities in the form of sidewalks and walking paths are found predominantly in the incorporated towns and the business intersections at Waterloo and Double Tollgate. The Appalachian Trail is located along the eastern portion of the County.

4. Railroads

The County is served by two rail lines. The primary line is a Norfolk Southern line that runs from Warren County in the southeast to the West Virginia State line in the northeast portion of the County. This line passes through both the Town of Berryville and Boyce with sidings serving existing businesses located in Berryville. A second line, operated by CSX, passes through the northern tip of the County from West Virginia to Frederick County near the community of Wadesville.

There is no passenger train access in the County.

5. Airports

There are no public airports in the County although there are a handful of private airstrips that are recognized by the Federal Aviation Administration. The closest public airports are Winchester Regional Airport in eastern Frederick County and Washington Dulles International Airport in Loudoun County.

6. Commuter Facilities

The Virginia Department of Transportation (VDOT) maintains two park-and-ride lots. The larger of the two is located in Waterloo near the intersections of U.S. 50/17 and U.S. 340. This facility contains 165 spaces and contains pick-up areas for commuter vans. The second lot is located on the east side of U.S. 522/340 at the Virginia Department of Corrections facility. This lot contains 24 spaces. RideSmart provides commuter assistance for residents of Clarke County and the Northern Shenandoah Valley.

II. PLAN OBJECTIVES AND STRATEGIES

This Chapter contains the 2024 Transportation Plan's Objectives and Strategies. The Objectives are statements of the County's transportation planning philosophy and the Strategies are recommended action items to be followed in order to implement the Objectives. The Objectives and Strategies are consistent with the guidance set forth in the 2022 Comprehensive Plan.

Objective 1

Plan for a safe, cost-efficient, and cost-effective County-wide transportation network.

Strategy 1

Conduct a formal evaluation of the Transportation Plan in conjunction with each fiveyear review of the County's Comprehensive Plan.

Strategy 2

Between five-year reviews of the Comprehensive Plan, evaluate the Transportation Plan's list of proposed improvement projects on an annual basis to gauge whether new impacts or funding opportunities may impact the need or priority of the projects. Consult with the Virginia Department of Transportation (VDOT) and Clarke County Sheriff's Office for input on these evaluations.

Strategy 3

Consider supporting new projects which may not be on the Plan's list of projects but that arise between five-year review periods due to new or changed impacts or new funding opportunities. Such projects shall be recommended for implementation by VDOT staff and have a strong likelihood of receiving State and/or Federal funding.

Strategy 4

Request VDOT to conduct new or update current safety studies along primary highways, secondary roads, and intersections with safety concerns including but not limited to:

- Lord Fairfax Highway (U.S. 340) corridor
- Harry Byrd Highway (Va. Route 7) corridor
- John Mosby Highway (U.S. 50/17) corridor
- Double Tollgate intersection U.S. 340/Va. 277 and U.S. 522
- Waterloo intersection U.S. 50/17 and U.S. 340

Request that VDOT provide recommendations on safety improvements including implementation strategies, cost estimates, and likelihood of funding through VDOT's Smart Scale funding process and other programs.

Strategy 5

Ensure that developers mitigate impacts of their development projects on the safety and functionality of the transportation network by providing required improvements. Encourage voluntary provision of recommended improvements such as right-of-way

dedication, sight distance improvements, turn lane and acceleration/deceleration lanes, and off-site transportation improvements.

Objective 2

Continue to focus the County's limited transportation funds and resources on projects that:

- Improve traffic safety and functionality within the Towns and business intersections
- Add compatible bicycle or pedestrian features
- Provide new or enhance existing commuting opportunities
- Replace existing gravel public roads or road segments with new hard surfaces

Strategy 1

Prioritize projects that would serve designated growth areas and either have a committed funding source or would be a strong candidate for transportation funding through programs such as Smart Scale.

Strategy 2

Apply the County's limited six-year secondary road construction funding towards projects that improve safety, address stormwater impacts, or that hard-surface existing gravel public roads. For projects to hard-surface gravel roads, solicit and evaluate public comments from property owners and users of these roads before construction is authorized.

Strategy 3

Projects that add or improve the safety of bicycle and/or pedestrian accommodations in designated growth areas should be supported. Bicycle and pedestrian projects along secondary roads in the rural areas shall not require significant road widening, in particular along the County's scenic byways.

Strategy 4

Private roads and access easements are the responsibility of the property owners that use them. Public funds shall not be used for hard surfacing or other improvements, nor shall public funds be used to bring these private roads and access easements into the public road system for State maintenance.

Objective 3

Improvements to the transportation network shall be consistent with the County's land use philosophy and the recommendations of the Comprehensive Plan.

Strategy 1

Oppose public and private efforts to expand capacity of the County's road network outside of the incorporated towns and business growth areas including the State and Federal primary highways. Improvement projects which may adversely impact properties in conservation easement or the County's scenic byways shall be avoided.

Strategy 2

Support those projects contained within the corporate limits of and proposed by the Towns of Berryville and Boyce that are consistent with the comprehensive plans of these towns and compatible with the County's land use and transportation philosophy.

Strategy 3

Projects that propose new public roads or significant improvements to existing public roads in designated growth areas shall be consistent with guidance from the following component plans:

- 2022 Comprehensive Plan
- Berryville annexation areas Berryville Area Plan
- Double Tollgate Double Tollgate Area Plan
- Waterloo Waterloo Area Plan

III. PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND STUDIES

Introduction

The projects and studies identified in this chapter are specifically designed to support the planned growth within the two incorporated towns of Berryville and Boyce along with the business intersections of Waterloo and Double Tollgate. The projects and studies also aim to improve safety conditions outside of the growth areas along the County's Federal and State primary routes and secondary roads.

Aside from a few noted exceptions, many of these projects are either newly-identified or have been in the County's Transportation Plan for several years without recent evaluation. The County should request that VDOT study each project over the upcoming Plan term and provide the following guidance:

- Whether there is still a need for the project
- Whether the project scope should be modified
- Whether the project estimate is accurate
- The likelihood of each project being competitive for Federal and State funding, in particular Smart Scale funding

Note that the project costs provided below are planning-level estimates only and do not reflect actual costs derived from preliminary engineering work. Cost estimates were developed using VDOT's Statewide Planning Level Cost Estimates tool (January 2015, current version).

Background

The 2013 Transportation Plan contained the following unprioritized list of improvement projects:

- Intersection of US Route 340 (Lord Fairfax Highway) and US Routes 50/17 (John Mosby Highway) at Waterloo Safety and capacity improvements, improve two existing right turn lanes to current urban design standards, reconfigure north and south sides of intersection to add capacity when new development occurs.
- Intersection of Route 7 (Harry Byrd Highway) and Route 612 (Shepherds Mill Road), approximately 3 miles east of Berryville Safety improvements, upgrade two existing turn lanes to VDOT standards.
- Intersection of US Route 340/277 (Lord Fairfax Highway) and US Route 522 (Stonewall Jackson Highway) at Double Tollgate Safety and capacity improvements, improve existing right and left turn lanes to current urban design standards, reconfigure north and south sides of intersection to add capacity when new development occurs.
- Route 7 Business (West Main Street) from Route 7 (Harry Byrd Highway) to Hermitage Boulevard in the Town of Berryville (approximately 1.2 miles of primary highway) Safety and capacity improvements, drainage improvements, addition of bicycle and pedestrian facilities.

- US Route 340 (Greenway Avenue) Drainage Issues in the Town of Boyce Drainage improvements.
- Route 7 Business (East Main Street) from Route 7 (Harry Byrd Highway) to Norfolk Southern Railroad crossing (approximately 0.94 miles of primary highway) – Safety and capacity improvements, drainage improvements, addition of bicycle and pedestrian facilities.
- Park and Ride Lot, Route 7 (Harry Byrd Highway) near intersection of Route 7 Business one mile west of Berryville Addition of new commuter facility.

In conjunction with the development of the draft 2024 Transportation Plan, the Planning Commission's Policy & Transportation Committee reviewed a revised list of projects consisting of existing projects and new projects that were identified in recent years. While the newer projects had more defined scopes and justifications, most of the existing projects were scoped many years ago. As such, these projects are likely to be outdated and do not account for piecemeal improvements made over the years by private developers or the Virginia Department of Transportation (VDOT). Staff recommended that the 2024 Transportation Plan be focused on requesting VDOT to review each of the projects with outdated scopes to determine whether there is still a need for the project, to clarify the scope if necessary, and to recommend a cost estimate and funding strategy to complete the project.

The Committee requested Planning Staff to prioritize the projects according to need which would be used to direct VDOT's evaluations in the coming years. This resulted in the following prioritized list:

- 1. Intersection of US Route 340/277 (Lord Fairfax Highway) and US Route 522 (Stonewall Jackson Highway) at Double Tollgate
- 2. Intersection of Va. Route 7 (Harry Byrd Highway) and Route 612 (Shepherds Mill Road), approximately 3 miles east of Berryville
- 3. Intersection of Va. Route 7 (Harry Byrd Highway) and Route 601 (Blue Ridge Mountain Road) New project to improve safety at high-traffic intersection.
- 4. Va. Route 7 Appalachian Trail Pedestrian Bridge New project to construct a foot bridge over Va. Route 7 to allow pedestrians to travel safely between trail accesses and parking areas.
- 5. Va. Route 7 Business (East Main Street) from Va. Route 7 (Harry Byrd Highway) to Norfolk Southern Railroad crossing (approximately 0.94 miles of primary highway)
- 6. Va. Route 7 Business (West Main Street) from Va. Route 7 (Harry Byrd Highway) to Hermitage Boulevard in the Town of Berryville (approximately 1.2 miles of primary highway)

- 7. Intersection of US Route 340 (Lord Fairfax Highway) and US Routes 50/17 (John Mosby Highway) at Waterloo
- 8. US Route 340 (Greenway Avenue) Drainage Issues in the Town of Boyce
- 9. Park and Ride Lot, Va. Route 7 (Harry Byrd Highway) near intersection of Va. Route 7 Business one mile west of Berryville

One project (described in detail later in this chapter) was included as an unprioritized project – the Town of Berryville's Southeastern Collector Road – a new facility to be constructed from Lord Fairfax Highway (US 340) to Jack Enders Boulevard (Route 700).

Following completion of the 2024 Transportation Plan initial draft and review by the full Commission, the draft was sent to VDOT for review in accordance with Code of Virginia §15.2-2223. As stated in this code section, transportation plans are required to be consistent with the Commonwealth Transportation Board's Statewide Transportation Plan. VDOT staff noted that the County can identify any improvement projects deemed important however any projects that are included on a prioritized list must include quantifiable measures to support the need for the project.

To assist the County, VDOT staff provided crash data and safety ranking information for the draft list of projects and for other areas with high crash rates that are not addressed in the draft. This list and its supporting data are summarized below:

	VDOT Projects Recommended Based on Crash Data and Ranking ¹					
VDOT Rank	Location	Project Type	Total Crashes	Fatal/Injury Crashes		
16	Harry Byrd Highway (Va. Route 7) 0.93 mi between Triple J Road (Route 632) and West Main Street (Va. Business 7)	Segment	46	11		
19	Waterloo John Mosby Highway (US 50/17) and Lord Fairfax Highway (US 340)	Intersection	32	6		
37	Lord Fairfax Highway (US 340) – 0.74 mi between Shepherds Mill Road (Route 612) and West Virginia state line	Segment	28	7		
39	Harry Byrd Highway (Va. Route 7) and Shepherds Mill Road (Route 612)	Intersection	18	5		
51	Harry Byrd Highway (Va. Route 7) – 0.90 mi between Shepherds Mill Road (Route 612) and Castleman Road (Route 603)	Segment	30	11		
69	Blue Ridge Mountain Road (Route 601) – 1.34 mi between Paris Heights Lane and Valley View Lane	Segment	20	9		
85	Harry Byrd Highway (Va. Route 7) and Kimble Road (Route 653)	Intersection	12	6		

91	Lord Fairfax Highway (US 340) – 0.49 mi	Segment	15	4
	between Smallwood Lane (Route 680) and			
	South Church Street (Route 616)			
111	John Mosby Highway (US 50/17) – 0.66 mi	Segment	17	5
	between Mt. Carmel Road (Route 606) and			
	0.1 mi east of Stone Ridge Lane			
141	John Mosby Highway (US 50/17) – 0.48 mi	Segment	12	3
	between Wildcat Hollow Road (Route 602)			
	and Mt. Carmel Road (Route 606)			
145	Harry Byrd Highway (Va. Route 7) – 0.38	Segment	14	3
	mi between Pine Grove Road (Route 679)			
	and Blue Ridge Mountain Road (Route 601)			

^{1 –} Source, 2018-2022 Top Potential Safety Improvement (PSI) Segments and Intersections (VDOT)

Projects identified in the initial draft that are not directly supported by VDOT's crash data and ranking include:

- Va. Route 7 Appalachian Trail Pedestrian Bridge. This project could indirectly support VDOT's 145th-ranked project location by removing pedestrian traffic from the segment.
- Intersection of US Route 340/277 (Lord Fairfax Highway) and US Route 522 (Stonewall Jackson Highway) at Double Tollgate
- Va. Route 7 Business (East Main Street) from Va. Route 7 (Harry Byrd Highway) to Norfolk Southern Railroad crossing (approximately 0.94 miles of primary highway)
- Va. Route 7 Business (West Main Street) from Va. Route 7 (Harry Byrd Highway) to Hermitage Boulevard in the Town of Berryville (approximately 1.2 miles of primary highway)
- US Route 340 (Greenway Avenue) Drainage Issues in the Town of Boyce
- Park and Ride Lot, Va. Route 7 (Harry Byrd Highway) near intersection of Va. Route 7 Business one mile west of Berryville
- Town of Berryville Southeastern Collector Road Lord Fairfax Highway (US 340) to Jack Enders Boulevard (Route 700). This project could support VDOT's 91st-ranked project location by reducing traffic along the affected segment.

In order to reconcile VDOT's recommended project list with the County's draft priorities – and taking into consideration that several existing projects have outdated scopes – the following prioritization is proposed which contains a combination of improvement projects and requests for VDOT engineering studies. Projects that cannot be supported by crash data or other quantifiable measures at this time are listed as "other projects and studies."

Priority Improvement Projects and Studies

1. Intersection of Va. Route 7 (Harry Byrd Highway) and Route 612 (Shepherds Mill Road)

Project Scope

• Complete improvements as recommended by VDOT's Va. Route 7 Corridor Study.

Justification:

The intersection is VDOT's 39th-ranked project location. Most crashes at the intersection are angle (T-bone) and rear end, mainly due to drivers turning from the median turn lanes onto the east and westbound lanes of Va. Route 7.

Planning-Level Cost Estimate: \$1,100,000

Assessed Need/Description:

Shepherds Mill Road (Route 612) is a high-volume shortcut for commuter traffic traveling to and from West Virginia via Route 7 and U.S. 340. The intersection has serious safety issues due to insufficient sight distance and substandard turn lanes. An existing convenience store on the northeast corner of the intersection has an entrance located within the right turn lane, creating additional conflict points.

In 2019, VDOT completed a corridor safety study for Va. Route 7 which included a detailed evaluation of this intersection. The report confirmed issues with the intersections and recommended the following counter measures:

- Improve sight distance to the east by removing vegetation, cutting back the slope on the north side of Va. Route 7.
- Install signing to encourage traffic to use Va. Route 7 and U.S. 340 instead of Shepherds Mill Road as a shortcut to West Virginia.
- Install optical speed bars on Va. Route 7 westbound to possibly reduce the speed of traffic approaching the intersection.
- Install centerline in the crossover.
- Refresh the stop bar on Shepherds Mill Road.
- Widen and extend the westbound right turn lane to Shepherds Mill Road north.
- Modify the crossover to allow eastbound traffic to turn north onto Shepherds Mill Road but not allow southbound traffic to cross the westbound lanes to turn east onto Va. Route 7. Close westbound left turn to Va. Route 7 eastbound and extend westbound left turn lane at Hawthorne Lane.
- Raise the grade of the sag vertical curve in the westbound lanes east of the intersection.

As of August 2023, VDOT had implemented several of the recommended counter measures and was in the process of implementing the crossover modifications (UPC #122783).



Intersection of Va. Route 7 and Shepherds Mill Rd. (Rt. 612)

2. Corridor Safety Improvements – Va. Route 7 (Harry Byrd Highway) between Route 612 (Shepherds Mill Road) and Route 601 (Blue Ridge Mountain Road/Raven Rocks Road)

Project Scope:

Identify and construct improvements to enhance safety and reduce wait times for turning movements along project corridor including turn lane and acceleration lane improvements, intersection improvements, and modifications to crossovers.

Justification:

The corridor of concern contains multiple areas that appear on VDOT's 2018-2022 Top Potential Safety Improvement (PSI) Segments and Intersections:

- Intersection of Va. Route 7 and Shepherds Mill Road (Route 612) − 39th
- 0.90 mile segment located between Shepherds Mill Road and Castleman Road (Route $603) 51^{st}$
- 0.38 mile segment located between Pine Grove Road (Rt. 679) and Blue Ridge Mountain Road/Raven Rocks Road (Rt. 601) 145th

Planning-Level Cost Estimate:

Total to be determined. \$2,650,000 for improvements to Route 601 (Blue Ridge Mountain Road/Raven Rocks Road) intersection.

Assessed Need/Description:

This project was originally scoped as an improvement project for the intersection of Va. Route 7 and Blue Ridge Mountain Road/Raven Rocks Road (Route 601). A recent increase in traffic resulting from construction of a brewery/event center on Route 601 in Loudoun County as well as increased usage of the Bears Den overlook and Appalachian Trail has produced safety and capacity deficiencies at this intersection. A 2022 study by VDOT recommended implementation of an "R-CUT" intersection design which would replace current left turn movements at this intersection with east and westbound U-turn movements at other downslope crossovers. This design was not supported by the Board of Supervisors so VDOT proposed a smaller safety improvement project that does not mandate U-turns. A Smart Scale application to fund these necessary improvements was filed in 2023 but was not selected for funding. Applications for this project should be pursued in future Smart Scale funding rounds. As a possible alternative, a new project which combines this project with the Appalachian Trail pedestrian project described in #5 below could be evaluated.

Additional needs beyond this intersection have been further identified. The County has received multiple complaints from residents along the corridor regarding wait times and safety concerns with entering and exiting Va. Route 7. This is due primarily to the high volume of morning and evening traffic, rate of speed, substandard turn lanes, and absence of acceleration lanes. These issues impact not only major public road intersections but lower classification public and private roads and crossovers:

- Quarry Road (Route 612) Access for county convenience center
- North Hill Lane (private)
- Gordons Ridge Lane (private)
- Castleman Road (Route 603)
- River Road (Route 606)
- Parker Lane (private) Access for Shenandoah University's Shenandoah River campus
- Ross Lane (private)
- Retreat Road (Route 643) Access for Shenandoah Retreat subdivision
- Longwood Lane (private)
- Pine Grove Road (Route 679) Two access points for Pine Grove unincorporated area
- Ebenezer Road (Route 604)
- Good Shepherd Road (Route 604)
- Seltenhorst Lane (private)
- Valley Springs Lane (private)
- Blue Ridge Mountain Road (Route 601) Access for Mt. Weather Emergency Operations Center
- Raven Rocks Road (Route 601)
- 6 crossovers east of the Shenandoah River (including one unmarked, nonconforming crossover)
- 5 crossovers west of the Shenandoah River

Many of these intersections and crossovers lack conforming turn lanes, tapers, and acceleration lanes. Speeding enforcement is also difficult due to a lack of safe locations for law enforcement

to make traffic stops. In addition to supporting improvements to the Route 601 intersection, the expanded project scope would include measures throughout the corridor to improve safety and reduce wait times for local traffic entering and exiting Route 7. The County would rely on VDOT to identify turn lane and acceleration lane improvements to key locations in addition to any other measures that forward the project's goal.



Project corridor – Va. Route 7 between Shepherds Mill Road (Route 612) and Blue Ridge Mountain Road/Raven Rocks Road (Route 601)



VDOT's 51st ranked corridor of concern - Quarry Road (Rt. 612) to Castleman Road (Rt. 603)



Yellow circle -- Intersection of Va. Route 7 and Blue Ridge Mountain Rd/Raven Rocks Rd (Rt. 601) Blue line – VDOT's 145th ranked corridor of concern, Pine Grove Road (Rt. 679) to Blue Ridge Mountain Rd/Raven Rocks Rd (Rt. 601)

3. Corridor and Intersection Study – Harry Byrd Highway (Va. Route 7) between West Main Street (Va. Business 7) and Triple J Road/Crums Church Road (Route 632)

Project Scope

- Evaluate/recommend safety improvements at the following intersections:
 - o West Main Street (Va. Business 7)
 - o Kimble Road (Route 653)
 - o Triple J Road/Crums Church Road (Route 632)
- Evaluate whether additional improvements are necessary to reduce crash volume along corridor of concern.

Justification

This corridor of concern is the highest ranked project location (16th) in VDOT's 2018-2022 Top Potential Safety Improvement (PSI) Segments and Intersections list, and the intersection of Harry Byrd Highway and Kimble Road (Route 653) is the 85th-ranked project location. In VDOT's 2017-2021 PSI list, the intersection of Harry Byrd Highway and West Main Street (Va. Business 7) was identified as the 89th-ranked project with 17 total crashes and 5 injury/fatality crashes. This intersection is not ranked in the 2018-2022 PSI list.

Planning-Level Cost Estimate: Corridor and intersection study request

Assessed Need/Description:

This is a high-volume corridor of concern that supports both local traffic and regional traffic traveling between the Winchester area/I-81 and Northern Virginia. VDOT's 2019 Corridor Study for Va. Route 7 did not identify this corridor or the three public road intersections within the corridor as areas recommended for specific safety improvements, however the PSI rankings raise concerns that this project area should be examined further. It should also be noted that

Clarke County Sheriff's Office staff has recommended additional study of the Kimble Road (Route 653) intersection due to an increased rate of crashes in recent years.

This project would request VDOT to conduct a more detailed evaluation of this corridor and the three referenced intersections in order to identify additional safety improvements to be made in order to reduce the volume of crashes.



Va. Route 7 corridor between Route 632 and Va. Business 7
(1) Triple J Road/Crums Church Road (Rt. 632) intersection, (2) Kimble Road (Rt. 653) intersection, (3) West Main Street (Va. Business 7) intersection

4. Intersection of US Route 340 (Lord Fairfax Highway) and US Routes 50/17 (John Mosby Highway) at Waterloo

Project Scope

Turn lane, safety, and capacity improvements at primary highway intersection. Includes improving two existing right turn lanes.

Justification

This intersection is the second highest ranked project location (19th) in VDOT's 2018-2022 PSI Segments and Intersections list.

<u>Planning-Level Cost Estimate</u>: \$3,500,000 -- \$5,580,000

Assessed Need/Description:

The Waterloo intersection is one of the County's two designated business growth areas and additional safety and capacity improvements are necessary to facilitate economic development. Some functional improvements were added to the intersection in conjunction with development of a convenience store/gas station complex on the southeast quadrant. As new development occurs at the intersection, the scope and type of improvements should be evaluated based on the projected traffic to be generated by the new uses. The cost of some portions of this project could be assumed by the development community as part of their projected traffic impacts.

This project was first added to the County's transportation priorities list in 1992. Partial funding for engineering design was approved (UPC 54384) but full funding complete the design phase of the project was not identified. This project should be evaluated by VDOT to determine whether the project scope should be re-defined, in particular to account for improvements made by developers since the project was originally identified in 1992. Historical and projected traffic volumes should also be considered in evaluating the scope and prioritizing the need for this project.



Waterloo intersection - US 340 and US 50/17

5. Va. Route 7 Appalachian Trail Pedestrian Bridge

Project Scope:

Construct a 300' X 8' pedestrian bridge over Va. Route 7 near the intersection with Route 679 (Pine Grove Road) including 450 square feet of retaining wall and 490 feet of new trail to allow pedestrians to travel safely between trail accesses and parking areas.

Justification:

This project is located within a corridor of concern ranked 145th in VDOT's 2018-2022 PSI Segments and Intersections list – Harry Byrd Highway (Va. Route 7) between Pine Grove Road (Rt. 679) and Blue Ridge Mountain Road (Rt. 601). Reduction of pedestrian traffic attempting to cross Harry Byrd Highway would improve traffic safety and functionality and reduce crash volume.

Planning-Level Cost Estimate: \$5,400,000 -- \$7,200,000

Assessed Need/Description:

This project was identified at the same time as the intersection improvement project at Va. Route 7 and Route 601 above. It is intended to provide Appalachian Trail visitors who park at the Pine Grove Road parking area with a safe means of crossing Va. Route 7. VDOT conducted a collaborative study of this project which resulted in consensus on a recommended bridge design in 2023. Funding sources for this project have not yet been identified. As a possible alternative, a new project which combines this project with Va. Route 7/Route 601 intersection improvements described in #2 above could be evaluated.



Intersection of Va. Route 7, Pine Grove Rd (Rt. 679), and Appalachian Trail (green)

6. Intersection Study -- Intersection of US Route 340/277 (Lord Fairfax Highway) and US Route 522 (Stonewall Jackson Highway) at Double Tollgate

Project Scope

Evaluate and recommend need for safety and capacity improvements at substandard intersection.

<u>Planning-Level Cost Estimate</u>: Intersection study request

Justification:

A 1.48 mile segment of Va. Route 277 from this intersection into Frederick County was the 45th-ranked project location in VDOT's 2017-2021 PSI list. The segment was altered in the 2018-2022 PSI list and no longer includes the intersection.

Assessed Need/Description:

The Double Tollgate intersection is one of the County's two designated business growth areas and currently contains a gas station/ convenience store, church, flea market, and tourist attraction (Dinosaur Land). This intersection has experienced an increase in traffic of over 30% since 2001 and has insufficient turn lanes and through lane capacity. Both passenger vehicle and truck traffic is expected to increase in the coming years as large-scale residential development occurs in nearby Lake Frederick (2,000+ units in Frederick County) and industrial growth continues around the Virginia Inland Port in Warren County. This project was first added to the County's priorities list in 1997 in order to address impacts from the anticipated traffic increase

The 2022 update of the Double Tollgate Area Plan included support for public water and sewer and a significant increase in the Plan Area with the addition of the State-owned former "Camp 7" properties located to the southeast. A conditional zoning application was approved in 2023 for Rappahannock Electric Cooperative to construct a new regional office facility on 65 acres and is likely to be a catalyst to bring water and sewer to the Plan Area from Frederick County. This planned extension is also likely to increase both traffic counts and the priority for safety and capacity improvements. It is expected that the necessary improvements generated by development will be paid for and constructed by the developers of those projects.



Double Tollgate intersection – US 340, US 522, and Va. Route 277

Other Projects and Studies

The following projects are identified for further study to gain a better understanding of the need for each project and to develop a project scope and cost estimate. These projects are not included in the priority projects list for one or more of the following reasons:

- 1. Data is not available to support the need for the project.
- 2. The project scope is out of date and needs to be evaluated in light of current traffic patterns, development impacts, and previously-completed improvements.
- 3. The area of concern is newly-identified and a detailed study is necessary to determine whether a priority project is needed and what the scope of that project would be.

The list of other improvement projects is sorted by projects referenced in the previous (2013) Transportation Plan and new projects identified in developing the current Plan. The projects are otherwise not listed in a particular order.

1. Projects from 2013 Transportation Plan

A. Va. Route 7 Business (East Main Street) from Va. Route 7 (Harry Byrd Highway) to Norfolk Southern Railroad crossing (approximately 0.94 miles of primary highway)

Project Scope:

Evaluate the need to reconstruct 0.94 miles of primary highway to improve capacity and safety, add drainage improvements, and add bicycle/pedestrian facilities. Re-scope project as necessary.

Planning-Level Cost Estimate: \$5,890,000 -- \$8,850,000

Assessed Need/Description:

This project has been on the County's list of priorities since 1995. The roadway serves as a major route for truck traffic to several industrial businesses on the east side of town including the County Business Park and a major publishing company. The project area is located predominantly within the Town of Berryville.

In 2023, the Town of Berryville was selected to receive Smart Scale funding to construct sidewalk improvements in two phases (Phase 1 -- \$4.089 million, Phase 2 -- \$4.274 million). These future improvements should be factored into the project scope and planning-level cost estimate.

The Town's Southeastern Collector Road project (described below) would have a significant impact on traffic volume through the East Main Street corridor and specifically on the intersections of Jack Enders Boulevard, Battletown Drive, and Harry Byrd Highway. Should the Collector Road project be pursued, the need for capacity improvements on East Main Street should be determined and funding identified.



East Main Street corridor from Norfolk Southern railroad to Battletown Drive



East Main street corridor from Battletown Drive to Va. Route 7

B. Va. Route 7 Business (West Main Street) from Va. Route 7 (Harry Byrd Highway) to Hermitage Boulevard in the Town of Berryville (approximately 1.2 miles of primary highway)

Project Scope:

Reconstruct approximately 1.2 miles of primary highway to improve capacity and safety, add drainage improvements, and add bicycle/pedestrian facilities.

Planning-Level Cost Estimate: \$7,520,000 -- \$11,300,000

Assessed Need/Description:

This project was first added to the County's priorities list in 1992. The corridor serves five public school buildings, the County's Parks and Recreation Facility, and the Ruritan Fairgrounds in addition to serving as the main western route into the Town of Berryville. The original project concept was to upgrade the current two-lane section to three lanes with turn lanes, drainage, and safety improvements at major intersections, and sidewalks and bike lanes/trails to facilitate pedestrian and bicycle traffic.

The construction of Clarke County High School and extension of Mosby Boulevard to West Main Street included the construction of a roundabout and new sidewalks added along the corridor in addition to other improvements. Additionally, the Mosby Boulevard extension now provides a new route for traffic between the west end of town and the north end of town at U.S. 340. The project scope, particularly along the segment in the Town, will need to be evaluated to determine whether it remains necessary. The project scope is not intended to include improvements to the Harry Byrd Highway intersection as that project is included in Priority Project #2 (described above).



West Main street corridor from Harry Byrd Highway to Hermitage Boulevard

C. US Route 340 Drainage Issues in the Town of Boyce

Project Scope:

Construct drainage improvements along corridor.

Planning-Level Cost Estimate: \$750,000 (2013 estimate)

Assessed Need/Description:

The project was first added to the County's priorities list in 2003. The project is necessary in order to replace existing drainage swales that are insufficient to handle runoff from US Route 340 and cause frequent flooding on nearby properties. Some drainage improvements were made in conjunction with a recent residential development project on the south end of town. The Town should re-evaluate the scope of the project taking into consideration these improvements.

The project area is located entirely within the Town of Boyce.



US 340 corridor through the Town of Boyce

D. Park and Ride Lot, Va. Route 7 (Harry Byrd Highway) near intersection of Va. Route 7 Business one mile west of Berryville

Project Scope:

Construct new commuter parking facility.

<u>Planning-Level Cost Estimate</u>: \$2,500,000 for 250 space facility.

Assessed Need/Description:

Harry Byrd Highway (Va. Route 7) is a major east-west commuter route between the Winchester area and employment centers in the Washington metropolitan area. Commuter traffic has increased more than 50% along this route since 2001 and will continue to increase with new residential growth in Winchester, Frederick County, and surrounding jurisdictions. Alternatives

to single-occupancy vehicle commuters must be developed to avoid increasing the capacity of Va. Route 7 and a park and ride lot at this location would help with this effort.

The facility should be designed similar to the park and ride facility at Waterloo (John Mosby Highway, US 50/17) with a higher capacity to support the greater traffic demand along with accommodations for commuter buses and vans. The location on the west side of Berryville would help maximize convenience for Town and County residents who choose to commute, however other locations along the Va. Route 7 corridor should be evaluated.

E. Town of Berryville Southeastern Collector Road – Lord Fairfax Highway (US 340) to Jack Enders Boulevard (Route 700)

Project Scope:

Construct a new collector road from Jack Enders Boulevard to Lord Fairfax Highway (U.S. 340) including upgrading a segment of Smallwood Lane (Route 680), expanding an existing railroad crossing, and constructing a new signalized intersection.

<u>Planning-Level Cost Estimate</u>: \$9,600,000 (estimate from 2020 PrimeAE study)

<u>Assessed Need/Description</u>:

This Town of Berryville project proposes to construct a new collector road that would provide more direct access for Clarke County Business Park traffic to U.S. 340 and would reduce truck traffic through East Main Street and downtown. This project could potentially address safety issues on Lord Fairfax Highway (US 340) between Smallwood Lane (Route 680) and Town of Berryville limits (see project description below). This corridor of concern is ranked 91st in VDOT's 2018-2022 PSI list.

The Town and County jointly undertook a study in 2020 with consultant PrimeAE to determine the optimum route for the collector road including the most feasible means to cross the Norfolk Southern railroad. The Town and County for many years had planned to extend Jack Enders Boulevard from its current terminus to U.S. 340 near the southern end of South Church Street. Work by PrimeAE staff with Norfolk Southern determined that this would be infeasible and would not be approved by the railroad. PrimeAE ultimately recommended extending Jack Enders Boulevard from a point near the entrance to the Business Park southeast to Smallwood Lane. The collector road would then merge with Smallwood Lane and extend to a new signalized intersection at U.S. 340, making use of an existing rail crossing with required improvements.

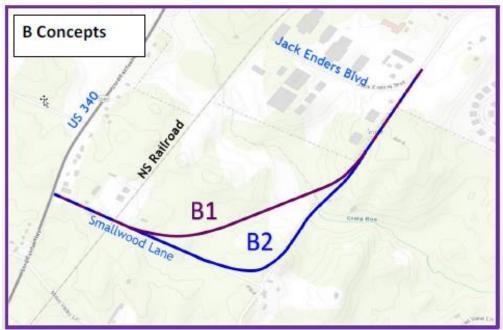
This proposed collector road project requires additional study to determine whether it would have an adverse impact on the capacity and safety of existing Jack Enders Boulevard, East Main Street, and East Main Street's intersection with Va. Route 7. If the collector road is constructed, it is possible that a significant amount of "pass-through" traffic attempting to go eastbound on Va. Route 7 from U.S. 340, and southbound on U.S. 340 from westbound Va. Route 7, would use the collector road as an alternative route. This would be especially true if GPS routing identifies the collector road as the shortest route for this traffic pattern. Additional study should

be done to determine whether the capacity of Jack Enders Boulevard and East Main Street could support this "pass-through" traffic in addition to regular local traffic.

Construction of a new signalized intersection at U.S. 340 and upgrades to the existing railroad crossing on Smallwood Lane present additional challenges. The current intersection borders a large farm in permanent conservation easement to the south and an existing business to the north. A new and much larger signalized intersection with turn lanes and tapers at this location would likely require private property to be acquired, potentially through eminent domain, on both sides of U.S. 340. Land cannot be obtained from the farm in conservation easement which could require the intersection to be relocated to the north. Similar challenges exist at the railroad crossing as the property at the northwestern quadrant of this crossing is VDOT's maintenance facility. Two small residential lots of 1.6 acres and 0.64 acres respectively occupy the southwestern and northeastern quadrants of the crossing. Significant land acquisition will be needed in order to accommodate a larger at-grade crossing to serve a much larger collector road.

Given these challenges it is likely that the ultimate project cost would be significantly higher than PrimeAE's estimate of \$9,600,000. Absent significant private sector funding, this project would have to be funded using State or Federal transportation funding. The most likely funding source is VDOT's Smart Scale program. This competitive process awards funding for new projects based on five criteria – safety, congestion mitigation, accessibility, environmental quality, and economic development. The collector road project would likely score highest as an economic development project compared to other new road construction projects. Those new road construction projects that are awarded funding, particularly for economic development purposes, must be "shovel-ready." This means that the project is included in the locality's comprehensive plan and transportation plan, the area impacted by the project has been rezoned for development, and site plans for construction of businesses to be served by the new road have been approved. Significant work by the Town and County, and potentially financial investment, would be needed in order to make this project competitive for Smart Scale funding.

Solutions to these challenges must be identified before this project can be included in the priority list of projects.



Proposed collector road routes, PrimeAE study presentation (July 14, 2020)

2. Newly-Identified Projects

F. Corridor Study – Lord Fairfax Highway (US 340) between Smallwood Lane (Route 680) and Town of Berryville limits

Project Scope:

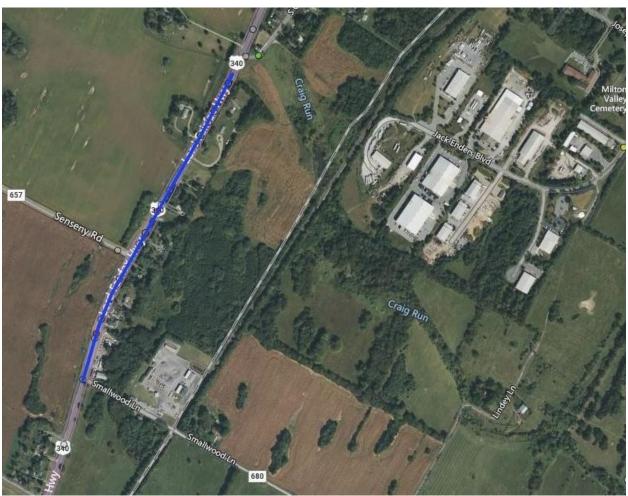
Evaluate need for safety improvements to address crash volume along corridor.

<u>Planning-Level Cost Estimate</u>:

To be determined by the study

Assessed Need/Description:

This corridor of concern is the 91st-ranked project location in VDOT's 2018-2022 PSI list. The corridor is the southern approach to the Town of Berryville and has two speed changes from 55MPH to 45MPH just south of the Smallwood Lane intersection and from 45MPH to 35MPH just south of Town limits. The corridor contains the intersection with Senseny Road (Route 657) which is used both locally and regionally as an alternative route to Va. Route 7 for traffic to and from Frederick County and Winchester. This intersection was modified in recent years to add turn lanes. A corridor study should be undertaken to determine whether additional improvements are necessary.



US 340 corridor between Smallwood Lane (Route 680) and Berryville town limits

G. Corridor Study – Lord Fairfax Highway (US 340) between Harry Byrd Highway (Va. Route 7) and West Virginia state line

Project Scope:

Evaluate need for safety improvements along corridor including the intersection of US 340 and Va. Route 7.

Planning-Level Cost Estimate:

To be determined by the study

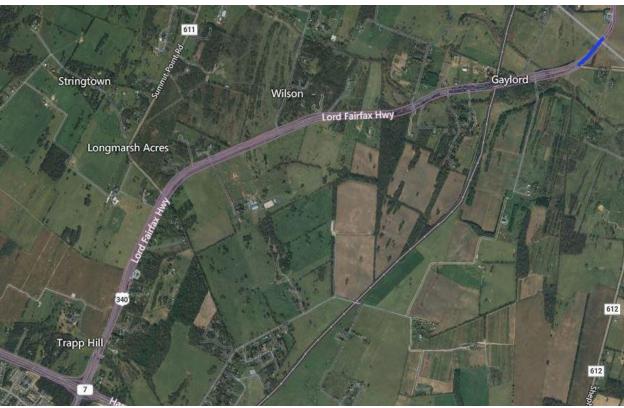
Assessed Need/Description:

The US 340 corridor north of the Town of Berryville to the West Virginia state line has not been evaluated for safety improvements and no projects have been undertaken on the corridor in many years. It is a major commuter route for West Virginia residents traveling to employment locations in Virginia. The corridor contains the 37th-ranked project location in VDOT's 2018-2022 PSI list – the segment between Shepherds Mill Road (Route 612) and the state line. This segment is also the location of a project to widen a small two-lane section of US 340 (UPC

#111615) to match West Virginia's project to widen US 340 to four lanes. The widening of US 340 in West Virginia could result in increased traffic along the corridor.

Additionally, a 0.67 mile segment between the intersection of Va. Route 7 and Davis Lane (private road) was identified in VDOT's 2017-2021 PSI list as the 33rd-ranked project location with 31 crashes and 12 crashes involving injury or fatality. The project location does not appear on VDOT's 2018-2022 PSI list.

A safety study for the entire corridor should be conducted by VDOT to determine whether safety and functional improvements are necessary.



US 340 corridor between Va. Route 7 and West Virginia state line Blue line -37^{th} -ranked project location (VDOT PSI list, 2018-2022)

H. Corridor Study – Blue Ridge Mountain Road (Route 601)

Project Scope:

Evaluate need for safety improvements along corridor.

Planning-Level Cost Estimate:

To be determined by the study

<u>Assessed Need/Description</u>:

Blue Ridge Mountain Road is a winding, two-lane secondary road that predominately follows the Blue Ridge ridgeline between Harry Byrd Highway (Va. Route 7) and John Mosby Highway

(US 50/17). The road is an alternate north-south route for traffic between these two primary highways and contains a major employer – the Federal Emergency Management Agency's (FEMA) Mount Weather facility. There is also a large winery/brewery at the northern end of the corridor (Bear Chase Brewing Company) in Loudoun County that is a significant traffic generator on weekends and holidays.

Blue Ridge Mountain Road contains the 69th-ranked project location in VDOT's 2018-2022 PSI list – a 1.34 mile segment on the southern end of the corridor between Paris Heights Lane and Valley View Lane. The intersection with Harry Byrd Highway is the 145th-ranked project and is listed as the County's 4th-ranked priority project (described above).

A safety study for the entire corridor should be conducted by VDOT to determine whether safety and functional improvements are necessary.



Blue Ridge Mountain Road – John Mosby Highway to Mount Weather facility Blue line -- 69th-ranked project location (VDOT PSI list, 2018-2022)



Blue Ridge Mountain Road – Harry Byrd Highway to Mount Weather facility
Blue line -- 145th-ranked project location (VDOT PSI list, 2018-2022)

I. Corridor Study – John Mosby Highway (US 50/17) between the Shenandoah River Bridge and Fauquier County line

Project Scope:

Evaluate need for safety improvements along corridor.

Planning-Level Cost Estimate:

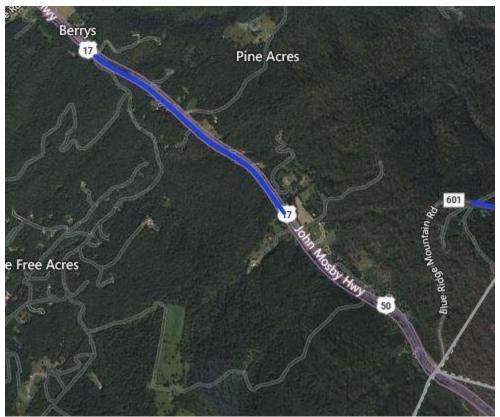
To be determined by the study

Assessed Need/Description:

The US 50/17 corridor east of the Shenandoah River has not been evaluated for safety improvements and no projects have been undertaken on the corridor in many years. It is a major east-west commuter route for County and Shenandoah Valley residents traveling to employment

locations in Northern Virginia. The corridor contains both the 111^{th} -ranked and 141^{st} ranked project locations in VDOT's 2018-2022 PSI list.

A safety study for the corridor should be conducted by VDOT to determine whether safety and functional improvements are necessary.



US 50/17 corridor between the Shenandoah River and Fauquier County line

State Six-Year Improvement Program Projects

Below is a list of projects that have been programmed into the State's Six-Year Improvement Program as of November 2023. Some of these projects are referenced in the County's priority improvement projects while others are conducted are programmed directly by VDOT at their discretion.

UPC#	Project Description
122783	MODIFIED R-CUT INT RTE 7 AND RTE 612
121191	FY29 Clarke County Rural Rustic Roads Projects
112899	ROUTE 7 – SHOULDER WIDENING AND RUMBLE STRIPS
111615	Rte 340 Clarke Co. VA and WV STATE LINE
110827	RTE 7 SHOULDER WIDENING AND RUMBLE STRIPS
98956	RTE 761 – Replace Bridge 05453 & Appr over Opequon Creek

Local Six Year Secondary Road Construction Project Priorities

The Clarke County Board of Supervisors works with VDOT on an annual basis to prioritize state funding for improvement projects in the County's secondary road system. State secondary system funds are allocated to a locality based on their population and land area. These system funds compose the majority of secondary road funds made available to localities and are also vary based upon the adopted state transportation budget. Other funds are available for specific project types such as upgrading unpaved roads with a hard surface (e.g., Pave in Place and Rural Rustic Roads programs) and bridge improvements.

Because secondary road construction funding varies from year to year and project requirements can change, the secondary road construction priorities are not included in the Transportation Plan.

IV. Conclusion

Clarke County's approach to transportation planning mirrors the County's unique land use philosophies and the Comprehensive Plan. Safety, functionality, and limited capacity improvements are encouraged in the incorporated towns and business growth intersections to maximize the efficiency of the road network. Capacity expansion in the unincorporated areas is strongly opposed in order to reduce future development pressures and to maintain the County's rural, agrarian, and historic character. Modest improvements to add hard surfaces to unpaved secondary roads and improve traffic safety in the unincorporated areas are generally supported.

While new development within the County does not regularly impact the transportation network, development in adjoining localities has a significant impact particularly on the County's primary highways and collector roads. The County should continue to rely on the Virginia Department of Transportation to identify solutions to address safety and functionality issues and to assist in funding these solutions.

It is also recommended that the Transportation Plan be reviewed on a five-year review schedule to ensure projects are accurately scoped and prioritized, objectives and strategies are up to date, and the Transportation Plan overall is consistent with the Comprehensive Plan. The five-year review should be conducted according to the following process:

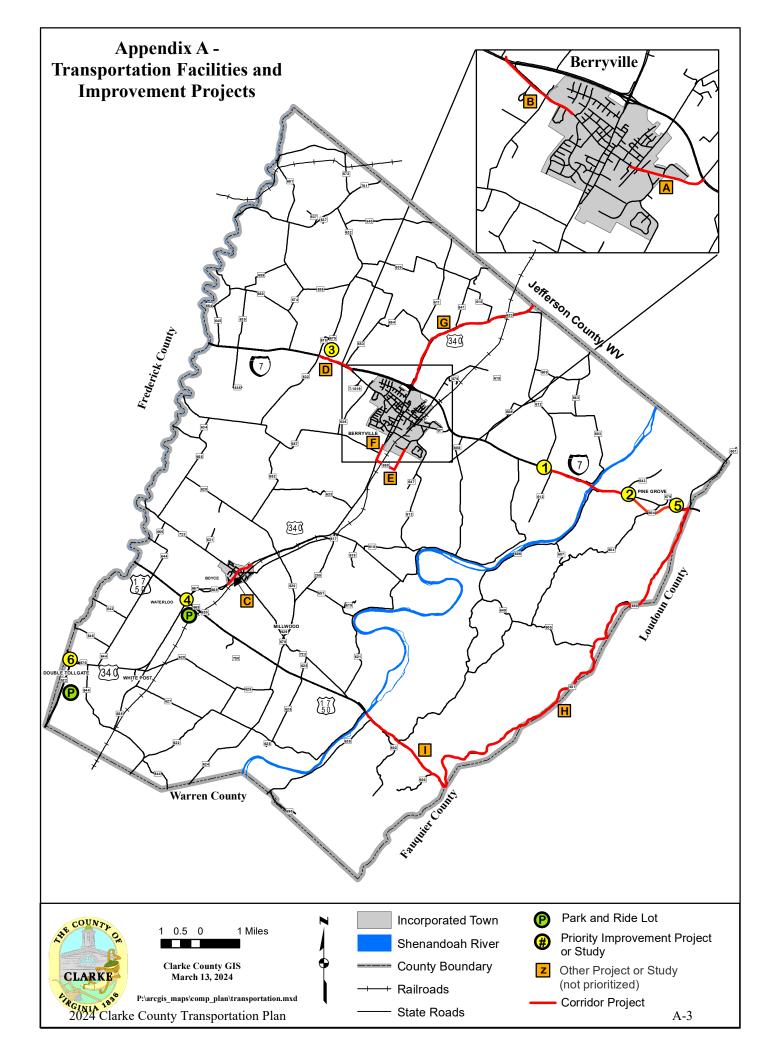
- 1. On a five-year schedule from the adoption date of the current Transportation Plan, the Planning Commission shall adopt a resolution addressing the status of the Plan, whether it should be updated, and to what degree it should be updated. This resolution may come in one of the following forms:
 - A finding that the current Plan recommendations are sufficient and that no amendment is necessary.
 - A finding that changes in the community warrants a comprehensive review and update of the Plan. An example would be the release of decennial Census data and growth projections.
 - A finding that the Plan does not address, or inadequately addresses, a specific topic area or areas warranting a focused update of the Plan. While the update may have a specific purpose, the review should remain comprehensive to ensure that all impacts are carefully evaluated.
- 2. It is recommended that at the beginning of year four in the five-year schedule, the Commission should begin work evaluating the Plan status. This can be accomplished as a committee of the whole or by designating a special subcommittee. The Plan status should be evaluated by considering factors including, but not limited to:
 - Recent release of updated demographics.
 - Recent updates to the County Comprehensive Plan.
 - Impact of new development projects since the previous Plan update.
 - Impact of recently completed capital projects or transportation improvements.
 - Any other subject not addressed or inadequately addressed by the current Plan.

While not recommended, a proposal may be considered to amend the Plan outside of the scope of the Plan's five-year review cycle. Frequent, piecemeal changes to the Plan are strongly discouraged as they can result in the document becoming fragmented and inconsistent. It can also devalue the importance of the document as a long-range planning guideline. For these reasons, interim amendments are strongly discouraged.

APPENDIX A

Transportation Facilities and Improvement Projects Map

PRIORITY IMPROVEMENT PROJECTS AND STUDIES Intersection of Va. Route 7 (Harry Byrd Highway) and Route 612 (Shepherds Mill Road) Corridor Safety Improvements – Va. Route 7 (Harry Byrd Highway) between Route 612 (Shepherds Mill Road) and Route 601 (Blue Ridge Mountain Road/Raven Rocks Road) Corridor and Intersection Study – Harry Byrd Highway (Va. Route 7) between West Main Street (Va. Business 7) and Triple J Road/Crums Church Road (Route 632) Intersection of US Route 340 (Lord Fairfax Highway) and US Routes 50/17 (John Mosby Highway) at Waterloo Va. Route 7 Appalachian Trail Pedestrian Bridge Intersection Study -- Intersection of US Route 340/277 (Lord Fairfax Highway) and US Route 522 (Stonewall Jackson Highway) at Double Tollgate **OTHER PROJECTS AND STUDIES (not prioritized)** Va. Route 7 Business (East Main Street) from Va. Route 7 (Harry Byrd Highway) to Norfolk Southern Railroad crossing (approximately 0.94 miles of primary highway) Va. Route 7 Business (West Main Street) from Va. Route 7 (Harry Byrd Highway) to Hermitage Boulevard in the Town of Berryville (approximately 1.2 miles of primary highway) US Route 340 Drainage Issues in the Town of Boyce Park and Ride Lot, Va. Route 7 (Harry Byrd Highway) near intersection of Va. Route 7 Business one mile west of Berryville Town of Berryville Southeastern Collector Road – Lord Fairfax Highway (US 340) to Jack Enders Boulevard (Route 700) Corridor Study – Lord Fairfax Highway (US 340) between Smallwood Lane (Route 680) and Town of Berryville limits Corridor Study – Lord Fairfax Highway (US 340) between Harry Byrd Highway (Va. Route 7) and West Virginia state line **Corridor Study – Blue Ridge Mountain Road (Route 601)** Corridor Study – John Mosby Highway (US 50/17) between the Shenandoah River Bridge and Fauguier County line



APPENDIX B

Functional Classification Table

APPENDIX B -- FUNCTIONAL CLASSIFICATION TABLE Public Road System (Clarke County and Towns of Berryville and Boyce)

Route	Facility Name	From	$\overline{\Gamma_0}$	Functional Class
7	HARRY BYRD HWY	FREDERICK CL	LOUDOUN CL	Other Principal Arterial
7	WEST MAIN ST	HARRY BYRD HWY	N BUCKMARSH ST	Major Collector
7	EAST MAIN ST	N BUCKMARSH ST	HARRY BYRD HWY	Major Collector
50	JOHN MOSBY HWY	FREDERICK CL	FAUQUIER CL	Minor Arterial
255	BISHOP MEADE RD	JOHN MOSBY HWY	LORD FAIRFAX HWY	Major Collector
277	LORD FAIRFAX HWY	FREDERICK CL	STONEWALL JACKSON HWY	Minor Arterial
340	LORD FAIRFAX HWY	STONEWALL JACKSON HWY	HARRY BYRD HWY	Minor Arterial
340	LORD FAIRFAX HWY	HARRY BYRD HWY	WEST VIRGINIA SL	Other Principal Arterial
522	STONEWALL JACKSON HWY	FREDERICK CL	WARREN CL	Minor Arterial
601	BLUE RIDGE MOUNTAIN RD	JOHN MOSBY HWY	LOUDOUN CL	Minor Collector
601	RAVEN ROCKS RD	TONDONN CT	WEST VIRGINIA SL	Minor Collector
909	MOUNT CARMEL RD	JOHN MOSBY HWY	FROGTOWN RD	Minor Collector
909	RIVER RD	HARRY BYRD HWY	FROGTOWN RD	Minor Collector
809	WICKLIFFE RD	HARRY BYRD HWY	WEST VIRGINIA SL	Minor Collector
611	SUMMIT POINT RD	LORD FAIRFAX HWY	WEST VIRGINIA SL	Major Collector
612	SHEPHERDS MILL RD	HARRY BYRD HWY	JOHN MOSBY HWY	Major Collector
613	SPRINGSBURY RD	JACK ENDERS BLVD	POSSUM HOLLOW RD	Minor Collector
615	FIRST ST	E MAIN ST	LIBERTY ST	Major Collector
615	FIRST ST	LIBERTY ST	E FAIRFAX ST	Minor Collector
616	S CHURCH ST	S BUCKMARSH ST	E MAIN ST	Major Collector
616	N CHURCH ST	E MAIN ST	LIBERTY ST	Major Collector
616	N CHURCH ST	LIBERTY ST	BUNDY ST	Minor Collector
616	BUNDY ST	N CHURCH ST	N BUCKMARSH ST	Minor Collector
617	BRIGGS RD	LOCKES MILL RD	BISHOP MEADE RD	Minor Collector
620	BROWNTOWN RD	BISHOP MEADE RD	LORD FAIRFAX HWY	Major Collector
624	RED GATE RD	JOHN MOSBY HWY	WARREN CL	Minor Collector

APPENDIX B -- FUNCTIONAL CLASSIFICATION TABLE Public Road System (Clarke County and Towns of Berryville and Boyce)

	Functional Class	Major Collector	Major Collector	Major Collector	Major Collector	Major Collector	Minor Collector	Minor Collector	Minor Collector	Major Collector	Minor Collector	Major Collector	Minor Collector	Minor Collector	Minor Collector	Minor Collector	Major Collector	Major Collector	Major Collector	Major Collector	Major Collector	Major Collector
•	To	WHITE POST RD	HARRY BYRD HWY	OLD CHARLES TOWN RD	SENSENY RD	WARREN CL	LORD FAIRFAX HWY	RIVER RD	STRINGTOWN RD	LORD FAIRFAX HWY	WHITE POST RD	CARTERS LINE RD	SUGAR HILL RD	FREDERICK CL	BRUCETOWN RD	SPRINGSBURY RD	LORD FAIRFAX HWY	JOHN MOSBY HWY	WEST VIRGINIA SL	N CHURCH ST	JACKSON DR	MOSBY BLVD
•	From	LORD FAIRFAX HWY	SENSENY RD	HARRY BYRD HWY	W MAIN ST	JOHN MOSBY HWY	JOHN MOSBY HWY	MT CARMEL RD	HARRY BYRD HWY	FREDERICK CL	WARREN CL	LORD FAIRFAX HWY	CARTERS LINE RD	SWIMLEY RD	OLD CHARLES TOWN RD	E MAIN ST	FREDERICK CL	BISHOP MEADE RD	FREDERICK CL	FIRST ST	N BUCKMARSH ST	W MAIN ST
	Facility Name	BERRYS FERRY RD	TRIPLE J RD	CRUMS CHURCH RD	WESTWOOD RD	HOWELLSVILLE RD	GUN BARREL RD	FROGTOWN RD	KIMBLE RD	SENSENY RD	SUGAR HILL RD	WHITE POST RD	WHITE POST RD	BRUCETOWN RD	SWIMLEY RD	JACK ENDERS BLVD	OLD WINCHESTER RD	MILLWOOD RD	OLD CHARLES TOWN RD	LIBERTY ST	MOSBY BLVD	JACKSON DR
	Route	628	632	632	989	638	644	649	653	<i>L</i> 29	859	859	859	661	672	700	723	723	761	1005	1035	1041

APPENDIX C

Private Roads Unincorporated Areas of the County

APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY

Private Road	Public/Private Road Accessed by	Public Road Route #
Alder Ln	Retreat Rd	643
Allegheny Ridge Ln	Wadesville Rd	661
America Ln	River Rd	606
Anamaria Ln	Manor Rd	690
Ancient Oak Ln	Crums Church Rd	632
Annfield Farm Ln	Annfield Rd	633
Antique Ln	Withers Larue Rd	640
Ashley Ln	John Mosby Hwy	50/17
Ashley Woods Ln	Blue Ridge Mtn Rd	601
Ashwood Ln	Withers Larue Rd	640
Aspen Ln	Cedar Ln/Holly Ln (private roads)	n/a
Audley Ln	Harry Byrd Hwy/Boom Rd	7/615
Azalea Ln	Retreat Rd	643
Balsam Ln	Cedar Ln/Holly Ln (private roads)	n/a
Banjo Ln	Good Shepherd Rd	604
Barbour Ln	Moose Rd	635
Barker Ln	Blue Ridge Mtn Rd	601
Barred Owl Ln	Calmes Neck Ln (private road)	n/a
Bedrock Ln	Garden Rd	675
Beechwood Ln	Alder Ln (private road)	n/a
Bee Line Ln	Harry Byrd Hwy	7
Bell Hollow Ln	Ebenezer Rd	604
Bell Ln	Parshall Rd	608
Bellevue Ln	Old Winchester Rd	723
Bellringer Ln	Westwood Rd	636
Bench Ln	Ebenezer Rd	604
Beydler Ln	Allen Rd	639
Bittersweet Ln	Chilly Hollow Rd	621
Black Oak Ln	Cedar Ln/Holly Ln (private roads)	n/a
Blakemore Ln	Trapp Hill Rd	729
Blandy Farm Ln	Blandy Farm Ln/Berrys Ferry Rd	750/628
Blue Bird Ln	Calmes Neck Ln (private road)	n/a
Bolden Ln	Frogtown Rd	649
Boyer Ln	Lewisville Rd	641
Brecklyn Ln	Brooke Ln	676
Bridge Ln	River Rd	606
Bristow Ln	Castleman Rd	603
Broad View Ln	Possum Hollow Ln	647
Bryarly Ln	Lord Fairfax Hwy	340
Bungalow Ln	Westwood Rd	636
Burch Ln	Kennel Rd	625
Burleson Ln	Old Charles Town Rd	761
Burner Ln	Kimble Rd	653
Bushland Ln	Senseny Rd	657
Butler Ln	Gun Barrel Rd	644
Calmes Neck Ln	Mount Carmel Rd	606
Cardinal Ln	Calmes Neck Ln (private road)	n/a
Carefree Ln	Wildcat Hollow Rd	602

Private Road	Public/Private Road Accessed by	Public Road Route #
Carter Hall Ln	Bishop Meade Rd	255
Castlerock Ln	Russell Rd	660
Cedar Ln	Beechwood Ln/Holly Ln (private roads)	n/a
Cedar Hall Ln	Parshall Rd	608
Cedarwood Ln	Sugar Hill Rd	658
Chapel Ln	Bishop Meade Rd	255
Chapel Hill Ln	Lord Fairfax Hwy	340
Chapman Ln	Manor Rd	690
Cherry Ln	Retreat Rd	643
Chestnut Ln	Shepherds Mill Rd	612
Chestnut Coombe Ln	Blue Ridge Mtn Rd	601
Chilcott Ln	Feltner Rd	606
Childrens Ln	Chilly Hollow Rd	621
Clay Hill Farm Ln	Clay Hill Rd	651
Clermont Ln	East Main St	7
Cliff Ln	Horseshoe Ln (private road)	n/a
Clifton Farm Ln	Clifton Rd	610
Colonial Ln	Bishop Meade Rd	255
Concert Ln	Chilly Hollow Rd	621
Cool Spring Ln	Castleman Rd	603
Coulson Ln	Mount Weather Rd	650
Country Ln	Hawthorne Ln (private road)	n/a
Country Club Ln	Millwood Rd	723
Cunningham Ln	Bishop Meade Rd	255
Cunningham Ln	Millwood Rd	255
Dairy Ln	Summit Point Rd	611
Davis Ln	Lord Fairfax Hwy	340
Dearmont Hall Ln	Gun Barrel Rd	644
Deer Haven Ln	Frogtown Rd	649
Deer Wood Ln	Withers Larue Rd	640
Dogwood Ln	Timber Ln/Pine Crest Ln (private roads)	n/a
Doleman Ln	Clifton Rd	610
Dorsey Orchard Ln	Shepherds Mill Rd	612
Double Wood Ln	Ebenezer Rd	604
Duke Ln	Ebenezer Rd	604
Eagle Point Ln	Calmes Neck Ln (private road)	n/a
Eagle Rock Ln	Blue Ridge Mtn Rd	601
Earhart Ln	accessed from West Virginia	n/a
Easy Ln	Morgans Mill Rd	605
East Huntingdon Ln	N Greenway Ave	340
Edenbrook Ln	Old Charles Town Rd	761
Edgewood Ln	Lord Fairfax Hwy/Gun Barrel Rd	340/644
Elm Spring Ln	Janeville Rd	652
Elmington Ln	Lord Fairfax Hwy	340
Evergreen Ln	Retreat Rd	643
Fairfield Ln	Lord Fairfax Hwy	340
Fairview Ln	Longmarsh Rd	656
Farms Ridge Ln	Manor Rd (private road)	n/a

Private Road	Public/Private Road Accessed by	Public Road Route #
Farnley Ln	Sugar Hill Rd	658
Fire Trail Rd	accessed from Warren County	n/a
Flint Spring Ln	Retreat Rd	643
Forest Ridge Ln	Blue Ridge Mtn Rd	601
Fox Ln	Vista Ln	1070
Fox Woods Ln	Calmes Neck Ln (private road)	n/a
Frankford Ln	Shepherds Mill Rd	612
Gillions Ln	Mercer Farm Ln (private road)	n/a
Glebe Ln	Castleman Rd	603
Glen Orchard Ln	Wickliffe Rd	608
Glen Owen Ln	Parshall Rd	608
Goat Hill Ln	Lord Fairfax Hwy	340
Good Success Ln	John Mosby Hwy	50/17
Gordons Ridge Ln	Harry Byrd Hwy	7
Gorham Ln	White Pine Ln (private road)	n/a
Grafton Ln	Wickliffe Rd	608
Granddaddy Ln	Senseny Rd	657
Grand View Ln	Parshall Rd	608
Green Bourne Ln	John Mosby Hwy	50/17
Greenfields Ln	White Post Rd	658
Greenstone Ln	Wildcat Hollow Rd	602
Grigsby Ln	Parshall Rd	608
Grouse Ridge Ln	Ebenezer Rd	604
Hackberry Ln	Beechwood Ln (private road)	n/a
Hampton Ln	Springsbury Rd	713
Harmony Ln	Flint Spring Ln (private road)	n/a
Harvue Ln	Longmarsh Rd	656
Hawthorne Ln	Harry Byrd Hwy	7
Heart Trouble Ln	Blue Ridge Mountain Rd	601
Helmley Ln	Senseny Rd	657
Hemlock Ln	Beechwood Ln (private road)	n/a
Hickory Ln	Retreat Rd	643
Hickory Green Ln	Berrys Ferry Rd	628
Hidden Hollow Ln	Mount Carmel Rd	606
Hidden Valley Ln	Alder Ln (private road)	n/a
Hideaway Ln	Carefree Ln (private road)	n/a
Highland Ridge Ln	Blue Ridge Mtn Rd	601
Hill And Dale Ln	Parshall Rd	608
Hollow Brook Ln	Ebenezer Rd	604
Holly Ln	Beechwood Ln (private road)	n/a
Honey Ln	Harry Byrd Hwy	7
Honeysuckle Ct	Honeysuckle Ln (private road)	n/a
Honeysuckle Ln	Retreat Rd	643
Horseshoe Ln	Morgans Mill Rd	605
Hunting Ridge Ln	Chilly Hollow Rd	621
Huntingdon Ln	N Greenway Ave	340
Huntover Ln	Red Gate Rd	624
Island Farm Ln	Tilthammer Mill Rd	621
Island Falli Lii	1 maiammer will Nu	021

Private Road	Public/Private Road Accessed by	Public Road Route #
Jenkins Ln	Morgans Mill Rd	605
Journeys End Ln	Blue Ridge Mtn Rd	601
Juniper Ln	Wildcat Hollow Rd	602
Katharbrine Ln	Lord Fairfax Hwy	340
Kave Ln	Harry Byrd Hwy	7
Kelly Ln	Pine Grove Rd	679
Kent Farm Ln	River Rd	606
Kentland Ln	Harry Byrd Hwy	7
Kentmere Farm Ln	Millwood Rd	723
Kersey Ln	Swift Shoals Rd	622
Keystone Ln	Harry Byrd Hwy	7
Kinderhook Ln	Salem Church Rd	655
Kingsbury Ln	Crums Church Rd	632
Kinsky Ln	Parshall Rd	608
Kitchen Ln	Gun Barrel Rd	644
Lafayette Ln	Blue Ridge Mtn Rd	601
Lakeview Ln	Carefree Ln (private road)	n/a
Lakeville Farm Ln	John Mosby Hwy	50/17
Lander Ln	Senseny Rd	657
Laurel Ln	Timber Ln/Dogwood Ln	n/a
Laurel Wood Ln	Crums Church Rd	632
Leeds Manor Ln	River Rd	606
Leslie Ln	Wrights Mill Rd	645
Lewin Hill Ln	Frogtown Rd	649
Lewis Farm Ln	Lockes Mill Rd	613
Liberty Hill Ln	Liberty Hill Ln	600
Lindey Ln	Smallwood Ln	680
Linster Ln	Lockes Mill Rd	613
Lions Ln	Howellsville Rd	638
Little River Ln	Calmes Neck Ln (private road)	n/a
Llewellyn Ln	Lord Fairfax Hwy	340
Lloyds Ridge Ln	Mt. Carmel Rd	606
Lockesly Ln	Millwood Rd	723
Locust Ln	Old Ferry Ln (private road)	n/a
Lois Ln	River Park Ln (private road)	n/a
Long Branch Ln	Bordens Spring Rd/Nelson Rd	622/626
Long Field Ln	Pastoral Ln (private road)	n/a
Longwood Ln	Harry Byrd Hwy	7
Loyola Ln	Blue Ridge Mountain Rd	601
Lost Boys Ln	Eagle Rock Ln (private road)	n/a
Majestys Prince Ln	Walnut Hall Ln (private road)	n/a
Manor Rd	Manor Rd	690
Maple Ln	Beechwood Ln (private road)	n/a
Marsh Ln	Lord Fairfax Hwy	340
Meadowbrook Ln	Hawthorne Ln (private road)	n/a
Meadows Ln	Farnley Ln (private road)	n/a
Mercer Farm Ln	Feltner Rd	606
Middle Cottage Ln	Senseny Rd	657
Middle Collage Lil	Benseny Ku	037

Private Road	Public/Private Road Accessed by	Public Road Route #
Mighty Turn Ln	Walnut Hall Ln (private road)	n/a
Mill Ln	Chapel Ln (private road)	n/a
Milton Valley Ln	Lord Fairfax Hwy	340
Minniewood Ln	Triple J Rd	632
Misty Hill Ln	Swimley Rd	672
Montalegre Ln	Harry Byrd Hwy	7
Montana Hall Ln	Bordens Spring Rd	622
Morgan Ln	Wildcat Hollow Rd	602
Morning Star Ln	Good Success Ln (private road)	n/a
Mount Airy Farm Ln	Bishop Meade Rd	255
Mount Prospect Ln	Swift Shoals Rd	622
Mountain Lake Ln	Mount Carmel Rd	606
Mountain Ridge Ln	Pine Grove Rd	679
Mountaineer Ln	Ebenezer Rd	604
Naylee Ln	Withers Larue Rd	640
Nellie Custis Ln	Audley Ln (private road)	n/a
Noble Ln	Crums Church Rd	632
Northfield Ln	Kennel Rd	625
North Hill Ln	Harry Byrd Hwy	7
Oak Cliff Ln	Calmes Neck Ln (private road)	n/a
Oakland Ln	Lord Fairfax Hwy	340
Oakleaf Ln	Longwood Ln (private road)	n/a
Old Barn Ln	Red Gate Rd	624
Old Blue Ridge Rd	Blue Ridge Mountain Rd	601
Old Ferry Ln	River Rd	606
Old Oak Ln	Manor Rd	690
Old Tavern Ln	Crums Church Rd	632
Old Tuley Ln	John Mosby Hwy	50
Page Brook Ln	Page Brook Ln	631
Paris Heights Ln	Blue Ridge Mountain Rd	601
Parker Ln	Harry Byrd Hwy	7
Pastoral Ln	Chilly Hollow Rd	621
Peaceful Hollow Ln	Ebenezer Rd	604
Pearl Ln	Calmes Neck Ln (private road)	n/a
Persimmon Ridge Ln	Crums Church Rd	632
Pine Crest Ln	Timber Ln (private road)	n/a
Piney Ridge Ln	Cliff Ln (private road)	n/a
Pioneer Ln	Lions Ln (private road)	n/a
Pleasant Ln	Wickliffe Rd	608
Pond Quarter Ln	Senseny Rd	657
Pope Ln	Crums Church Rd	632
Poplar Ln	Beechwood Ln (private road)	n/a
Poppy Ln	Wind Whistle Ln (private road)	n/a
Poston Ln	Frogtown Rd	649
Powhatan Ln	Millwood Rd	723
Princess Ln	Summerville Rd	652
Prospect Spring Ln	Browntown Rd	620
Providence Ln	Frogtown Rd	649

Private Road	Public/Private Road Accessed by	Public Road Route #
Quarter Horse Ln	Clay Hill Rd	651
Quartermoon Ln	Kennel Rd	625
Queenship Ln	Swimley Rd	672
Ramsburg Ln	Westwood Rd	636
Randleston Ln	River Rd/Ebenezer Rd	606/604
Ratcliffe Ln	Ebenezer Rd	604
Ray Of Hope Ln	Stonewall Jackson Hwy	340
Redbud Ln	Beechwood Ln/Holly Ln (private road)	n/a
Ridgewood Ln	Manor Rd	690
River House Ln	John Mosby Hwy	50/17
River Park Ln	Feltner Rd	606
River View Farm Ln	River Rd/Ebenezer Rd	606/604
Riverside Farm Ln	Castleman Rd	603
Robin Ln	Calmes Neck Ln (private road)	n/a
Rock Dale Ln	Russell Rd	660
Rock Gate Ln	White Post Rd	658
Rock Hall Farm Ln	Harry Byrd Hwy	7
Rocky Bank Ln	Bishop Meade Rd	255
Rose Airy Ln	John Mosby Hwy	50
Rose Hill Ln	Harry Byrd Hwy	7
Ross Ln	Harry Byrd Hwy	7
Running Bear Ln	Calmes Neck Ln (private road)	n/a
Rutherford Ln	Harry Byrd Hwy	7
Scaleby Ln	Millwood Rd	723
Seltenhorst Ln	Harry Byrd Hwy	7
Shady Ford Ln	Wildcat Hollow Rd	602
Shady Grove Ln	Shepherds Mill Rd	612
Shan Hill Ln	Shan Hill Ln	619
Sheets Ln	John Mosby Hwy	50
Shenandoah River Ln	Howellsville Rd	638
Shepherd Ln	Anamaria Ln (private road)	n/a
Shepherds Ford Ln	River Rd	606
Silent Hill Ln	Stonewall Jackson Hwy	340/522
Silver Ridge Ln	Featherbed Rd	644
Sipe Hollow Ln	Boom Rd	615
Skyhorse Ln	Mount Weather Rd	650
Slate Ridge Ln	Mount Carmel Rd	606
Sleepy Hollow Ln	Frogtown Rd	649
Smithfield Ln	Wickliffe Rd	608
Soldiers Ln	Summit Point Rd	611
Solitude Ln	Carefree Ln (private road)	n/a
South Gate Ln	Millwood Rd	723
Springfield Ln	Crums Church Rd	632
Spring House Ln	Hawthorne Ln (private road)	n/a
Springsbury Farm Ln	Briggs Rd/Springsbury Rd	621/713
Stella Mae Ln	Frogtown Rd	649
Stock Ln	Berrys Ferry Rd	628
Stock Ln Stone Hill Ln		
Stolle Hill LII	Harry Byrd Hwy	7

APPENDIX C -- PRIVATE ROADS, UNINCORPORATED AREAS OF THE COUNTY

Private Road	Public/Private Road Accessed by	Public Road
		Route #
Stone Quarter Ln	White Post Rd	658
Stone Ridge Ln	John Mosby Hwy	50/17
Stonebrier Ln	Harry Byrd Hwy	7
Stonecrest Ln	Mount Weather Rd	650
Stonefield Ln	Salem Church Rd	655
Stubblefield Ln	Briggs Rd	617
Summer Springs Ln	John Mosby Hwy	50
Sunny Canyon Ln	Pyletown Rd	620
Sunset Ln	Browntown Rd	620
Sycamore Ln	Rocky Bank Ln	678
Tadpole Ln	Frogtown Rd	649
Taylor Hill Ln	Ebenezer Rd	604
Throwleigh Ln	Pyletown Rd	620
Timber Ln	Retreat Rd	643
Toy Hill Ln	Ebenezer Rd	604
Tuleyries Ln	Berrys Ferry Rd	628
Turtle Ln	Allen Rd	639
Valley Springs Ln	Harry Byrd Hwy	7
Valley View Ln	Blue Ridge Mtn Rd	601
Victory Ln	Thornton Rd	625
Victory Farm Ln	Frogtown Rd	649
Village Ln	Pine Grove Rd	679
Vita Bella Ln	Ebenezer Rd	604
Walnut Hall Ln	Summerville Rd	652
Warfield Ln	John Mosby Hwy	17
Warner Washington Ln	Lord Fairfax Hwy	340
Westfield Farm Ln	Lord Fairfax Hwy	340
Whispering Knolls Ln	Boom Rd	615
White Oak Ln	Retreat Rd	643
White Pine Ln	Solitude Ln (private road)	n/a
Wickliffe Farm Ln	Wickliffe Rd	608
Wiley Mountain Ln	Morgans Mill Rd	605
Wilkins Ln	Blandy Farm Ln	750
Williamstead Ln	Jack Enders Blvd	700
Willow Lake Ln	Feltner Rd	606
Wind Spring Ln	Senseny Rd	657
Wind Whistle Ln	Raven Rocks Rd	601
Windwood Ln	Blue Ridge Mtn Rd	601
Wolfe Ln	Boom Rd	615
Woodberry Ln	Shepherds Mill Rd	612
Woodley Ln	Briggs Rd	617
Worthington Ln	River Rd	606
York Ln	Lord Fairfax Hwy	340

APPENDIX D

Unpaved Public Roads

APPENDIX D -- UNPAVED PUBLIC ROADS

Route	Road Name	<u>From</u>	<u>To</u>	Miles
600	Liberty Hill Ln	John Mosby Hwy (US 50/17)	Liberty Hill Ln (PR)	0.65
602	Wildcat Hollow Rd	Carefree Ln (PR)	Greenstone Ln (PR)	0.89
603	Castleman Rd	Shepherds Mill Rd (Rt. 612)	Glebe Ln (PR)	2.13
604	Ebenezer Rd	River View Farm Ln (PR)	Saw Mill Hill Rd (Rt. 607)	1.00
605	Morgans Mill Rd	Blue Ridge Mountain Rd (Rt. 601)	Frogtown Rd (Rt. 649)	2.61
606	Feltner Rd	Mercer Farm Ln (PR)	Mt. Carmel Rd (Rt. 606)	1.70
619	Shan Hill Ln	Clay Hill Rd (Rt. 651)	Shan Hill Ln (PR)	0.60
619	Lime Marl Ln	End of pavement	Dead end	0.30
621	Ellerslie Rd	Clay Hill Rd (Rt. 651)	Briggs Rd (Rt. 621)	2.00
621	Briggs Rd	Ellerslie Rd (Rt. 621)	Lockes Mill Rd (Rt. 618)	1.30
621	Lockes Mill Rd	0.96 mi east of Parshall Rd (Rt. 608)	Chilly Hollow Rd (Rt. 621)	1.08
622	Bordens Spring Rd	Sugar Hill Rd (Rt. 658)	Red Gate Rd (Rt. 624)	2.09
622	Swift Shoals Rd	Boat landing	Mt. Prospect Ln (PR)	2.20
625	Thornton Rd	John Mosby Hwy (US 50/17)	Millwood Rd (Rt. 723)	0.53
625	Bethel Ln	Swift Shoals Road (Rt. 622)	Dead end	0.19
630	Iron Rail Ln	John Mosby Hwy (US 50/17)	Dead end	0.20
637	Linaburg Ln	Old Charles Town Rd (Rt. 761)	Dead end	0.30
637	Windy Hill Ln	Old Charles Town Rd (Rt. 761)	Dead end	0.15
644	Featherbed Rd	Lord Fairfax Hwy (US 340)	Sugar Hill Rd (Rt. 658)	2.07
644	Stonebridge Rd	Sugar Hill Rd (Rt. 658)	Warren County line	1.08
663	Auburn Rd	Castleman Rd (Rt. 603)	Wickliffe Rd (Rt. 608)	1.00
664	Neill Rd	Wrights Mill Rd (Rt. 645)	Dead end	0.30
678	Rocky Bank Ln	Bishop Meade Rd (Rt. 255)	Rocky Bank Ln (PR)	0.13
680	Smallwood Ln	Lord Fairfax Hwy (US 340)	Lindey Ln (PR)	0.34
			TOTAL (approximate)	24.84

PR -- Private Road

SOURCE: Virginia Department of Transportation County GIS